

Afan Strategic Storage Habitat Management Plan

Alun Griffiths (Contractors) Ltd

61323

November 2025



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S0 – Work in progress	S1 – For coordination	S2 – For information
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List of Abbreviations

Abbreviation	Full Description
DCWW	Dŵr Cymru Welsh Water
ECoW	Environmental Clerk of Works
HMP	Habitat Management Plan
NPT	Neath Port Talbot
SAC	Special Areas of Conservation
SINC	Site of Importance for Nature Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
WwTW	Waste Water Treatment Works.

1 INTRODUCTION

1.1.1 TACP UK (Ltd) (TACP) was commissioned by Alun Griffiths Construction Ltd to prepare a Habitat Management Plan (HMP) for works associated with the proposed construction of a temporary storage for sludge cake (hereafter referred to as 'the Project') at the Afan Waste Water treatment Works (WwTW) (hereafter referred to as 'the site'). The site is owned by Dwr Cymru Welsh Water (DCWW).

1.2 Scheme

1.2.1 It is proposed to construct a Zapp Shelter located to the north of existing settlement tanks at Afan WwTW. The shelters are 12mx30m, concrete block walls with a steel framed plastic membrane cover. Aerial imagery, including the site boundary and surrounding area are presented below in Figure 1.

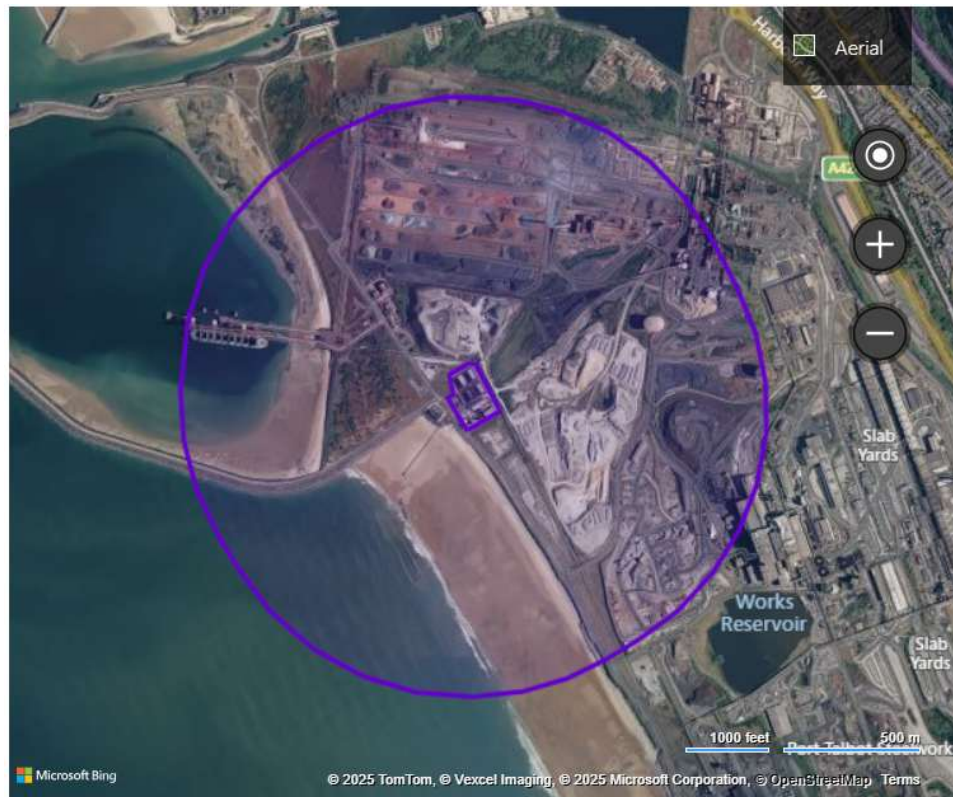


Figure 1 Site boundary and ssurroundings.

1.3 Planning Context

- 1.3.1 The proposed development has been granted a planning permission (ref. P2025/0570) dated 25 October 2025 subject to a number of conditions. Condition 3 requires a HMP:

Prior to the commencement of works a detailed Habitat Management Plan to include a schedule of implementation, in line with the section 7 recommendations of the Preliminary Ecological Appraisal, shall be submitted to and approved in writing by the local authority and these works shall be carried out as approved.

Reason:

In the interests of Biodiversity and to provide a net benefit to Biodiversity in accordance with Policy 9 of Future Wales and so as to accord with Policy SP15 of the adopted Neath Port Talbot Local Development Plan

1.4 Completed Assessments

- 1.4.1 A Preliminary Ecological Appraisal (PEA) was undertaken by TACP in February 2025 (TACP PEA 2025) informed by an Extended Phase 1 Habitat Survey, which was carried out on 31/01/2025. An additional Phase 1 habitat survey was carried out on 04/06/2025 on adjacent land focused on identifying potential habitat mitigation areas. Full details can be found in the TACP PEA 2025. The Phase 1 Habitat Map is presented below in Figure 2 and target notes in Table 1.

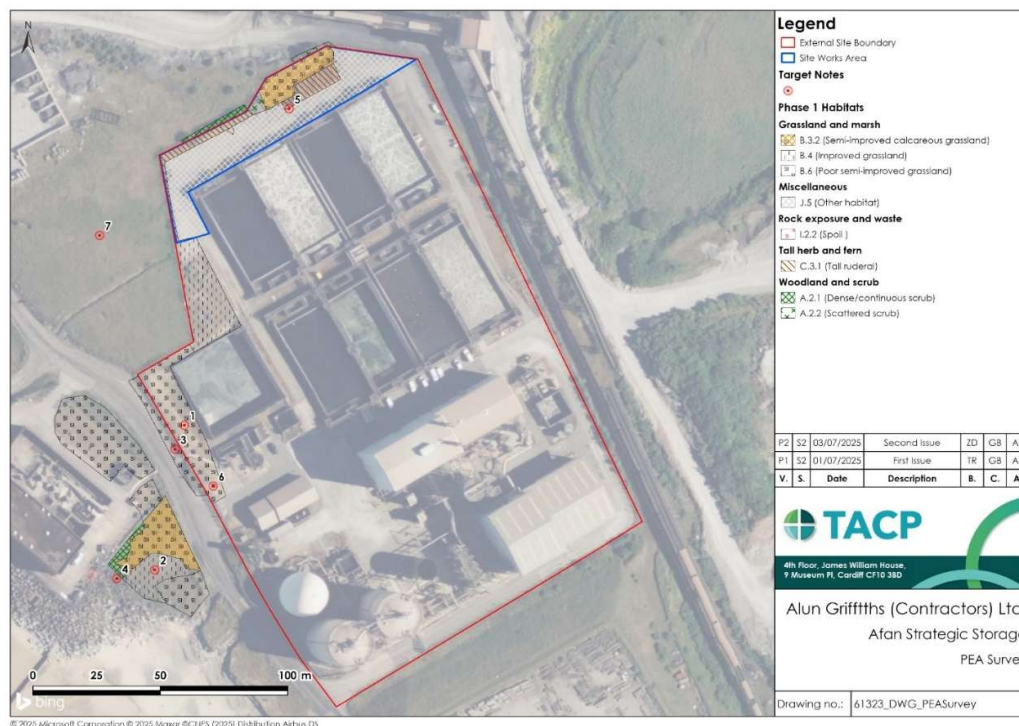


Figure 2 PEA Habitat Survey Map

Table 1-Phase 1 Habitat Survey Target Notes

Target Note Number	Note
1	Potential Habitat Mitigation area, overseed with wildflower
2	Potential Habitat Mitigation area. Strip back false oat grass, sow with wildflower and create insect hibernacula.
3	Dense Sea Buckthorn
4 & 5	Territorial, Rabbit Dropping Latrine
6	Evident orchid species already present, Bee and Pyramidal Orchid.
7	Adjacent Species rich Calcareous Grassland

1.4.2 The TACP PEA 2025 identified species rich grassland of ecological value within the construction zone for the proposed Zapp Shelter. In order for the works to proceed, this is required to be cleared, and under the DECCA/NBB framework, improvement incorporating additional habitat or mitigation features is essential. Two habitat mitigation areas were identified within DDCW land highlighted below in Figure 3.



Figure 3 Habitat Mitigation areas

Area 1 Infilled Pond

- 1.4.3 Within adjacent DCWW land, to the west of the main compound, an area of improved grassland was surveyed. This contained a single species of grass, False oat-grass *Arrhenatherum elatius*. Anecdotal evidence suggested this area had previously been excavated, and became a duck pond that over time infilled. The area contrasted with the species rich calcareous grassland adjacent to the north.
- 1.4.4 It was recommended and accepted to improve this area via scraping back the grass, seeding with suitable wildflower mix for calcerious soils and creating an insect hibernaculum.

Area 2 Grassland west inside main compound.

- 1.4.5 An area of species poor semi improved grassland was identified along the western edge of the main compound. Wildflowers including rare orchids are beginning to naturalise this area.
- 1.4.6 It was recommended to improve this area by adopting a suitable wildflower management plan, as detailed below.

1.5 HMP Scope

- 1.5.1 This HMP has been prepared to inform the discharge of Planning Condition 3. The HMP will detail the following:
- Recommendations on monitoring works during the construction phase by instructing an Ecological clerk of works (ECoW) to be present to oversee any works.
 - Construction/creation of the Area 1 Habitat mitigation area.
 - Habitat management of the Area 1 Habitat mitigation area.
 - Habitat management of Area 2.
 - Additional recommendations for all the land owned by DDCW at Afan WwTW. (Including the management of invasive species and previously created mitigation area).

1.6 Programme

- 1.6.1 The construction phase for the Zapp Shelter is due to commence in January 2026. The creation of habitat mitigation Area 1 should take as part of this works. Works concerning preparation of this area should take place before March. This will allow for spring wildflower sowing between mid-March and May.
- 1.6.2 If this window is missed this next optimum time for wildflower sowing is Autumn, (Mid - August to October).
- 1.6.3 During and following completion of the project - implementation of the habitat management plan should take place.

2 SITE CONTEXT

- 2.1.1 This section provides a pertinent summary of the site context presented in detail in TACP PEA 2025.

Designated Sites

- 2.1.2 Given the very small footprint of the project, a 1km search zone was used for the TACP PEA 2025 desk study.
- 2.1.3 There are no statutory designated Special Protection Areas (SPA), Special Areas of Conservation (SAC), Ramsar or Sites of Special Scientific Interest (SSSI) within 1 km of the Scheme.
- 2.1.4 The site lies within the Neath Port Talbot (NPT) Watercourses Site of Importance for Nature Conservation (SINC) site, however this is a buffer zone for all watercourses in the NPT area. The TACP PEA 2025 concluded that there would be no impact to this locally designated site.

Onsite and surrounding Habitat and designated Species

- 2.1.5 An area of species rich grassland was identified within the site with ecological value to plants, invertebrates and mammals, and additional potential for reptiles and amphibians. Potential impacts on designated species or habitats have been addressed in the TACP PEA 2025. The requirement to remove species rich grassland and associated scrub in the construction area led to the habitat mitigation/improvement areas covered in this report.
- 2.1.6 The land use of the surrounding area is predominantly commercial/industrial works of Tata Steel. However large areas of species rich grassland and tidal flats are present adjacent to the site.
- 2.1.7 **Plants** - SEWBreC data shows records of Oxtongue broomrape, a WCA8 protected species 184m from the site. Two species included within the Environment (Wales) Act 2016 Section 7, are recorded within 1km of the site including Basil Thyme *Clinopodium picridis* and Sea stock *Matthiola sinua*). Although not yet identified, there is the potential for protected plant species to be growing within the proposed works area boundary
- 2.1.8 **Birds** - Extensive bird populations are present in the surrounding area. Extensive records of protected birds are shown within 1km of the site. The onsite potential for nesting birds was low. The adjacent scrub should not be impacted by the development.
- 2.1.9 **Reptiles** - Local records show minimal records of reptiles and amphibians near the site. However, the species rich grassland and surrounding habitats provide potential habitat for reptiles and amphibians. This area is expected to be cleared during construction of the project.
- 2.1.10 **Mammals** - Evidence of rabbits present in the site was identified by a territorial latrine and droppings, burrows were not identified.

- 2.1.11 **Invertebrates** - Common Blue butterfly, hoverfly species and bee species, were evident during the June site visit within the construction area. Records of small blue butterfly have been recorded 950m away from the site. Multiple records of section 7 invertebrates are present within 1km of the site.
- 2.1.12 The scale of the proposed Project is very small. The impact beyond the site boundary was considered negligible. No impact on nearby habitats are anticipated from the development.
- 2.1.13 Butterfly bush, sea-buckthorn and stone crop were identified with the site and surrounding habitats.
- 2.1.14 Given the above, a precautionary approach was recommended for clearance works, with the presence of an ecologist/ECoW recommended, as stated in Section 4.

3 SUMMARY OF LAND USE

3.1 Baseline Site Use

- 3.1.1 As a baseline, the construction area contains 0.06ha of habitat including 0.02 ha of species rich grassland, the remainder being tall ruderal and scrub. This is due to be removed. The remainder of the construction area is hardstanding.

3.2 Proposed Site Use

- 3.2.1 The construction area will contain the Zapp Shelter, and its associated soakaway drainage works.

4 MONITORING OF VEGETATION CLEARANCE

- 4.1.1 Given the sensitivity of the surrounding area, a precautionary approach has been recommended for clearance of the vegetation on site. The works are to be undertaken under an appointed ECoW supervision.
- 4.1.2 Although not identified during the TACP PEA 2025, there is also potential for protected plant and invertebrate species to be growing within the construction area. Namely **Small Blue butterfly** (*Cupido minimus*), Figure 4, which is included within WCA S5 Figure 4 and/or Wildlife and Countryside Act schedule 8 (WCA8) **oxtongue boom rape** (*Orobanche picridis*), Figure 5.
- 4.1.3 Should any of these species be found during pre-construction checks or during construction, works will stop and further advice sought from the appointed ECoW.
- 4.1.4 The conservation status of reptile and amphibian populations will be maintained through a combination of the exclusion and/or the relocation of reptiles and amphibians from parts of the Project area where construction will occur, to a suitable

receptor site agreed prior to works commencing. Suitable habitat areas are considered extensive in the surrounding area.

- 4.1.5 If previously unidentified evidence of Bats, GCN and Hedgehog are identified prior or during construction, works should stop immediately until advice from the appointed ECoW has been obtained.



Figure 4-Potential WCA5



Figure 5-Potential WCA58.

5 5MITIGATION AREA CONSTRUCTION.

5.1 Mitigation Area 1 Wildflower seeding.

5.1.1 The extent of Mitigation Area 1 is shown on Figure 6.

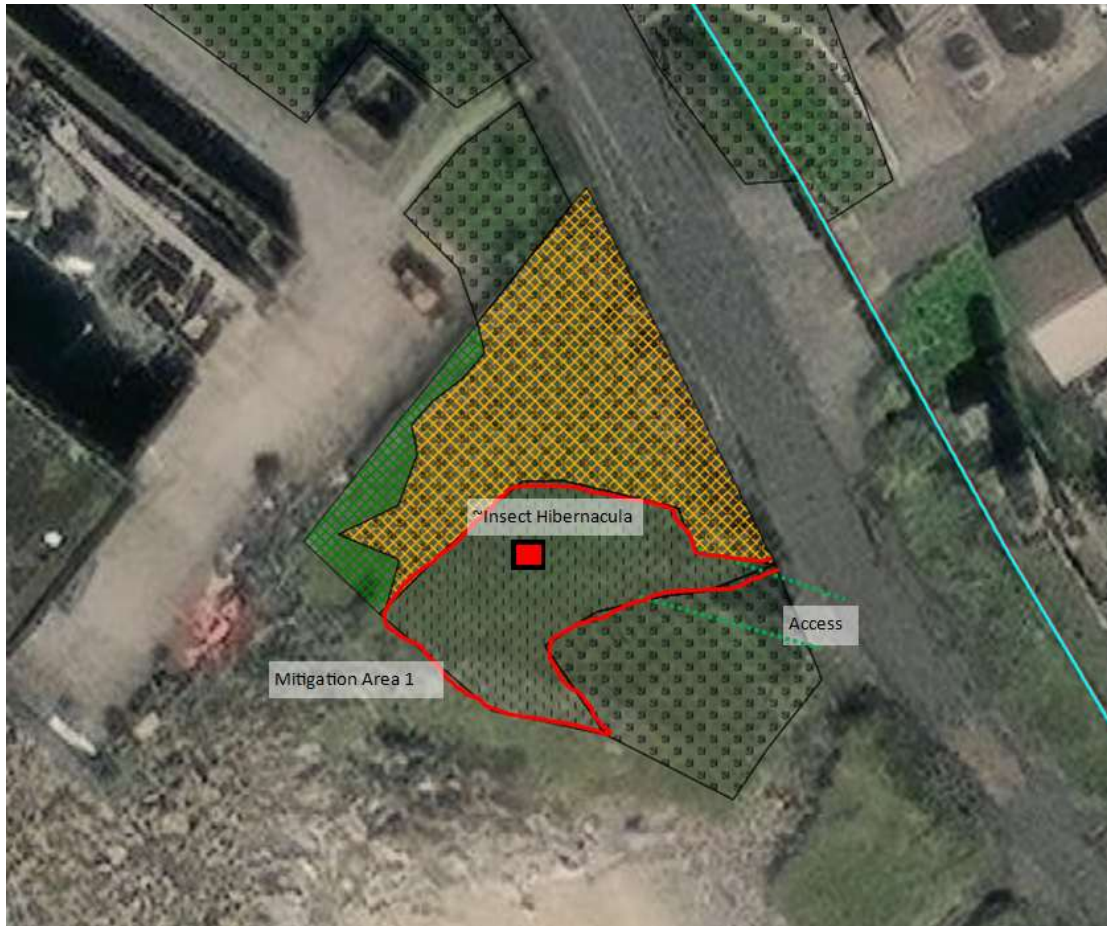


Figure 6 Extent of Mitigation Area 1

5.1.2 To construct the Mitigation Area 1 mitigation the area:

- Ecologist to mark out the extent of species poor grassland to be cleared.
- The grass turf should be scraped back producing as little arisings as possible.
 - Viable methods include: the use of a small excavator less than 5 ton to avoid damage to surrounding habitats. Steps should be taken to ensure heavy

machinery does not excessively damage adjacent wildflowers accessing the area the most suitable path is shown in **Figure 6**.

- Alternatively the grass can be trimmed or mowed short and lifted with a turf cutter machine.
- Grass and turf arisings should be piled in a mound within Mitigation Area 1, creating additional ecological habitat/hibernacula, alternatively it can be removed from site.
- The bare soil in the zone should be sown with wildflower seed mix.
- In keeping with the surrounding habitat, a suitable seed mix for calcareous soils should be used, such as, Germinal amenity WFG5 Calcareous Soils or similarly approved.
- Germinal amenity usage guide suggests 5g per m². The area is approximately 270m². A 1kg bag of wildflower seed is therefore considered adequate for the works.

5.1.3 **Wildflower seeding should be sown in spring (March to May).** Soil conditions at the infilled pond may be different to the calcareous soils in the surrounding area, if wildflower mitigation seeding does not reach the required standard and seed germination is considered inadequate, this area will require a review and implementation of other options which may include soil testing.

5.2 Insect Hibernacula

- An insect hibernaculum is to be constructed within mitigation area 1. It is recommended that a pallet style insect hibernacula is most suitable for the site, example **Figure 7**.
- Basic tools such as electric saws, electric drills, screws and wheelbarrow will be required.
- Pallets are stacked and screwed together.
- Site reclaimed material such as pallets chunks of concrete, pipes, bricks, grass and stones, can all be utilised. The WwTW compound has access to old rubber pipe

seals, and driftwood is situated in piles in DCWW land, local cobbles are also available. Other example materials include logs, bamboo, twigs, straw and leaves.

- The gaps are filled with suitable collected materials, heavier materials like brick and concrete should be placed at the bottom.



Figure 7 Example Insect Hibernacula.

5.3 Mitigation Area 2

5.3.1 Mitigation Area 2 (shown in Figure 8 below) is already undergoing wildflower naturalisation including wild orchids. To further encourage this process, the area should adopt a suitable wildflower management plan as suggested in the maintenance section below (Section 6).



Figure 8 Mitigation Area 2

6 MAINTENANCE

- 6.1.1 Maintenance for the site primarily concerns appropriate mowing management of the wildflower grassland present on DDCW land. The newly created wildflower seeding will require a year 1 establishment mowing regime. For Mitigation Area 2 an established wildflower mowing schedule should be adopted. The previously created habitat mitigation area present on site can also adopt an established wildflower meadow cutting programme.
- 6.1.2 The maintenance schedule for WwTW land for the next three years is presented below in Section 6.2 and summarised in Table 2.

6.2 Wildflower Grassland

- 6.2.1 Grass shall be cut cleanly and evenly at the frequencies and to the heights specified below without damage to the existing surface. Soft vegetative growth such as clover and broad-leaved vegetation shall be deemed to be part of the cutting operation where it falls within areas of grass.
- 6.2.2 All arisings from species rich grassland areas shall be left in-situ for 3 days in dry conditions to allow for seed dispersal before being raked up and removed from site.
- 6.2.3 During periods when ground conditions are so wet as to prevent grass cutting without causing damage to the surface or producing divots, operations shall cease and shall recommence only when ground and weather conditions are suitable.
- 6.2.4 No fertilisers will be used as this will promote the proliferation of competitive species at the expenses of botanical diversity.

Germinal Amenity Mowing Frequency

- 6.2.5 The mowing frequency should be as follows:

Spring Sown – year one:

- First cut mid-September
- Then again in October
- Cutting height of 70-100 mm

Autumn sown – year one:

- First cut – early July
- Then monthly during August, September and October
- Cutting height of 70-100 mm

Note: ref. <https://germinalamenity.com/how-to-manage-a-wildflower-meadow>

- 6.2.6 Thereafter, cut from mid-July to early September – this can be done as one cut. Preferably, if the wildflower meadow is big enough, cut in sections and leave a week to a fortnight between cuts. Ensure the arisings are collected.
- 6.2.7 If the meadow is large enough, consider allowing up to a fifth to stand uncut through the winter and cut down and remove the clippings in March of the following year. This

is to provide a habitat for invertebrates, including pollinators, and some vertebrates over the winter.

- 6.2.8 Rotate this area so a different section is left uncut each year. This more closely replicates the grazing of animals, which would leave some small areas not grazed. This is the ideal alternative for wildflower meadow management without grazing.
- 6.2.9 If possible, and with the obvious exception of areas left uncut, lightly mow the sward down to 70-100 mm as required throughout the winter months until March and collect the clippings.
- 6.2.10 As mentioned above, optimally an area of the habitat mitigation would be left to stand until March. Additionally, the previously constructed habitat mitigation zone should be scheduled into the wildflower maintenance schedule.

6.3 Invasive Species

- 6.3.1 The sea buckthorn and buddleia present in the WwTW land should be managed to prevent them from dominating the species rich grassland/habitat mitigation areas situated on the land outside the site. Given the small scale of the habitat mitigation areas, any plants should be dug and removed to prevent establishment.
- 6.3.2 The optimum time to remove these unwanted shrubs is during the dormant season in winter, however, for continuity this activity can be part of landscape activities during wildflower management once a year.

Seabuckthorn Identification

Wildlifetrust- <https://www.wildlifetrusts.org/wildlife-explorer/trees-and-shrubs/sea-buckthorn>



Butterfly Bush Identification

<https://www.nonnativespecies.org/non-native-species/information-portal/view/581>



Table 2- Maintenance Schedule (assuming spring wildflower sowing)

Element Area	Management Activity	Year 1 (2026)			Year 2 (2027)	Year 3 (2028)
		August-Mid September	Mid-September	October	August-Mid September	August-Mid September
Wildflower Mitigation Area 1 (New spring sowing)	Wildflower Cut- Removing Arisings		x	x	x	x
Wildflower Mitigation Area 2	Wildflower Cut- Removing Arisings	x			x	x
Previous Habitat Mitigation Area	Wildflower Cut- Removing Arisings	x			x	x
All WwtW land	Dig and remove Butterfly bush and Seabuckthorn shrubs	x			x	x

Notes

- Wildflower areas would benefit from removal of arisings three days after cutting for seed dispersal.
- Potential for further enhancement - The species rich calcaerious grassland on WwtW land north of Mitigation Area 1, would also benefit from a yearly August to Mid september cut.

