

**ABERMULE BUSINESS PARK,
ABERMULE, POWYS**

**GREAT CRESTED NEWT
METHOD STATEMENT**

A Report to: Powys County Council

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REPORT VERIFICATION AND DECLARATION OF COMPLIANCE

This study has been undertaken in accordance with British Standard 42020:2013 "Biodiversity, Code of practice for planning and development".

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

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A EXECUTIVE SUMMARY

The proposed development at Abermule Business Park is divisible into three distinct areas: a Business Park, a Recycling Bulking Facility and a Surface Water Compensation Area. Some initial site enabling works, including construction of road infrastructure within the site, were completed under a previous consent 7-10 years ago, and full planning consent was granted in August 2018 for the delivery of the rest of the development. It is anticipated that the development will be delivered over the period 2019-2023.

A great crested newt survey completed by Gerald Longley Ecological Consultants Ltd in 2017 included two ponds within a 500 m radius of the proposed development area. P1 was located to the immediate east of the proposed business park and was separated from it by a minor railway line (not considered to be a barrier to dispersal). P2 was located within pastoral farmland c. 200 m to the northwest of the site, and separated from it by the A483 main road. During the surveys completed in 2017 P1 was found to support a medium population size class of great crested newts, with a peak count of 12 great crested newts recorded on any one visit. No great crested newts were recorded in P2 on any survey visit.

Middlemarch Environmental Ltd previously completed enhancement of terrestrial habitats surrounding pond P1 in February 2018 under Natural Resources Wales conservation licence 78058:OTH:CA:20. These works included fencing off the grassland surrounding P1 to prevent livestock overgrazing and poaching, planting of new native hedgerow/scrub and creation of hibernacula. All work associated with this licence is complete.

In the absence of any avoidance, mitigation or compensation it is not anticipated that the proposed development would result in any direct or indirect adverse impacts on any aquatic habitats used by great crested newts. It will, however, result in the loss of potential terrestrial habitat that could be used by great crested newts, and in turn could result in the killing or injury of individual great crested newts. Other potential impacts could include minor disturbance and fragmentation of habitat as a result of an increased presence of built environment, potential harm to great crested newts arising from site drainage proposals and killing or injury of great crested newts within the proposed Recycling Bulking Facility. The creation of the Surface Water Compensation Area alone is considered to be beneficial to great crested newts, but without mitigation the overall impact would be negative.

A series of avoidance and mitigation proposals will be implemented to ensure that the development does not have an adverse impact on the favourable conservation status of the great crested newt population associated with pond P1. This will involve implementing a programme of trapping and translocation to allow great crested newts to be removed from terrestrial habitats to be lost to the development. Trapping will be completed by suitably qualified and licensed ecologists, and all animals captured will be translocated into the area of previously enhanced habitat around pond P1, as described above. Once a 30 day trapping period is completed (reduced trapping duration to be agreed with Matthew Ellis at NRW), internal drift fencing will be removed under ecological supervision and the site will be subject to a destructive search to allow all cells to be classified as 'newt free' (delayed until October 2019). Perimeter fencing will be retained until all development is completed, and will be subject to daily monitoring throughout the construction period to ensure that it continues to provide a barrier to herpetofauna. Furthermore, due to the high level of risk to great crested newts associated with the Recycling Bulking Facility, once the facility is constructed the temporary barrier fence will be replaced with a permanent great crested newt barrier to ensure that newts are permanently excluded from this area. Site drainage proposals have been designed with ecological input to reduce the risk posed to great crested newts. Although standard drainage options including gully pots are proposed, these will be designed to include ladder features and will be located in the middle of hardstanding areas away from kerbs to reduce the potential for newts to become trapped.

The site will also be subject to a series of habitat enhancements, including the planting of new native trees and shrubs, creation of a series of hibernacula and creation of two new wildlife ponds within the Surface Water and Ecology Compensation Area. The landscaping proposals have been designed based on ecological input from Middlemarch Environmental Ltd, and will ensure that the value of the site to great crested newts is increased by the development. Middlemarch Environmental Ltd have produced an Ecological Compliance Schedule and Habitat Management Plan (Report RT-MME-127496) which covers a period of 20 years and will ensure that the biodiversity value of the site is maximised in the medium to long term.

Middlemarch Environmental Ltd will complete annual population monitoring surveys throughout the development period and until 2038. Regular reports will be produced and provided to Natural Resources Wales detailing findings and any remedial recommendations required.

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B INTRODUCTION

B.1 BACKGROUND TO THE DEVELOPMENT

In November 2017, Powys County Council (PCC) instructed Middlemarch Environmental Ltd (MEL) to produce a Great Crested Newt Method Statement to accompany a hybrid planning application for the proposed Abermule Business Park development. Full planning permission was subsequently granted by PCC on 2nd August 2018 (Ref P/2018/0587).

Prior to MEL's involvement, Gerald Longley Ecological Consultants Ltd. (GLEC) completed a Preliminary Ecological Appraisal (GLEC-0896a-01), Dormouse Survey (GLEC-0946a-01), Reptile Survey (GLEC-0946b-01) and Great Crest Newt Survey and Mitigation Plan (GLEC-0896b-01) for the site. MEL then went on to act as the project ecologists throughout the application process for a Great Crested Newt Conservation Licence from Natural Resources Wales (NRW), which was successfully obtained in January 2018. MEL then oversaw the enhancement works completed at pond P1 in February 2018 and have remained the project ecologists throughout the current preparation works for obtaining a Great Crested Newt Development Licence.

This amended method statement includes changes to project timescales as agreed at a liaison meeting held with Matthew Ellis (NRW) on 26th November 2019.

DEVELOPMENT OVERVIEW

Abermule Business Park is located approximately 500 m south of Abermule village (National Grid Reference SO 1576 9410) and falls within the Powys County Council district. The development area covers approximately 3.5 ha, with a 0.6 ha ecological mitigation area south of the site, giving a total site area of 4.1 ha.

The development seeks to construct a Recycling Bulking Facility, comprising a bulking shed, a welfare / Office facility and associated storage unit, storage slab, outdoor glass collection bay. This facility will also provide collection vehicle parking for up to 28 vehicles and car parking for up to 70 staff, approx. 33 spaces and vehicle washing and refuelling facilities. Immediately northeast of the recycling plant will be the Abermule Business Park. This will include six units for business, general industry and storage and distribution. A Surface Water Compensation Area will also be created in the southernmost field on site.

Works to construct access roads, sewers and services on site were carried out approximately 7-10 years ago under Powys County Council planning consent M/2002/113. Enhancement works to a pond located approximately 50 m southeast of the development site (P1) were carried out between February 14th and 28th of this year under a NRW Great Crested Newt Conservation Licence (Licence No: 78058:OTH:CA:20).

DEVELOPMENT JUSTIFICATION

The proposed recycling facility will increase the capacity and improve efficiency of the existing services offered by PCC by enabling bulking of paper, cardboard, cans, glass and plastic bottles donated by local residents. This is essential to ensure adherence with the current waste strategy for Wales, Towards Zero Waste (TZW), published by the Welsh Assembly Government in 2010. Currently, there are bulk recycling plants based in Brecon and Rhayader, leaving a need for a similar facility within the north of the county. Abermule, being central to the two largest populations in Montgomeryshire, provides the ideal location to satisfy this requirement.

The development also provides employment opportunities for the local area in line with the LDP allocation (P02 EA1). The Abermule Business Park has been allocated under Policy E1 (Employment Proposals on allocated Employment Sites), assigned for B1, B2 and B8 uses.

B.2 PLANNING HISTORY AND DETAILS OF PROPOSED WORKS

In 2003, planning consent was granted for the construction of vehicle access, estate road, sewers, services, footways and cycleways on site under application reference M/2002/113. Later in 2003, planning consent for the erection of a business centre was also approved under application reference M/2002/1134.

Full planning permission for the formation of a vehicle access, estate road, footways and associated works regarding the proposed business site was approved in December 2009 (P/2009/1162). Access routes into the site have subsequently been constructed.

Outline planning permission was granted in April 2010 for the construction of a prestige business park for office accommodation within Use Class B1 for research and development industries. Access was granted under planning application P/2009/1162, whilst appearances, landscaping, layout and scale remain reserved matters.

The current planning consent granted by PCC in August 2018 (Ref P/2018/0587) gives full consent for the proposed Recycling Bulking Facility and outline consent for the development of a business park comprising six units.

RECYCLING BULKING FACILITY – FULL PLANNING CONSENT

The proposed Recycling Bulking Facility will include construction of a bulking shed measuring approximately 48.4m x 33.9 m x 13.3 m in size; the height of the building reflects the need for tall refuse and recycling vehicles to enter and unload within the shed. The elevations and roof of the shed will be constructed from profiled steel cladding. Attached to the bulking shed will be a welfare / office and associated storage unit, measuring approximately 33.5 m x 6.4 m x 6.7 m. This unit will occupy offices, a print room, kitchenette and toilet facilities on the ground floor, as well as a training room, shower rooms, locker space and additional toilet facilities on the first floor. It is proposed for this unit to be rendered with black framed windows and doors.

A vehicle washing area, storage slab, and outdoor glass collection bay will be located along the site's western periphery. A weighbridge to the south of the site and a refuelling area, comprising of a 32,000L diesel tank, are also proposed.

Access to the site will be obtained via the existing spur road which was constructed in line with planning consent P/2009/1162. To improve site safety and the efficiency of unloading vehicles, the internal layout has been designed as a one-way system. A staff parking area, with the capacity to facilitate 33 vehicles, has been proposed towards the entrance of the site. An additional 28 parking spaces are also to be provided to the west of the bulking shed for use by refuse and recycling vehicles.

The existing woodland to the north and directly west of the site are to be retained and improved with native shrub planting and provision of hibernacula features. To the west of the existing woodland, a Surface Water Compensation Area is to be constructed and seeded with a species-rich, wetland meadow mix. The surrounding drier areas will be seeded with a species-rich, general-purpose meadow mix. Two ponds are also to be created within this area to help support the area's local great crested newt population.

BUSINESS UNITS – OUTLINE PLANNING CONSENT

Abermule Business Park will comprise of six units for B1 (Business), B2 (General Industry) and B8 (Storage or Distribution) use on site. The development is in line with the previous outline planning consent for the development of the site for a business park (P/2009/1353).

The access road serving the development has been constructed as detailed above. Adequate parking alongside the proposed business units is also to be provided in line with CCS Wales standards.

Appearance, scale and design of the site remain reserved matters.

B.3 ACTIONS REQUIRING LICENSING

To facilitate development, the following actions require licensing:

- Disturbing;
- Capturing;
- Translocating; and,
- Damaging or destroying a resting place.

To facilitate development of the Recycling Bulking Facility and Business Park, great crested newts will first need to be excluded from the site under a NRW Great Crested Newt Development Licence, to be applied for once planning permission is received and relevant planning conditions are discharged.

At present, the site is dominated by improved grassland with intermittent areas of native woodland and shrub. As great crested newts are known to be present within P1, located approximately 50 m southeast of the proposed site, these areas may be utilized by the local newt population as terrestrial or commuting habitat. It is therefore required for the site to be trapped and for any newts captured to be translocated to P1 as the designated receptor site.

Once trapping and translocation has been completed, the site can be stripped in preparation for development works. Due to the site's proximity to P1, this may be classed as destruction of a great crested newt resting place and therefore requires a licence before being undertaken.

Newts will be prevented from re-entering the site through the installation of permanent and temporary newt-exclusion fencing. Due to the presence of fencing, natural commuting routes by great crested newts may be disturbed, and a licence is therefore also required for this activity.

At the time of writing trapping and translocation has been completed and works associated with the commencement of works associated with the destructive search of terrestrial habitats have commenced for part of the site (Compartments 1 and 2 on Drawing C150856-01-Rev B). A further action requiring licensing, associated with the translocation of a section of roadside hedgerow to facilitate a visibility splay, has also been incorporated into the licensable works. The location of this work is shown on PCC Drawing 2395/P03/016 Rev A.

C SURVEY AND SITE ASSESSMENT

C.1 EXISTING INFORMATION ON GREAT CRESTED NEWTS AT THE SURVEY SITE

Up until the recent survey works conducted in association with the Abermule development proposal, there has been a limited record of great crested newt observations made on site.

Desk study research conducted by GLEC found the nearest great crested newt record to be approximately 2.1 km southwest of the site (2007). However, great crested newts were known to have been observed in a pond approximately 50 m southeast of the Abermule Business Park (P1) as part of surveys for earlier access and services works on site.

During the site's Preliminary Ecological Appraisal (PEA) conducted by GLEC in April 2017 (GLEC-0896a-01), a juvenile great crested newt was recorded underneath a piece of wood towards the northwest of the site. Great crested newt eggs were also found on vegetation in P1; these were noted to be a few days through their development cycle and were taken as confirmation of great crested newts breeding at the pond.

C.2 STATUTORY SITES KNOWN FOR THE SPECIES (SSSIs OR SACs) WITHIN 10 KM

MAGIC search results revealed there to be one SSSI (England), nine SSSIs (Wales) and one SAC (Wales) within a 10 km radius of the development site (Annexe 1). The nearest SSSIs were Montgomery Canal SSSI, approximately 400 m north of the site, and Hollybush Pastures SSSI, approximately 1.2 km north of the site. The Montgomery Canal is also designated as a SAC for its population of floating water plantain (*Luronium natans*).

Of the designated sites identified, one has been recorded to support great crested newts. Gregynog SSSI, approximately 7.1 km southwest of the site, is known to host a population of great crested newts, although the size of the population is not specified within the site's SSSI citation.

C.3 OBJECTIVES OF SURVEY

In May 2017, GLEC conducted a Great Crested Newt Survey and Mitigation Strategy for Abermule Business Park (GLEC-0896b-01). The survey included the aforementioned P1 and an additional pond (P2) located approximately 200 m northwest of the development site.

The objectives of this survey were as follows;

- To establish the presence or absence of great crested newts in ponds within 500 m of Abermule Business Park, Abermule, Powys, SY15 6ND.
- To estimate the great crested newt population size class assessment for the ponds surveyed where great crested newts were found to be present.
- To make appropriate recommendations according to the findings.

A copy of the GLEC survey report is appended to this method statement.

C.4 SCALED PLAN/MAP OF SURVEY AREA

The survey area included two ponds; P1, located approximately 50 m southeast of the development site, and P2, located approximately 200 m northwest of the site, across the A483. Both ponds are shown on Drawing C126868-03-01.

C.5 SITE / HABITAT DESCRIPTION

The details provided within the following site descriptions are based on the findings of the Preliminary Ecological Appraisal and Great Crested Newt Survey conducted by GLEC in April 2017 and May 2017 respectively. Both provided information based on day-time surveys and were conducted by suitably qualified ecologists (see Section C.6.3). A more recent description of P1 is also provided, following the completion of enhancement works at the site in February 2018.

General

The development site is approximately 3.75 ha and located within a semi-agricultural landscape just south of the village of Abermule. It consists of two sheep grazed fields separated by a stretch of existing broad-leaved woodland. Parcels of existing woodland also occupy the far north-eastern corner of the site, as well as a small area towards the centre of the site, parallel with A483. Works to construct access roads, sewers and services on site were carried out approximately 7-10 years ago under Powys County Council planning consent M/2002/113.

To the southeast, the site borders a single-track railway line on an embankment with a pond and sheep grazed fields. The northwest of the site is boarded by the A438 and B4386 roads, with grazed fields and the River Severn beyond.

Improved grassland is the dominant habitat on site with some small areas of amenity grassland along parts of the estate road, electricity sub-station and other services. There are three areas of broad-leaved woodland, as previously described, which include species such as silver birch *Betula pendula*, hawthorn *Crataegus monogyna*, elder *Sambucus nigra* and field maple *Acer campestre*. Towards the southeast of the site, there is approximately 575 m of intact native hedgerow, mainly consisting of hawthorn and hazel *Corylus avellana*.

Habitats identified to be most relevant to great crested newt ecology were two ponds (P1 and P2) located within 500 m of the development site and their immediate surroundings.

Pond P1

P1 is situated on the terrace of a north-facing slope approximately 50 m southeast of the development site (Grid Reference: SO15769410). It is oval in shape and is estimated to be more than 2,000 m² in area (Plates C.5.1 and C.5.2). The pond slopes gradually from the edges, reaching an approximate maximum depth of between 2 and 3 m. The substrate is dominated by solid stone and clay.



Plate C.5.1: P1



Plate C.5.2: P1 and surrounding landscape

Great Crested Newt Survey (May 2017)

At the time of the great crested newt survey, approximately 25% of the pond's surface was covered with vegetation. Numerous aquatic plant species were identified, including water mint *Mentha aquatica*, floating sweet grass *Glyceria fluitans*, water plantain *Alisma plantago-aquatica*, water forget-me-not *Myosotis scorpioides*, branched burr-reed *Sparganium erectum*, brooklime *Veronica beccabunga* and patches of blanket weed *Spirogyra* sp. Several common bird species, or evidence of, were also identified on site, including mallards *Anas platyrhynchos* and coots *Fulica atra*.

The pond was noted to be surrounded by heavily-grazed grassland and hedgerow, with some interspersed patches of scrub and woodland. Trees located on a bank to the southeast of the pond cast some shade over the water's surface. Potential refuge sites for great crested newts were identified in a pile of discarded fence posts and timber to the south-east of the pond, as well as holes in tree roots in the nearby woodland. The water was identified as being polluted from the storage of old silage bales and burnt waste in the surrounding area.

Post-Enhancement Works (March 2018)

Following the provision of a Great Crested Newt Conservation Licence from Natural Resources Wales in January 2018 (Licence No: 78058:OTH:CA:20), enhancement works were completed at P1 as part of the mitigation works associated with the Abermule Business Park development. Enhancement works did not impact the pond directly but instead focused on improving the pond's immediate surroundings and reducing the potential for declines in water quality through the removal of grazing pressure. Enhancement work completed is shown on PCC Drawing 2395/M02/003-Rev B at the end of this report.

Overgrazing and poaching of the pond's marginal edges was identified as a significant issue for P1 and so was addressed as a priority for management under the mitigation works. To this end, approximately 240 m of double stock-proof fencing was installed around the perimeter of the pond and the surrounding area (Plate C.5.3). Two seven-bar, galvanized steel gates were also installed to allow access for future management works.

To ensure provision of suitable hibernation and refuge habitat for great crested newts, three hibernacula were created on site (Plate C.5.4). These were constructed by filling cleared areas with split logs, dead wood and brick rubble. Retained topsoil and turf from the construction area were then applied to form a cover, with gaps left to allow herpetofauna to access the feature.

Approximately 200 m of native hedgerow was planted along all but the site's south-eastern boundary where an existing hedgerow already stands (Plates C.5.3 and C.5.5). Planting encompassed two staggered rows of hedgerow of mixed species, including hawthorn, hazel, blackthorn *Prunus spinosa*, field maple and common holly *Ilex aquifolium*. Approximately 50 individual native shrubs were also planted sporadically across the site in order to improve the area's connectivity and provide additional refuge sites for great crested newts (Plate C.5.6).



Plate C.5.3: Stock-proof fencing surrounding P1



Plate C.5.4: Hibernaculum at P1



Plate C.5.5: Native hedgerow planting at P1



Plate C.5.6: Native shrub planting at P1

Pond P2

P2 is located approximately 200 m northwest of the development site, across the A483, and is surrounded by grazed pasture fields (Grid Reference: SO15359419). It is a small, shallow pond, approximately 600 m² in area, with a soft clay and silt substrate.

Great Crested Newt Survey (May 2017)

At the time of surveying, P2 was contained within double fencing and so no grazing had taken place along the pond edges. The margins were instead occupied by patches of sweet flag *Acorus calamus*. Willow scrub, mature ash *Fraxinus excelsior* and oak *Quercus robur* trees shaded the pond on all but the north side. Fallen branches and holes under nearby trees surrounding the pond were noted as possible hibernacula and refuge sites and great crested newts.

Water beetles and evidence of coots were also noted on site. Aquatic plants identified included water plantain and gypsywort *Lycopus europaeus* and mats of floating sweet grass in areas of the water's surface that were less shaded.

Habitat Suitability Index

During the Great Crested Newt Survey, P1 and P2 were visually assessed for their suitability to support great crested newts using the Habitat Suitability Index (HSI) developed by Oldham et al (2000) and revised by ARG UK (2010). The HSI is a numerical index between 0 and 1, wherein a score of 1 represents optimal habitat for great crested newts. The HSI score is used to define the suitability of the pond on a categorical scale (Table C.1). It should be noted, however, that the system is not precise enough to allow the conclusion that a pond with a high score will support great crested newts whilst those with a low score will not.

HSI Score	Pond Suitability
< 0.5	Poor
0.5 – 0.59	Below average
0.6 – 0.69	Average
0.7 – 0.79	Good
> 0.8	Excellent

Table C.1: HSI Scoring

The HSI is given by assigning a quantitative figure to each of 10 variables thought to affect great crested newts, such as pond area, water quality and level of shading. The tenth root of the product of these variables is then calculated, giving a figure for habitat suitability.

Table C.2 provides a summary of the HSI scores calculated for both P1 and P2.

Pond Ref.	HSI Category										HSI Score
	SI 1	SI 2	SI 3	SI 4	SI 5	SI 6	SI 7	SI 8	SI 9	SI 10	
P1	0.5	-	0.9	0.67	1	0.67	1	0.7	0.67	0.55	0.74 (Good)
P2	0.5	1	1	0.67	0.6	0.67	1	0.7	0.67	0.5	0.72 (Good)
Key: SI 1 – Location SI 2 – Pond Area SI 3 – Pond Drying SI 4 – Water Quality SI 5 – Shade SI 6 – Waterfowl SI 7 – Fish SI 8 – Ponds Within 1km SI 9 – Terrestrial Habitat SI 10 – Macrophytes											

Table C.2: Habitat Suitability Index Scores for P1 and P2

C.6 FIELD SURVEY

C.6.1 Methods

The site surveys were designed by GLEC using standard techniques based on the guidance and information in JNCC (1993), English Nature (2001), Natural England government website advice (2015) and ARG UK Advice Notes 4 (2017) and 5 (2010).

Following the identification of two ponds within 500 m of the site during desk study research, an initial site visit was made to both P1 and P2 to conduct a habitat suitability evaluation for great crested newts as per ARG UK Advice Note 5, the results of which are discussed in Section C.5.

As the results of the Preliminary Ecological Appraisal conducted onsite had already revealed great crested newts be present at P1, this site was assessed using a population size class assessment survey. No previous assessment had been undertaken on P2 and so this was assessed using a presence/absence survey. Three guideline surveying methods were used:

- Bottle trapping
- Torching
- Egg searching

As developing great crested newt eggs were identified at P1 during the Preliminary Ecological Appraisal conducted on site, P1 was already concluded to be a confirmed great crested newt breeding pond. Consequently, no further egg searches were conducted during the surveys at P1 as unfolding leaves can increase the chances of predation on egg and larvae.

In accordance with recommended guidelines, a total of six surveys were completed at P1 and four at P2. Each survey involved the evening setting of bottle traps, where water depth allowed, and torching later into the evening when conditions were sufficiently dark. P1 was set with 62 traps each and P2 was set with 58 traps for all but the fourth survey when a reduced water level meant only 46 traps could be set. Each pond was revisited the following morning to recover the traps and begin egg searches.

C.6.2 Timing and weather conditions

Weather conditions during the time of the surveys were recorded and are presented in Table C.3.

Visit Number	Date	Time	Temperature (°C)	Cloud Cover (%)	Wind Force (Beaufort)	Precipitation
1	18/04/17	pm	11	40	F1	Dry
	19/04/17	am	13	40	F1	Dry
2	20/04/17	pm	12	60	F1-F2	Showers
	21/04/17	am	13	80	F1-F2	Dry
3	29/04/17	pm	11	80	F2	Dry
	30/04/17	am	13	100	F1-F2	Showers
4	01/05/17	pm	13	100	F2	Showers
	02/05/17	am	13	40	F1-F2	Dry
5	06/05/17	pm	11	100	F1-F2	Showers
	07/05/17	am	14	40	F1	Dry
6	11/05/18	pm	14	40	F1	Dry
	12/05/18	am	14	100	F1-F2	Showers

Table C.3: Weather Conditions During GLEC Ltd. Great Crested Newt Surveys 2017

C.6.3 Personnel and equipment

The surveys undertaken at P1 and P2 were conducted by Gerald Longley, (Licence No: NRW GCN 71877a:OTH:SA:2017 inc. box traps) and Mary Thompson (Licence No: NRW 69483:OTH:SA:2016).

Gerald Longley BSc. ACIEEM has more than 25 years' experience of working in wildlife conservation, including positions as a conservation officer for both the Montgomeryshire Wildlife Trust and the Shrewsbury Countryside Unit, and more recently becoming the director and principal ecologist of GLEC. As a result, he has gained experience as a field surveyor for birds, bats, dormice, reptiles, amphibians, as well as habitats, vegetation and higher plants. This has enabled his successful acquisition of licences to survey bats and great crested newts (including box traps), dormice in England and Wales and barn owls in England only.

Mary Thompson MSc. MCIEEM has been a senior ecologist for GLEC for five years. Prior to this, she worked as site ecologist for E.ON for almost ten years where her role involved ensuring project compliance with relevant protected species legislation for the species found on the site, which included great crested newts and other amphibians, reptiles, bats, otters and badger.

Torches used during the great crested newt evening surveys were Cluson Clulite CB2.

C.6.4 Observations

No non-native species, evidence of fish, or features which may cause incidental killing or capture of great crested newts were noted during the surveys of P1 or P2.

C.6.5 Survey constraints

No major constraints were encountered during the surveys of P1 or P2.

Minor constraints included a drop in minimum temperature to 4.5°C during surveys conducted on April 18th, 2017 and May 1st, 2017, thus falling below the minimum temperature guideline of 5°C. However, data logger records show that temperatures remained above 5°C for the vast majority of the night on both occasions.

Parts of the perimeter for both ponds (approximately 14% on P1 and 25% of P2) were not accessible due to slopes, soft ground and dense scrub and so, in these sections, bottle traps could not be set.

High water turbidity during the second, third and fourth visit to P2 meant torching could not be carried out. Reduced water levels at P2 also meant that the number of bottle traps set were reduced by 12 during the fourth visit.

C.7 SURVEY RESULTS

In addition to the newts recorded during the great newt surveys, a single great crested newt and palmate newt were recorded during the Preliminary Ecological Appraisal conducted in April 2017. These were located towards the northwest of the proposed development underneath woody debris.

The results of the 2017 great crested newt surveys are summarised in sections C.7.1, C.7.2 and Drawing C126868-03-02.

C.7.1 Bottle trap and torch light survey results

Results from GLEC bottle trap and torch light surveys of P1 and P2 conducted in May 2017 are presented in Table C.4 below.

Survey	P1			P2		
	Bottle Trap	Torch Light Survey	Maximum GCN Count using a Single Technique	Bottle Trap	Torch Light Survey	Maximum GCN Count using a Single Technique
1st Survey 18-19/04/2017	1 GCN 2 SN 1 PN	0 GCN 4 SN/PN	1	0 GCN 0 SN 0 PN	No newts seen	0
2nd Survey 20-21/04/2017	3 GCN 4 SN 2 PN	1 GCN 6 SN/PN	3	0 GCN 0 SN 0 PN	No torching – water too turbid	0
3rd Survey 29-30/04/2017	12 GCN 6 SN 5 PN	2 GCN 7 SN/PN	12	0 GCN 0 SN 0 PN	No torching – water too turbid	0
4th Survey 01-02/05/2017	4 GCN 1 SN 9 PN	2 GCN 9 SN/PN	4	0 GCN 0 SN 0 PN	No torching – water too turbid	0
5th Survey 06-07/05/2017	11 GCN 7 SN 8 PN	1 GCN 3 SN/PN	11	No newts found during four survey visits – no further visits were made.		
6th Survey 11-12/05/2017	3 GCN 16 SN 23 PN	2 GCN 9 SN/PN	3			
Key						
GCN Great Crested Newt (<i>Triturus cristatus</i>)						
SN Smooth Newt (<i>Triturus vulgaris</i>)						
PN Palmate Newt (<i>Lissotriton helveticus</i>)						

Table C.4: Great Crested Newt Survey Results for P1 and P2

Great crested newts were recorded during all six surveys conducted at P1. A maximum of 12 individuals were recorded during the third survey through use of bottle traps. Consequently, P1 can be categorised as hosting a medium sized great crested newt population (maximum counts between 11 and 100) (English Nature, 2001). Palmate and smooth newts were also recorded on all six surveys with maximum counts of 23 and 16 respectively.

No newt of any species was found during any of the four survey visits conducted at P2.

C.7.2 Egg searching survey results

As developing great crested newt eggs were identified at P1 during the Preliminary Ecological Appraisal conducted on site, P1 was already concluded to be a confirmed great crested newt breeding pond.

Consequently, no further egg searches were conducted during the surveys at P1. However, more folded leaves were evident during the emptying of traps.

P2 was egg searched on each morning survey. Despite the presence of good egg laying plant material for great crested newts, mostly *Glyceria fluitans*, no eggs were found during any of the four surveys.

C.8 INTERPRETATION AND EVALUATION OF SURVEY RESULTS

C.8.1 Presence/absence

Great crested newts were confirmed to be present within P1.

The results of the survey undertaken at P2 determined there to be an absence of great crested newts. This was to be expected as no great crested newts had been recorded at the site previously. Pond 2 is also not deemed to be easily accessible from P1 and so does not promote connectivity for the existing population at Pond 1 between the two sites.

C.8.2 Population size class assessment

P1 was the only location found to support great crested newts and so is considered to host the only population on site. During the population class assessment undertaken at P1, a maximum count of 12 great crested newts were caught via bottle trapping on April 30th, 2017. This therefore categorises P1 as hosting a medium size great crested newt population (maximum counts between 11-100) (English Nature, 2001).

C.8.3 Status of site and population significance

An estimated count of at least 12 adult newts for an area of this size is classified as a 'medium' population under English Nature Guidelines (2001), although it is at the lower end of this size class range. It is expected that any survey will only account for around 2-30% of a population (English Nature, 2001) as many newts will be well-hidden in crevices or weeds, under walls or underground.

The terrestrial habitat surrounding P1 was not originally considered to be high quality, largely consisting of heavily grazed grassland with some parcels of hedgerow, scrub and woodland towards the outer perimeter. However, recent enhancement works have vastly improved the site's suitability for great crested newts. The installation of stock-proof fencing has removed grazing pressure from the pond's immediate surroundings, allowing it to develop into a desired tussocky structure. The planting of scrub and hedgerow, as well as the construction of three hibernacula sites, has also provided additional resting, hibernating and foraging habitat. The hedgerows also provide corridors for accessing more distant terrestrial habitat, including the outer scrub and woodland.

The aquatic habitat within the development site is generally of moderate value for great crested newts, consisting of single medium sized pond that provides foraging opportunities. Evidence of breeding was recorded during the survey increasing the site's value for this species.

The site is unlikely to contribute to connectivity of populations in the wider area, as the nearest great crested newt record found during the PEA desk study completed by GLEC was approximately 2.1 km southwest of the site (2007). The closest designated area for great crested newts within a 10 km radius is then approximately 7.1 km southwest of the site. However, this makes the pond a significant feature in being one of only a few sites known within the local area to support great crested newts.

C.8.4 Constraints

There was a drop in minimum temperature to 4.5°C for two evening survey visits, which falls below the minimum guidelines of 5°C. However, data logger records showed that the temperatures remained above 5°C for much of the night and as great crested newts were recorded on both nights, this was not considered to have had an effect on the overall results of the survey.

Parts of the perimeter for both ponds (approximately 14% on P1 and 25% of P2) were not accessible due to slopes, soft ground and dense scrub and so, in these sections, bottle traps could not be set. Although this may have meant that more great crested newts could have been captured from P1 than was recorded, this was unlikely to increase the population size enough to qualify for a higher population classification (see Section C.7). It was also considered unlikely that trapping within the additional 25% of the perimeter for P2 would have resulted in great crested newts being found as none were captured within the 75% of the perimeter used during any of the four surveys.

High water turbidity during the second, third and fourth visit to P2 meant torching could not be carried out. Reduced water levels at P2 also meant that the number of bottle traps set were reduced by 12 during the fourth visit. As no great crested newts were captured within any of the bottle traps set or observed during the first torching survey, these limitations are not thought to have had an impact on the final result.

DRAFT

D IMPACT ASSESSMENT

D.1 SHORT TERM IMPACTS: DISTURBANCE

In the absence of any mitigation or compensation measures there are several potential short-term impacts that could arise from site preparation, enabling and construction works. Predicted areas of impact are highlighted on Drawing C126868-03-03 at the end of this report.

There will be no loss of, or disturbance to, any great crested newt breeding ponds or any other aquatic habitat because of the proposed development. The adjacent P1 is raised above the proposed development area, therefore there are no obvious pathways through which impacts such as pollution could occur. The pond is also separated from the development area by a small railway line, so no encroachment by construction vehicles is predicted.

The project will, however, require the clearance of existing terrestrial habitat in the form of improved pasture within the areas proposed for the Business Park, Recycling Bulking Facility and Flood Compensation Area. This will result in the loss of 2.77 hectares of terrestrial habitat, of which 2.059 hectares will be permanently lost to development and 0.714 hectares will be temporarily lost and reinstated once the Surface Water Compensation Area has been created.

In addition to the predicted loss of habitat from site clearance activities, the proposed works could also result in the direct killing or injury of any great crested newts that may be present within the areas of habitat to be cleared.

Translocation of 100 m of existing roadside hedgerow is proposed to facilitate a visibility splay into the site. This hedgerow is located 250 m from pond P1 and the risk of disturbance to great crested newts is considered to be low, however as a precaution it has been incorporated into the schedule of licensable actions. The location of this work is shown on PCC Drawing 2395/P03/016 Rev A.

In the absence of avoidance, mitigation and compensation measures the proposed works could have a moderate adverse impact on the favourable conservation status of the great crested newt population breeding in P1. Without mitigation, the proposed development would also result in a breach of wildlife legislation.

D.2 LONG TERM IMPACTS: SITE MODIFICATION

Most of the proposed development will result in habitat loss rather than modification (described in Section D.2) because of the conversion of areas of improved pasture to the built environment. No modification of breeding P1 or any of the surrounding terrestrial habitat to the east of the railway line is predicted.

The proposed creation of a flood compensation area within the southern region of the development area is a positive modification of the existing habitat, as this will involve the conversion of an existing area of grazed pasture into an area of damp grassland that is considered likely to be of increased value to great crested newts. This area, which will be temporarily lost because of works to lower site levels, will be reinstated with habitats of greater value than those currently existing.

Overall the proposed modification of the site is considered to have a minor beneficial impact on the favourable conservation status of the great crested newt population.

Table D1 provides a summary of total areas of habitat to be modified within varying radii from known great crested newt breeding ponds. These radii represent immediate, intermediate and distance terrestrial habitat from breeding ponds respectively.

Distance from Great Crested Newt Ponds (m)	Area of Habitat to be Modified (ha)
0-50	-
50-250	0.714
250-500	-

Table D1: Area of Habitat to be Modified within Buffers of Great Crested Newt Ponds

Translocation of 100 m of roadside hedgerow will result in a minor, temporary modification of distant terrestrial habitat.

D.3 LONG TERM IMPACTS: SITE LOSS

In the absence of avoidance or mitigation the proposed development will result in the permanent loss of 2.059 hectares of terrestrial habitat. There will be no loss of aquatic habitat because of the proposed development.

Distance from Great Crested Newt Ponds (m)	Area of Habitat to be Lost (ha)
0-50	0.015
50-250	2.044
250-500	-

Table D.2: Area of Habitat to be lost within Buffers of Great Crested Newt Ponds

D.4 LONG TERM IMPACTS: FRAGMENTATION AND ISOLATION

The proposed Recycling Bulking Facility and Business Park areas will both be dominated by the built environment, and will therefore both provide a degree of severance of habitat. It is, however, proposed that a band of plantation woodland to the southwest of the Recycling Bulking Facility will be retained and enhanced, and will continue to provide a corridor through which great crested newts and other amphibians will be able to move through the site. Once reinstated great crested newts will also be able to move through the Surface Water Compensation Area in the southern region of the site.

Overall the scale of the fragmentation impact is considered to be minor, as there will only be a partial barrier to dispersal because of the proposed development. No isolation of aquatic or terrestrial habitat is predicted.

D.5 POST-DEVELOPMENT INTERFERENCE IMPACTS

The most likely source is post-development interference impacts on the great crested newt population is considered to be the site drainage strategy. A permeable paving solution was originally investigated for the site; however, this was found to be infeasible as it would not ultimately remove the need for features such as gullies and drainage channels to be installed. As such, it is proposed that a modified version of the standard drainage solutions will be implemented on site, to include a combination of:

- Gully pots and drainage channels to be set a minimum of 100 mm away from the kerb line, often within the centre of paved areas;
- Drainage channels to be provided with 'Heelguard' gratings to reduce the size of the slot opening;
- Angled kerbstones to be used throughout the entire site; and,
- Gullies to be provided with 'newt ladders'.

This strategy was designed in consultation with the project ecologist to minimise the potential for impacts on the great crested newt population. A standard drainage solution with no modifications could have a moderate adverse impact on the newt population, however the modified approach is considered to reduce the level of risk to low.

Although the development at Abermule Business Park is not residential, the raised level of anthropogenic activity within the site and its immediate surroundings will result in a minor increase the potential for disturbance of the great crested newt habitat. Those areas of habitat of highest value, however, are unlikely to be accessed. Furthermore, the lack of residential development on site means that the potential for increases in predation by domestic pets is non-existent.

D.6 PREDICTED SCALE OF IMPACT

Overall it is predicted that, in the absence of any avoidance or mitigation, the proposed development could result in a moderate adverse effect on the great crested newt population that is known to breed in P1. The main adverse impacts that are likely to occur include loss of terrestrial habitat and potential killing or injury of individual great crested newts, and minor fragmentation from the built environment and disturbance from site drainage proposals. Creation of the Surface Water and Ecology Compensation Area alone is considered to be a beneficial impact, but the overall impact considered in combination is still likely to be adverse before avoidance or mitigation is considered.

The scale of impact is likely to be significant at the site level and within a 2 km radius, however impacts at a 10 km geographical scale or beyond are considered to be negligible. This is due to the relatively small population size and the known presence of other populations of great crested newts in the wider area that will not be impacted by the proposed development.

E MITIGATION, COMPENSATION AND MONITORING

The mitigation, compensation and monitoring proposals described in this chapter have been designed by a suitably qualified ecologist with over 10 years of experience in designing and implementing ecological mitigation. Mitigation proposals have been designed to ensure that the favourable conservation status of the great crested newt population is maintained and enhanced.

E.1 GREAT CRESTED NEWT CAPTURE AND EXCLUSION

A programme of capture, exclusion and translocation will be implemented to ensure that great crested newts are removed from any areas of the site in which they could be injured or killed prior to any works commencing. Trapping will include all terrestrial habitats to be impacted by the development. This is to include temporary fencing around the water compensation area, the Recycling Bulking Facility and the Business Park individually. Within each individual unit, drift fencing is also to be installed to segment the development area and consequently aid trapping efforts. For the water compensation area and the Business Park, the fencing will be removed upon the completion of works. For the Recycling Bulking Facility, temporary fencing will be replaced with permanent fencing upon completion of the works. This is to ensure newts do not utilise stored green waste and other materials that likely to be on site during its operation, as hibernacula.

Standard temporary herpetofauna exclusion fencing will be used to enclose areas to be trapped out. Drift fencing will be installed to sub-divide trapped areas and facilitate trapping, and a combination of pitfall traps and carpet tiles will be used to capture newts. All work will be undertaken in accordance with the best practice specification for newt fencing and trapping, as described by English Nature (2001). An extract from this guidance is provided as Figure E.1.

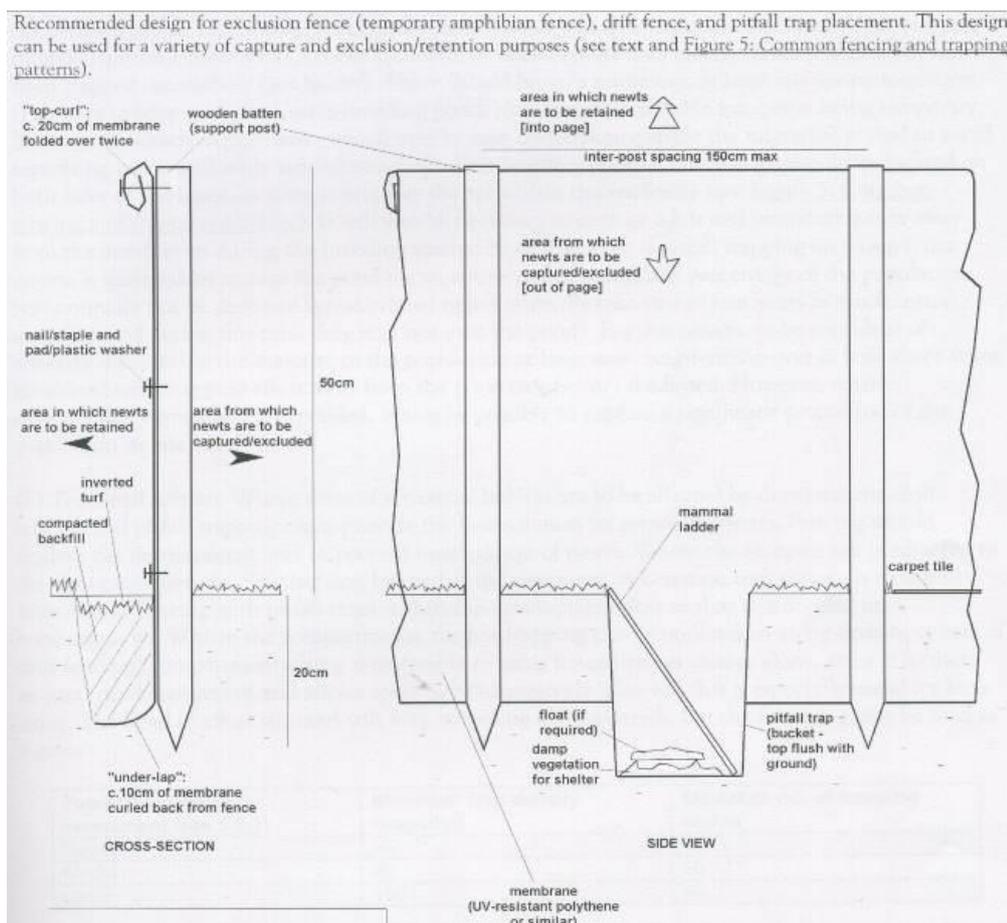


Figure E.1: Fencing Specification from Great Crested Newt Mitigation Guidelines (English Nature, 2001)

Although the baseline survey work completed in 2017 identified that P1 supported a medium population size class, due to the relatively low value of terrestrial habitats on site (dominated by grazed pasture) and the fact that the population was at the low end of the of 'medium' class range, it is proposed that a reduced trapping

effort be undertaken. Subject to agreement with Natural Resources Wales, it is proposed that a trapping period of a minimum of 30 days will be implemented (this has previously been discussed with Matthew Ellis at NRW). Once the 30 day trapping period is completed, drift fencing will be removed under ecological supervision and habitats will be subject to a destructive search during the active period for newts in order to allow any remaining newts to be located. Cells will then be classed as 'newt free', provided the perimeter exclusion fencing remains intact.

Details of the proposed capture and exclusion methods are shown on Drawing C126868-03-04 at the end of this report. Table E.1 provides a summary of the proposed capture, exclusion and translocation works associated with the development.

Action	Use method?	Minimum capture effort (days)
At pond: bottle-trap, net, hand search &/or drain down	No	-
At pond: ring-fence, pitfall trap (+ fence & refuges)	No	-
Away from pond: hand search	Yes	5
Away from pond: destructive search	Yes	5
Away from pond: fence, pitfall trap (+ fence & refuges)	Yes	30
Away from pond: night search	No	-
Away from pond: exclusion fence only (no capture)	No	-
Other or additional method(s)	-	-

Table E.1: Capture, Exclusion and Translocation Proposals

The programme of fencing, trapping and translocation is scheduled to commence in September 2018. Should it not be possible to complete the full 30 day trapping period in 2018 prior to the weather becoming too cold, work will recommence in March 2018 assuming weather conditions are suitable.

Any newts or other amphibians captured during the trapping programme will be moved into the part of the receptor area nearest to their point of capture. The receptor area for any great crested newts captured during the trapping exercise will be the area surrounding P1, which has recently been subject to enhancement works in accordance with NRW Conservation Licence 78058:OTH:CA:2018. The scope of enhancement work undertaken is described in Section C.5.

The location of the receptor area in relation to the application site is shown on Drawing C126868-03-04. The receptor site is vegetated with formerly grazed grassland, which has now been stock-fenced and will be allowed to develop a tussocky structure. The stock fencing will also prevent livestock poaching and grazing of the margins of the pond. Additional enhancement of the area surrounding P1 included the planting of new native hedgerow, pockets of native scrub and the creation of three new hibernacula.

The above trapping and translocation activities were completed in suitable weather conditions between September and December 2018. A report of trapping results and weather conditions, including both the trapping period and destructive search work, will be submitted to NRW by 31 January 2020.

It is proposed that, upon completion of the development of the Recycling Bulking Facility within the central region of the site (Compartment 2 on Drawing C150856-01-Rev C), the temporary fencing will be replaced with permanent exclusion fencing to permanently prevent herpetofauna from accessing this part of the site. This is because this area will not offer any aquatic or terrestrial habitat features, and the level of on-site activity predicted represents a significant risk of harm to great crested newts if they are allowed to access the facility. All work to install permanent fencing will be completed concurrently with the removal of the temporary perimeter fencing, under the direct supervision of a suitably qualified ecologist. This work can only be completed in suitable weather conditions, generally between March and October inclusive.

To ensure that the exclusion fencing remains in good condition until the development work commences, it is proposed that a suitably qualified ecologist from MEL will complete a monthly walkover to inspect the fence lines and to carry out any repair works that are considered necessary. The aim of this exercise is to ensure that the fencing continues to provide an intact barrier to prevent encroachment of herpetofauna into the site. Should any additional maintenance works be required, e.g. spraying of vegetation along fence lines, this will be arranged. When development works are taking place, a daily checks of the fencing will be completed by

either a representative of PCC or by the principal contractor undertaking development works. A log of all fence monitoring and maintenance checks will be kept.

As described above, a programme of fencing, trapping and translocation was undertaken between September and November 2018 inclusive. Due to the onset of cold weather and subsequent delays to the project timetable, the destructive search element of the licensed mitigation was delayed and commenced in suitable weather conditions on 7th October 2019. The approach to the destructive search was discussed and agreed at a liaison meeting on 20th August 2019 and during subsequent correspondence between NRW, PCC and Middlemarch.

The destructive work will be divided into two broad stages:

1. Work Commencing October 2019: Clearance of area required to allow the construction of the Surface Water and Ecology Compensation Area (Compartment 1 on Drawing C150856-01-Rev C) and the Recycling Bulking Facility (Compartment 2 on Drawing C150856-01-Rev C). Compartment 2 also includes the area proposed for future business park development as this will be used as a compound by the contractors.
2. Work Commencing March 2020: Clearance of the north-eastern field (Compartment 3) and the area surrounding the old road, currently containing stored farm materials, debris and understood to contain asbestos (Compartment 4).

Access into the compartments will be controlled through the use of a combination of gates and newt grids, to be installed under ecological supervision.

Works Commencing October 2019

Clearance of Compartments 1 and 2 will comprise the following stages:

- a) Installation of new lengths of herpetofauna fencing as a precautionary measure to delineate Compartments 1 and 2. This will be completed by an approved contractor under the direct supervision of a suitably qualified ecologist, who will complete a fingertip search of fence lines prior to the fencing being installed.
- b) Completion of initial grassland management to a height of 150 mm above ground level. This will be completed under ecological supervision, with cuttings carefully raked into windrows and subject to a fingertip search by a suitably qualified ecologist.
- c) Second cut of vegetation to ground level, again under the direct supervision of a suitable qualified ecologist who will carefully search the areas to be cleared using a combination of hand searches and sensitive raking of vegetation.
- d) Supervised topsoil strip. This will be undertaken using two techniques:
 - a. Use of a tracked excavator to clear topsoil within with 'high risk zone', comprising a 5 m band adjacent to the perimeter newt fencing. Areas will be methodologically hand searched by a suitably qualified ecologist, who will then allow the excavator to carefully clear small sections in a phased manner.
 - b. Use of a small bulldozer to clear topsoil in the central region of the site. This will be preceded by a methodical hand/rake search by a suitably qualified ecologist prior to allowing the machine to clear small sections in a phased manner.
- e) A final hand search of arisings from the topsoil strip process will be completed by a suitably qualified ecologist.

All site workers will be subject to an appropriate site induction that will include information about ecological sensitivities and constraints. No work will be permitted to proceed without a suitably qualified ecologist. Any great crested newts or other fauna found will be translocated to the approved receptor area around Pond 1 shown on Drawing C150856-01-Rev C.

A weather station and datalogger will be installed on site during w/c 7th October 2019. Data from this unit will be used to inform whether or not activities can proceed.

Once the topsoil strip has been completed to the satisfaction of the supervising ecologists, the compartments will be considered to be 'newt free' provided that the perimeter newt fencing is maintained in good condition.

A written report of these actions will be provided to NRW by 31st October 2019. This work has been completed.

Additional Works for Either November 2019 (weather dependent) or March 2020

It is necessary to relocate a 40 m section of existing perimeter fence c. 1.5 m to the west to provide a working corridor to allow the contractors to deliver the development. This will only be completed in suitable weather conditions, to be informed by the on-site weather station. The area of habitat to be impacted by this work comprises a section of field margin and woodland edge, which will be subject to a comprehensive fingertip search by a suitably qualified ecologist. The removal and reinstallation of the fence line will be completed by an experienced contractor under the direct supervision of a suitable qualified ecologist.

This work was completed in suitable weather conditions on 28th November 2019. Mike Doughty-Lee (Accredited Agent) supervised the work.

Works Commencing March 2020

Clearance of Compartments 3 and 4 will follow the same methods described above, with the following differences:

- a) Additional carpet tiles will be installed within Compartments 3 and 4. These tiles will be subject to daily checking for a period of at least 7 consecutive days prior to any clearance works commencing. These checks are an added precautionary to increase the efficacy of the capture effort for two reasons: due to the time that has elapsed since the initial trapping was completed and due to the presence of complex piles of material within Compartment 4 that could be concealing herpetofauna. Daily checks will only be completed in the active period for great crested newts (to be informed by local weather conditions from the on-site weather station) and will be completed by a suitably qualified ecologist.
- b) Waste materials present in Compartment 4 will be carefully removed under direct supervision of a suitably qualified ecologist. The ecologist will complete a hand search for great crested newts and other fauna. No work will be completed in areas containing asbestos until the risks are fully understood and appropriate control measures are in place.

Once the above works are completed a phased process of supervised vegetation management and topsoil tripping will be completed.

E.2 GREAT CRESTED NEWT HABITAT

E.2.1 Receptor Site Modification, Enhancement or Creation

As described above, enhancement of the receptor site was completed in January and February 2018 under NRW Conservation Licence 78058:OTH:CA:2018. No further enhancement in this area is planned at present, however the area has been included in a Habitat Management Plan that has been compiled for the site (Report RT-MME-127496).

The extent of habitat enhancement work completed near Pond 1 is shown on Powys County Council Drawing 2395/M02/003 Rev B.

In addition to the enhancement works around P1 that have already been completed, the following additional habitat creation and enhancement work has been built into the design of the proposed development:

- Creation of a Surface Water Compensation Area measuring 0.31 hectares (excluding ponds) within the southernmost field on site.
- Construction of two new wildlife ponds, designed for use by great crested newts, within the Surface Water Compensation Area.
- Retention and enhancement of existing woodland and scrub vegetation on site.
- Creation of 8 hibernacula utilising materials arising from the construction work, e.g. tarmac and rubble from the breaking up of the Old Road.

Each of these measures is described in greater detail below. Powys County Council Drawing 2395/P03/009 shows the landscaping and ecology proposals for the site.

Surface Water and Ecology Compensation Area

The south-westernmost field on site is currently occupied by improved grazed pasture, and is bordered by intact native hedgerow along two sides and a small block of early-mature plantation woodland on the north-eastern boundary. This area will be excavated to create a basin area, which will subsequently be seeded with a species rich wetland meadow mix, e.g. Emorsgate Mix EM8. It is not anticipated that this area will hold water

regularly, however two ponds will be created within the grassland (described below). The grassland will, however, provide valuable terrestrial habitats for newts and other amphibians.

New Wildlife Ponds

Two new ponds, designed to hold permanent water, will be dug within the Surface Water Compensation Area, in the locations shown on Drawing 2395/P03/009. These ponds will be c. 300 m² in area, and will be designed in accordance with the ideal profile shown on Figure E.2. The aim of this design is to provide both shallow shelves and areas of deeper water suitable for use by great crested newts during various stages of their breeding cycle. These ponds will be in addition to the required volume of the surface water compensation.

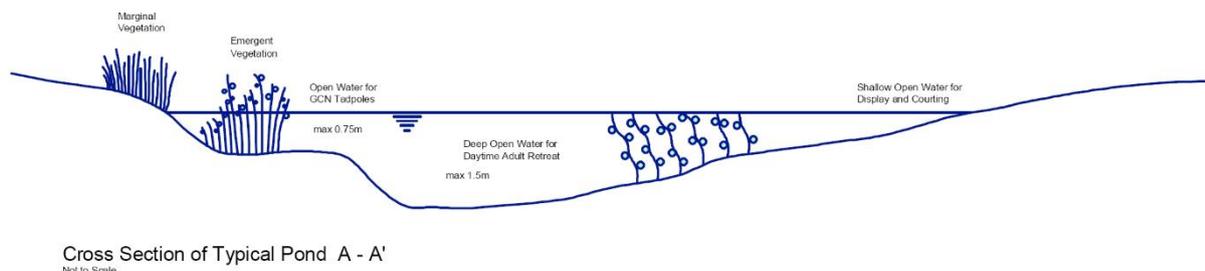


Figure E.2: Idealised Cross Section for New GCN Ponds

The ponds will be planted with native marginal, aquatic and emergent species in order to maximise value to great crested newts by providing shelter and egg-laying features. Recommended species are detailed in Table E.2. All planting should be from approved sources and of native provenance.

English Name	Latin Name
Amphibious bistort	<i>Polygonum amphibium</i>
Brooklime	<i>Veronica beccabunga</i>
Greater spearwort	<i>Ranunculus lingua</i>
Marsh marigold	<i>Caltha palustris</i>
Meadowsweet	<i>Filipendula ulmaria</i>
Pond sedge	<i>Carex riparia</i>
Purple loosestrife	<i>Lythrum salicaria</i>
Soft rush	<i>Juncus effuses</i>
Water forget-me-not	<i>Myosotis scorpioides</i>
Water milfoil	<i>Myriophyllum spicatum</i>
Water mint	<i>Mentha aquatica</i>
Water plantain	<i>Alisma plantago-aquatica</i>
Water soldier	<i>Stratiotes aloides</i>
Yellow flag iris	<i>Iris pseudacorus</i>
White water-lily	<i>Nymphaea alba</i>
Common water starwort	<i>Callitriche stagnalis</i>
Hornwort	<i>Ceratophyllum demersum</i>
Water crowfoot	<i>Ranunculus hederaceus</i>

Table E.2: Suitable Emergent, Marginal and Submerged Vegetation for GCN Ponds

During a liaison meeting held with NRW on 26th November 2019, it was agreed that, if possible, it would be beneficial to plant native black poplar as around the periphery of the Surface Water and Ecology Compensation Area.

Retention and Management of Woodland and Scrub

Existing areas of woodland and scrub vegetation located between the Surface Water Compensation Area and adjacent to the Old Road will be retained and enhanced through the implementation of a programme of management. MEL has produced an Ecological Compliance Schedule and Habitat Management Plan for the site (RT-MME-127496), a copy of which is submitted with this application. The aim of the woodland and scrub management is to maintain natural habitats with diverse structure.

It is also proposed that existing shrub planting will be supplemented through the planting of new native shrubs, to comprise:

- Hawthorn *Crataegus monogyna*;

- Hazel *Corylus avellana*;
- Blackthorn *Prunus spinosa*;
- Field maple *Acer campestre*; and,
- Holly *Ilex aquifolium*.

This species mix is that same as that approved for the enhancement work carried out under NRW Conservation Licence 78058:OTH:CA:2018.

Hibernacula Creation

A total of 8 hibernacula will be created on site, using materials arising from site enabling works (e.g. breaking up of the hard surfacing forming the Old Road). These hibernacula will be constructed under ecological supervision in accordance with the best practice design shown in Figure E.3.

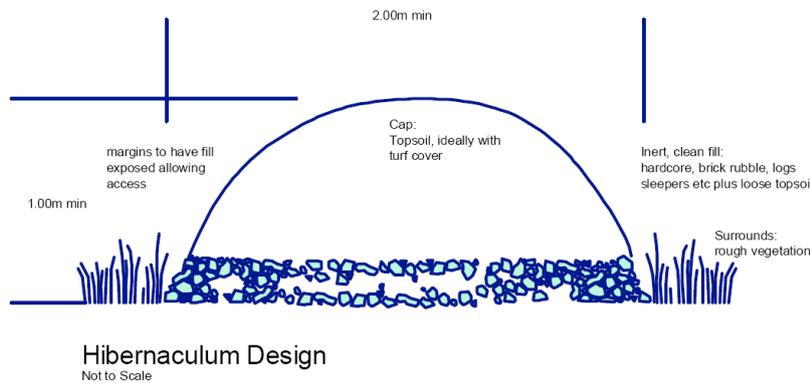


Figure E.3: Diagram of Ideal Hibernaculum Design

E.2.2 Temporary Loss of Breeding Sites, Resting Places

It is proposed that areas subject to temporary loss will be included within the zones identified for trapping and translocation, therefore these are considered in Section E.2.3.

Works associated with the minor translocation of 100 m of roadside hedgerow forming 'distant' terrestrial habitat are detailed within Middlemarch Environmental Ltd Report RT-MME-127521-02, which is submitted in support of this licence modification request. The location is shown on PCC Drawing 2395/P03/016-Rev A. All works will be completed in accordance with the best practice methods described.

E.2.3 Destruction of Existing Breeding Sites, Resting Places

Once the NRW Development Licence for the project is granted, the programme of fencing and trapping (as described in Section E.1) will commence. It is anticipated that fencing will be installed in September 2018, and will take up to two weeks to install. Fencing will be completed by an experienced contractor using a mini-digger and hand tools, and will be undertaken under the direct supervision of a suitably qualified ecologist. The ecologist will complete a fingertip search of fence lines prior to the fence being installed.

Once installed, the 30 day trapping period will commence immediately. Trapping will be undertaken by a suitably qualified ecologist for consecutive days in suitable weather conditions, but will cease if temperatures drop below 5°C overnight.

Trapping will cease after 30 days, provided that no capture is achieved for each cell for a period of 5 consecutive days at the end of the trapping period. Internal drift fencing will subsequently be removed by hand under the direct supervision of a suitably qualified ecologist who will undertake hand searches of fence lines to remove and great crested newts located adjacent to the fence. Once this is done the topsoil within the proposed development and water compensation areas will be stripped carefully under ecological supervision. Once this destructive search is completed cells will be classified as 'newt free' as long as the peripheral fencing remains intact. A suitably qualified ecologist from MEL will complete a monthly inspection of the fence lines and undertake remedial action if needed.

Access to the site to install fencing and undertake site trapping and clearance works will be via existing hardstanding. Care will be taken to minimise impacts on terrestrial habitat prior to the trapping being completed. Any alternative access requirements will be fully assessed by an ecologist prior to being used.

All perimeter herpetofauna fencing will be regularly maintained, and will remain in-situ until the development of plots is complete. This will subsequently be removed under the supervision of a suitably qualified ecologist during the active period for great crested newts. As described above, permanent fencing will be installed around the Recycling Bulking Facility concurrently with the removal of the temporary perimeter fence around this area.

The proposed trapping and translocation work was completed on November 11th 2018. A destructive search of terrestrial habitats was delayed as a result of weather conditions and changes to project timescales, however a revised methodology for clearing the site was agreed at a liaison meeting on 20th August 2019. This is detailed in Section E.1.

E.2.4 Scaled Maps/Plans

The following scaled maps and plans are attached:

- Powys Count Council Drawing 2395/P03/009 – Landscaping and Ecology Plan
- Powys Count Council Drawing 2395/M02/003-Rev B – Pond Works Completed in February 2018
- WSP Drawing 70019430-DP-01_P01 – Preliminary Foul and Surface Water Drainage Layout
- Middlemarch Environmental Drawing C126868-03-01 – Survey Area
- Middlemarch Environmental Drawing C126868-03-02 – Survey Results
- Middlemarch Environmental Drawing C126868-03-03 – Impacts Map
- Middlemarch Environmental Drawing C126868-03-04 – Capture and Exclusion Proposals and Receptor Site Location
- **Middlemarch Environmental Drawing C1508560-01-Rev E – Updated Newt Fencing Layout**

E.3 MECHANISMS FOR ENSURING DELIVERY OF MITIGATION AND COMPENSATION MEASURES

E.3.1 Measures to Ensure Compliance with this Method Statement

This method statement is submitted in support of a planning application for the development of Abermule Business Park, and therefore it is anticipated that the need to comply will be enshrined in a planning condition. Furthermore, as soon as planning consent is granted it will be necessary to apply to NRW for a development licence to control the work and ensure that it proceeds lawfully.

During the construction period checks of the fencing will be undertaken daily during the active period for great crested newts. This is weather dependent but generally extends between March and October inclusive. Outside of the active period the frequency of fence checks will be reduced to one per week, as great crested newts will not be moving in cold weather and the risk is therefore negligible.

Furthermore, it is proposed that MEL will audit the implementation of the method statement in accordance with the Ecological Compliance Schedule detailed in Report RT-MME-127496. This will include regular site meetings and correspondence with PCC and NRW.

Ecological Compliance Audits (ECA) will also be undertaken by an externally appointed body, Marches Ecology Ltd, throughout the construction phase of the scheme. They will comprise a site based audit to ensure that the exclusion fencing and all other great crested newt works meet the licence requirements, followed by a meeting with relevant stakeholders including NRW and PCC. ECA Key Performance Indicators have been agreed with NRW and a copy of the audit form is provided as Annex 1. Tom Knight (Marches Ecology) has been appointed as the Ecological Compliance Auditor for the project.

The above mechanisms are considered appropriate to ensure that the method statement is complied with.

E.3.2 Compensation Land

All mitigation work will be undertaken within the land ownership of Powys County Council. No additional land is required for compensation purposes.

Middlemarch Environmental Ltd will advise the owner on options in respect of the suitability of any changes to the future tenure of the compensation land.

E.3.3 Newt Friendly Designs

The development design has been based on ecological input, and has been designed to minimise the risk of incidental disturbance to great crested newts. This has included the modification of standard drainage proposals and the decision to permanently exclude great crested newts from the Recycling Bulking Facility where the risk of killing or injury is considered to be high.

E.3.4 Resources

Middlemarch Environmental Ltd is one of the UK's largest and most experienced ecological consultancies, with widespread experience of designing and implementing great crested newt mitigation work in England and Wales. Middlemarch will ensure that all works are managed by a highly experienced great crested newt worker, and that sufficient resource is allocated to allow all ecological supervision, trapping and monitoring to be completed to a high standard in accordance with this method statement.

Middlemarch Environmental Ltd will advise the owner on long term resource options

E.4 MITIGATION CONTINGENCIES

An Emergency Procedure Method Statement is detailed below:

Aim

To detail the required response should great crested newts be discovered within the development site during works.

Method

1. All work within the development site must cease immediately.
2. Great crested newt exclusion fencing must be immediately inspected for breaches and repaired immediately. Inspection and repair works will be recorded.
3. The Site Agent will telephone the appropriate Ecological Consultant immediately.
4. The Ecological Consultant will telephone the NRW Officer immediately.
5. The Site Agent will act on the advice of the Ecological Consultant immediately. The advice of the Ecological Consultant will be recorded in the logbook.

Reporting

1. Logbooks to be supplied to the Audit Body on completion of the recommended works.
2. Audit Body to report to NRW on completion of the recommended works.

There is also the potential for breaches in the great crested newt exclusion fencing to occur in-between fencing checks, prior to the commencement of development works. Breaches are to be reported to the Ecological Consultant. If any significant breaches are identified, the fence will be repaired, and discussions will be undertaken with NRW to identify a way forward to prevent future harm to any great crested newts which may have entered the exclusion areas.

E.5 BIOSECURITY RISK ASSESSMENT

The following biosecurity risk assessment has been produced to outline the biosecurity measures associated with the presence of a population of great crested newts adjacent to and within Abermule Business Park. It is anticipated that this document will be used by PCC when engaging contractors to deliver works at the business park site.

This document identifies and sets out the biosecurity risks, and provides control measures which should be implemented to minimise these risks. This is an outline document and each contractor working on site will provide a detailed biosecurity risk assessment and method statement associated with each contract.

Assessment Type:	Version for NRW Licence Application
Assessment Completed By:	Middlemarch Environmental Ltd
Date:	11/06/2018

A: Assessed Activities

Description of Work Activities Being Assessed	<ul style="list-style-type: none"> • Implementation of a programme of fencing and trapping to remove great crested newts from the development area. • Works will include the use of a mini-digger to facilitate fencing, and larger machinery to when completing destructive search. • No encroachment into area surrounding either pond is anticipated. All works will be separated from P1 by a railway line. • Works will include pond creation, landscaping and habitat enhancement.
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B: Invasive Species / Habitats

Invasive Species	Habitat / Species At Risk
<p>Himalayan Balsam Himalayan Balsam is widely distributed in North and Central Wales and occurs in both lowland and upland localities. The species is thought to have extended its range and abundance, particularly in wetland habitats.</p>	<p>Habitats Ponds and watercourses</p>
<p>Australian swamp stonecrop <i>Crassula helmsii</i> <i>Crassula helmsii</i> is known to exist in North and Central Wales. The species is highly invasive and represents one of the principle factors that affect the long term ecological functionality of ponds as breeding sites for amphibians.</p>	<p>Habitats Ponds</p> <p>Species Great crested newt</p>
<p>Water fern <i>Azolla filiculoides</i> <i>Azolla filiculoides</i> is known to exist in North and Central Wales. The species is highly invasive and can spread rapidly across a pond, shading the water surface and causing problems for pond functioning. Considered to be a high risk non-native invasive species.</p>	<p>Habitats Ponds</p> <p>Species Great crested newt</p>

B (continued): Invasive Species / Habitats

Invasive Species	Habitat / Species At Risk																								
<p>Other Invasive Non-Native Aquatic Plant Species A range of invasive non-native plant species have been recorded to date in North Wales. The table below reviews risk species.</p> <table border="1" data-bbox="163 400 1393 643"> <thead> <tr> <th>Species</th> <th></th> <th>Risk</th> </tr> </thead> <tbody> <tr> <td>Parrot's-feather</td> <td><i>Myriophyllum aquaticum</i></td> <td>Medium Risk</td> </tr> <tr> <td>Floating pennywort</td> <td><i>Hydrocotyle ranunculoides</i></td> <td>High Risk</td> </tr> <tr> <td>Canadian waterweed</td> <td><i>Elodea Canadensis</i></td> <td>Medium</td> </tr> <tr> <td>Curly waterweed</td> <td><i>Lagarosiphon major</i></td> <td>Medium</td> </tr> <tr> <td>Nuttall's waterweed</td> <td><i>Elodea nuttallii</i></td> <td>Medium</td> </tr> <tr> <td>Waterweeds (other Elodea)</td> <td><i>Elodea spp</i></td> <td>Medium</td> </tr> <tr> <td>Least duckweed</td> <td><i>Lemna minuscula</i></td> <td>High</td> </tr> </tbody> </table>	Species		Risk	Parrot's-feather	<i>Myriophyllum aquaticum</i>	Medium Risk	Floating pennywort	<i>Hydrocotyle ranunculoides</i>	High Risk	Canadian waterweed	<i>Elodea Canadensis</i>	Medium	Curly waterweed	<i>Lagarosiphon major</i>	Medium	Nuttall's waterweed	<i>Elodea nuttallii</i>	Medium	Waterweeds (other Elodea)	<i>Elodea spp</i>	Medium	Least duckweed	<i>Lemna minuscula</i>	High	<p>Habitats Ponds</p> <p>Species Great crested newt</p>
Species		Risk																							
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Waterweeds (other Elodea)	<i>Elodea spp</i>	Medium																							
Least duckweed	<i>Lemna minuscula</i>	High																							
<p>Chytrid (potential) The Chytrid fungus was identified in Talacre and Johnstown in 2008. This fungus has affected amphibian populations globally and has caused the extinctions of species.</p> <p>ARG-UK Advice Note 4 provides generic guidance in respect of amphibian disease precautions. Available at: http://www.arguk.org/advice-and-guidance/view-category</p>	<p>Habitats No aquatic habitats affected.</p> <p>Species Common toad <i>Bufo bufo</i> Great crested newt <i>Triturus cristatus</i> Smooth newt <i>Lissotriton vulgaris</i> Palmate newt <i>Lissotriton helveticus</i></p>																								

C: Activity Risk Assessment

Risk Reference	Activity	Risk (High, Medium, Low)	Control Measures to be Implemented	Residual Risk (High, Medium, Low)
R1	Site visit by great crested newt ecologists who have been working on other sites.	Medium	<ol style="list-style-type: none"> 1. Ensure all surveyors are aware of bio-security control measures. 2. Disinfect and sterilize all equipment including clothing and footwear before and after each visit, including between sites (if applicable). 3. All debris, plant fragments and mud should first be scrubbed off and rinsed with water. Disinfection should comprise soaking in a bleach solution (1 measure of household bleach to 9 measures water) for 15 minutes; or Virkon solution (1 mg/ml) for 1 minute; or fabrics can be washed on a 40°C cycle (with detergent, ensuring sufficient rinsing). 4. All used disinfectants should be disposed of appropriately. 	Low
R2	Use of plant or equipment which may be carrying material from non-native invasive species. Relevant to Ecological Clerk of Works, and habitat creation contractor.	Medium	<ol style="list-style-type: none"> 1. Wherever possible ensure machines use metalled roads and parking areas. 2. Sterilize wheels if machine has visited ponds / wetlands within previous 10 days. 	Low
R3	Vegetation management activities within grassland habitats.	Medium	<ol style="list-style-type: none"> 1. Ensure all operatives are aware of bio-security control measures. 2. Disinfect and sterilize all equipment including clothing and footwear before and after each visit, including between sites (if applicable). 3. All debris, plant fragments and mud should first be scrubbed off and rinsed with water before leaving site. 4. All used disinfectants should be disposed of appropriately. 	Low

F POST-DEVELOPMENT SITE SAFEGUARD

F.1 HABITAT / SITE MANAGEMENT AND MAINTENANCE

MEL has compiled an Ecological Compliance Schedule and Habitat Management Plan for the Abermule Business Park (Report RT-MME-127496). A copy of this report is submitted in support of this application.

Key management and maintenance activities included within the plan are:

- Management of existing broadleaved plantation woodland within the business park area;
- Management of existing boundary hedgerows within the business park area;
- Management of created wildflower grassland within the business park area;
- Management of created scrub habitat within the business park area;
- Management of created ponds and associated habitats within the business park area;
- Management of the areas enhanced under NRW Conservation Licence 78058:OTH:CA:2018, including:
 - Retained broadleaved woodland;
 - Retained grassland;
 - Retained pond and associated marginal vegetation;
 - Created hedgerows; and,
 - Created scrub pockets.
- Ongoing Ecological Compliance Audit, including monitoring and maintenance of the exclusion fencing; and,
- Ongoing habitat and species monitoring to allow the impacts of mitigation and management to be measured.

F.2 POPULATION MONITORING

To inform the success of the mitigation strategy in ensuring the favourable conservation status of the great crested newt population, a programme of population monitoring will be implemented. It is proposed that monitoring will be undertaken in accordance with Wales GCN Monitoring Scheme Methodology. Surveys will be undertaken by NRW great crested newt licensed surveyors, and will include both bottle trapping and torchlight surveys of P1 and the two newly created ponds (provisionally referred to as Pa and PB).

It is proposed that monitoring will be undertaken annually until the development of all plots is complete. In accordance with the current NRW licence, annual post-development monitoring is required until 2038. Monitoring surveys will include a total of two visits per year, with both visits falling in the key period mid-April to mid-May, unless an alternative approach is agreed with NRW.

All data collected during monitoring surveys will be uploaded into the Cofnod-managed online Wales GCN Monitoring Scheme. Summary Monitoring reports shall be submitted to NRW by 31 December 2023, 31 December 2028, 31 December 2033 and 31 December 2038.

F.3 POST DEVELOPMENT MITIGATION CONTINGENCIES

If monitoring results are unfavourable, e.g. they show a consistent decline in great crested newt numbers, discussions will be undertaken with NRW to determine the need for remedial action. Potential remedial action could include additional habitat creation and/or amendments to the habitat management and maintenance regime.

The Compliance Audits and annual monitoring surveys will provide a platform to report upon adverse monitoring results and to identify and action solutions.

F.4 MECHANISMS FOR ENSURING DELIVERY OF POST-DEVELOPMENT WORKS

It is understood that initial habitat management and maintenance will be completed by a contractor to be appointed by Powys County Council, under the ecological management of MEL. All post development work will be based on the Ecological Compliance Schedule and Habitat Management Plan (Report RT-MME-127496) produced by Middlemarch Environmental Ltd and submitted with this application. This will include monthly fencing checks and annual ecological audits, to be reported back to PCC and NRW. Habitat

management within the ecology area will need to be carried out in accordance with the appropriate licence issued by NRW.

By 31 December 2020, a long-term post construction plan will be submitted to NRW for approval. This plan to consider future long term, management, wardening and surveillance for a duration of not less than 25 years. This plan shall identify any changes to tenure and long-term funding mechanism

G TIMETABLE OF WORKS

Table G.1 details the proposed work programme based on the current development schedule. Should this alter, it will be necessary to revise this programme.

Date	Activity	Current Status
June 2018	Planning application submitted, to include great crested newt method statement and habitat management plan.	Completed
July 2018	Consultation with NRW to agree mitigation approach pending planning, to allow development licence to be granted promptly upon confirming of planning permission.	Completed
August/September 2018	Planning permission granted.	Completed
September 2018	NRW development licence received.	Completed
September - 9 th November 2018	Installation of temporary herpetofauna fencing followed by 30-day trapping period.	Completed
12 th to 16 th November 2018	Supervised removal of internal drift fencing	Completed
October 7 th – 18 th 2019	Compartments 1 and 2 Phased vegetation management under ecological supervision, followed by destructive search of terrestrial habitats under ecological supervision.	Completed
w/c October 28 th 2019	Compartments 1 and 2 Amendment to fence line and minor additional destructive search of vegetation under ecological supervision.	Completed
November 2019 / March 2020	Relocation of 40 m section of perimeter fencing under ecological supervision, including fingertip search by suitably qualified ecologist.	Completed
November 2019-February 2020 inclusive	Reduction of frequency of fence checks to once per week over winter period. To be increased to daily checks from March 2020 onwards	Ongoing
November 2019 onwards	Compartments 1 and 2. Site enabling works once destructive search is complete. Creation of new ponds within flood compensation area to be undertaken as first stage of work.	Ongoing
December 2019 - February 2020 inclusive	Installation of gate feature to enclose road cell and ensure GCN access to site is prevented.	To be completed.
March 2020	Compartments 3 and 4 Daily checks of carpet tiles 7 days prior to work commencing. Phased vegetation management under ecological supervision, followed by destructive search of terrestrial habitats under ecological supervision.	To be completed
March 2020	Translocation of section of roadside hedge in accordance with Reasonable Avoidance Method Statement RT-MME-127521-02. Works to be completed in suitable weather conditions for newts to be active, under supervision.	To be completed
Ongoing 2019-2023	Phased development of plots within application area.	To be completed
October 2019-30 th November 2023	Daily checks of fence lines throughout construction period, to be completed and logged by principal contractor.	To be completed
October 2019- November 2023	Ecological Compliance Audits to ensure works are proceeding based on the documents approved as part of the NRW development licence application. To be reported via written reports and regular liaison meetings between PCC, Middlemarch and NRW.	To be completed
Ongoing 2019-2038	Implementation of Ecological Compliance Schedule and Habitat Management Plan (Report RT-MME-127496)	To be completed
Spring 2019-2038	Annual great crested newt population monitoring surveys	To be completed

Table G.1 Proposed Work Schedule

H LAND OWNERSHIP – MITIGATION SITE

H.1 MITIGATION SITE OWNERSHIP

All mitigation activities are to be undertaken within land owned by Powys County Council.

H.2 MITIGATION SITE OWNERSHIP POST-CONSTRUCTION

All land will remain within Powys County Council ownership. However some areas (P1 pond enhancements) will require access agreements, as they will remain under the tenure of PCC Farm Estates.

I DECLARATION

<p>I declare that should a licence be granted, the work as proposed in this Method Statement will be strictly adhered to. I understand that any deviation from the works as proposed in this Method Statement without agreement from NRW would result in a breach of the licence.</p> <p>NB. Applicants should note that it is an offence under regulation 59 of the Conservation of Habitats and Species Regulations 2017 to knowingly or recklessly provide false information in order to obtain a licence.</p>			
Signature of the Applicant		Date	09/12/2019
<p>For electronic submissions please insert an electronic signature above or place an x in the box opposite to confirm agreement with the declarations above.</p>			<input checked="" type="checkbox"/>
Full name in BLOCK LETTERS	LISA CONTESTABILE		
Signature of the Ecologist		Date	09/12/2019
<p>For electronic submissions please insert an electronic signature above or place an x in the box opposite to confirm agreement with the declarations above.</p>			<input checked="" type="checkbox"/>
Full name in BLOCK LETTERS	DR KATY READ		

J REFERENCES

ARG UK. (2010). ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index. Amphibian and Reptile Groups of the United Kingdom.

ARG UK. (2017). ARG UK Advice Note 4: Amphibian Disease Precautions – A Guide for UK Fieldworkers. Amphibian and Reptile Groups of the United Kingdom.

English Nature. (2001). *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough.

Gerald Longley Ecological Consultants (2017). Abermule Business Park, Abermule, Powys, SY15 6ND. Preliminary Ecological Appraisal. Gerald Longley Ecological Consultants Report Number GLEC-0896a-01. April 2017.

Gerald Longley Ecological Consultants (2017a). Abermule Business Park, Abermule, Powys, SY15 6ND. Great Crested Newt Survey and Mitigation Plan. Gerald Longley Ecological Consultants Report Number GLEC-0896b-01. May 2017.

Gerald Longley Ecological Consultants (2017b). Abermule Business Park, Abermule, Powys, SY15 6ND. Reptile Survey. Gerald Longley Ecological Consultants Report Number GLEC-0946b-01. June 2017.

Gerald Longley Ecological Consultants (2017c). Abermule Business Park, Abermule, Powys, SY15 6ND. Dormouse Survey. Gerald Longley Ecological Consultants Report Number GLEC-0946a-01. September 2017.

Joint Nature Conservation Committee. (1993). *Handbook for Phase 1 Habitat Survey: A technique for environmental audit*. Joint Nature Conservation Committee, Peterborough.

Langton, T., Beckett, C. and Foster, J. (2001). *Great Crested Newt: Conservation Handbook*. Froglife, Suffolk.

Oldham R. S., Keeble, J., Swan, M. J. S. and Jeffcote, M. (2000). 'Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*)'. *Herpetological Journal* **10 (4)**, 143-155.

The Conservation of Habitats and Species Regulations 2017.

The Wildlife and Countryside Act, 1981 (as amended).

K ANNEXES

Annex 1 - Approved KPI Ecological Compliance Audit Form

Annex 2 - MAGIC Data Search, Completed April 2018

ECOLOGICAL COMPLIANCE AUDIT FORM

Licence/ Scheme Details

Natural Resources Wales licence reference number:	S085108/4	Site name:	Abermule Business Park, Abermule, Newtown, Powys, SY15 6NT.
Species to which licence relates:	Great Crested Newt	Site grid reference:	SO 1576 9410
Name of licence holder:	Lisa Contestabile (Powys County Council)	Type of audit:	External
Name and organisation of licence ecologist:	Dr Katy Read (Middlemarch Environmental Ltd)	Date of this audit:	
Name and organisation of ecological compliance auditor:	Tom Knight (Marches Ecology)	Number of audit:	
Name of representative of developer if different from licence holder:	Lisa Contestabile	Number of audits scheduled:	Nine
		Interval between audits:	1-2 months (dependent on site activity)

Licensing History

Date licence issued (dd/mm/yy)	Date licence expires:	Licence implemented between (dd/mm/yy)	
28/08/18 (Amendment 1)		From:28/08/18	To:
Amendment 2		From:	To:
06/11/18 (Amendment 3)	31/12/26	From: 6/11/18	To: 24/09/19
24/09/19 (Amendment 4)	31/12/26	From: 6/11/18	To:

Performance Indicators

KPI No.	Performance Indicator	Evidence Required	Pass (Yes/ No, comments) Photographic evidence used?	What action is required as a result of findings?
Pre-start Requirements				
1	A suitably experienced licensed ecologist will be appointed and retained during the life time of this licence to provide on-site advice.	Letter, contract or other document outlining the appointment of an Ecologist for the lifetime of the project. This will be able to be supplied.		
2	Prior to the start of any works on site, all site workers will be inducted by the Project Ecologist. This induction will cover the legal status of the species, the method of working, and action to be taken if protected species are encountered.	Copy of documents from ecological induction, showing content of induction. List of induction attendees will be provided.		
3	Preparation and implementation of a biosecurity risk assessment as detailed in E.5 of the method statement.	Biosecurity risk assessment is available for inspection. Log of implementation of biosecurity measures is available for inspection and shows that they have been implemented.		
4	Licence available for inspection by any police constable or employee of Natural Resources Wales.	Licence is available for inspection on site.		

KPI No.	Performance Indicator	Evidence Required	Pass (Yes/ No, comments) Photographic evidence used?	What action is required as a result of findings?
5	No agent of the licensee shall act under licence unless they are in possession of a letter signed by the licensee appointing them by name as the duly accredited agent of the licensee for the purposes of this licence, and shall carry with them the said letter and a copy of this licence and shall produce them to any police constable or employee of the Natural Resources Wales or other authorised person on demand.	All relevant accredited agents have copies of the licence-holder's letter of authorisation. The licence-holder's letter is available for inspection.		
E.1 GCN capture and exclusion				
6	Design and installation of amphibian fencing to the specifications detailed in the method statement.	Visual check by auditor.		
7	Amphibian fencing has been subject to inspection and maintenance as detailed in the method statement throughout the translocation and construction periods.	Log of activities to be provided.		

KPI No.	Performance Indicator	Evidence Required	Pass (Yes/ No, comments) Photographic evidence used?	What action is required as a result of findings?
8	Works within amphibian habitats will not commence until working areas are confirmed to be clear of amphibians by the licensed ecologist.	Log of activities, including clearance activities, is available for inspection recording captures.		
9	Any works outside the amphibian fence are to be in accordance with a methodology as approved by NRW and supervised by a licensed person.	Log of works undertaken, including evidence of licensed person on site, available for inspection.		
E.2/E3 GCN habitat modification and creation for mitigation and compensation				
10	All mitigation and compensation measures have been implemented as per section E2 and E.3 of the Method Statement.	Log of works demonstrates habitat creation /enhancement implementation has been implemented in accordance with the Method Statement.		
11	The implementation of surveillance or monitoring of schemes, pre, during and post development as specified in Section E.3 of the Method Statement.	Log shows that surveillance and monitoring have been implemented pre, during and post development and results passed to appropriate data holder – Cofnod.		

KPI No.	Performance Indicator	Evidence Required	Pass (Yes/ No, comments) Photographic evidence used?	What action is required as a result of findings?
F and H: Long-term site proposals				
12	Implementation of habitat/site management and maintenance and, habitat monitoring as detailed in F.1 and F.2 of the method statement.	If audit undertaken <u>during development phase</u> : Auditor to review and confirm that all habitat creation and maintenance measures are being implemented in accordance with Method Statement.		
13	Implementation of population monitoring as detailed in F.2 of the method statement	If audit undertaken <u>during development phase</u> : monitoring plan demonstrates measures are in place to undertake GCN population monitoring post-development.		
14	Implementation of long-term site safeguard proposals as detailed in F.4, H.1 and H.2 of the method statement	Log of works demonstrates implementation e.g.: long-term monitoring of amphibian populations.		

Any other points to note/comments from auditor

Photographic evidence details

Auditor Name:

Date:

Auditor Signature:

Schedule of Ecological Compliance Audit Completion and Dissemination

Audit Number	Date Visit Completed	Date Report Issued to Developer/ Licence Holder/ Licence Ecologist	Names/ Organisations	Date Issued to NRW/ Other	Names/ Organisations
1					
2					
3					
4					
5					
6					
7					
8					
9					

Report Report generated on Mon Apr 23 2018

You selected the location: Centroid Grid Ref: SO157941

The following fetures have been found in your search area:

Sites of Special Scientific Interest (England)

Name

Rhos Fiddle SSSI

Reference

1002669

Natural England Contact

FRANCES MCCULLAGH

Natural England Phone Number

0845 600 3078

Hectares

65.82

Citation

1000360

Hyperlink

<http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1000360>

Sites of Special Scientific Interest (Wales)

Name

CAEAU GLYN (GLYN FIELDS)

SSSI Code

32WZK

First Notified

31/10/1989

Last Notified

Null

Confirmation Date

11/07/1990

Eastings

318035

Northings

302975

Cartesian Area (Ha)

3.925672

Name

COED BYRWYDD

SSSI Code

32WFE

First Notified

24/04/1985

Last Notified

Null

Confirmation Date

Null

Eastings

316085

Northings

304163

Cartesian Area (Ha)

9.532818

Name

GREGYNOG

SSSI Code

32WPE

First Notified

01/01/1978

Last Notified

06/06/2011

Confirmation Date

01/12/2011

Eastings

308879

Northings

297368

Cartesian Area (Ha)

54.983003

Name

GWEUNYDD PENSTROWED

SSSI Code

32WEP

First Notified

12/06/1984

Last Notified

Null

Confirmation Date

Null

Eastings

306689

Northings

290636

Cartesian Area (Ha)

1.674442

Name

HOLLYBUSH PASTURES

SSSI Code

32WK6

First Notified

23/03/1993

Last Notified

23/03/1993

Confirmation Date

01/09/1993

Eastings

315356

Northings

295546

Cartesian Area (Ha)

1.466361

Name

MOCHDRE DINGLES

SSSI Code

32WFW

First Notified

26/04/1985

Last Notified

15/08/1985

Confirmation Date

Null

Eastings

307857

Northings

287782

Cartesian Area (Ha)

49.637756

Name

MONTGOMERY CANAL

SSSI Code

32WPP

First Notified

01/01/1959

Last Notified

11/10/2000

Confirmation Date

05/07/2001

Eastings

324594

Northings

310061

Cartesian Area (Ha)

55.845166

Name

PENSTROWED QUARRY

SSSI Code

32WHD

First Notified

17/04/1986

Last Notified

Null

Confirmation Date

03/12/2007

Eastings

306756

Northings

290942

Cartesian Area (Ha)

2.62317

Name

RIVER TEME

SSSI Code

32WEA

First Notified

19/07/1996

Last Notified

Null

Confirmation Date

10/04/1997

Eastings

312554

Northings

282963

Cartesian Area (Ha)

44.130892

Special Areas of Conservation (Wales)

Name

Montgomery Canal

Reference

UK0030213

Marine

n

Date Notified

13/12/2004

Cartesian Area (Ha)

55.668449

Special Areas of Conservation (England)

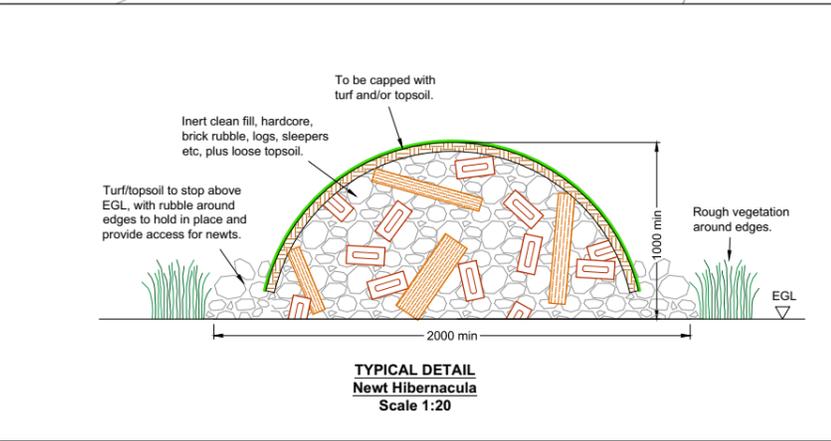
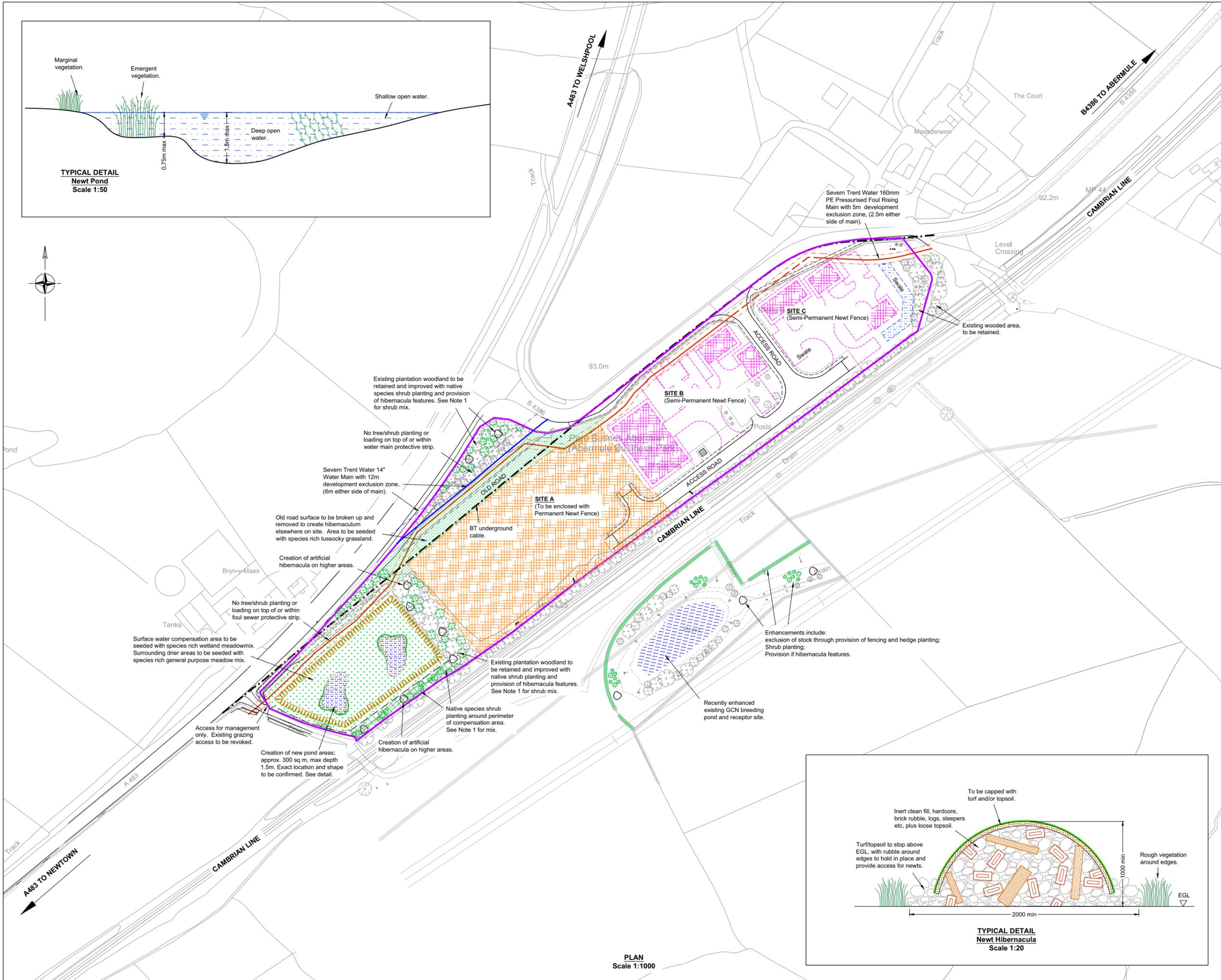
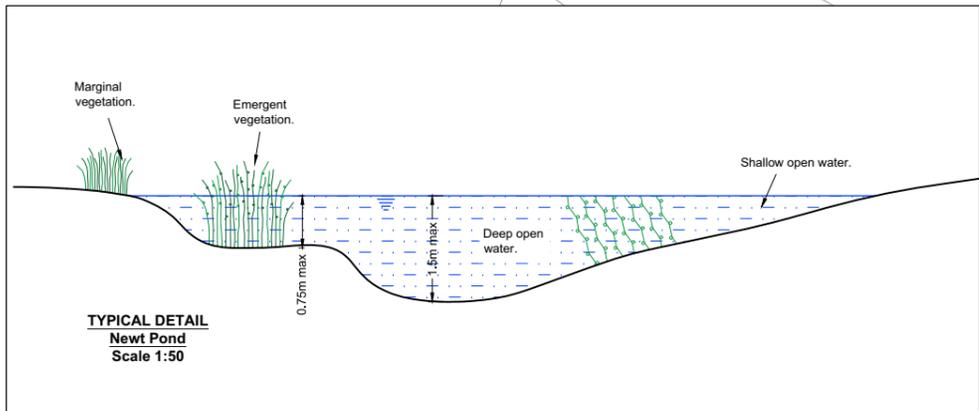
No Features found

Possible Special Areas of Conservation (England)

No Features found

DRAWINGS

Powys County Council Drawing 2395/P03/009 – Landscaping and Ecology Plan
Powys County Council Drawing 2395/M02/003-Rev B – Pond Works Completed in February 2018
WSP Drawing 70019430-DP-01_P01 – Preliminary Foul and Surface Water Drainage Layout
Middlemarch Environmental Drawing C126868-03-01 – Survey Area
Middlemarch Environmental Drawing C126868-03-02 – Survey Results
Middlemarch Environmental Drawing C126868-03-04 – Impacts Map
Middlemarch Environmental Drawing C126868-03-04 – Capture and Exclusion Proposals and Receptor Site Location
Middlemarch Environmental Drawing C126868-03-05 – Ponds to be Included in Population Monitoring
[Middlemarch Environmental Drawing C1508560-01-Rev E – Updated Newt Fencing and Carpet Tiles](#)
Powys County Council Drawing 2395/P03/016 Rev A – Amended Field Access and Visibility Splays



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100024419 (Ceredigion County Council) & 100020371 (Powys County Council)

Notes

- 1) All shrub planting to the following mix:
- | | |
|-------------------------------|-----|
| Cataeagus Monogyna (Hawthorn) | 40% |
| Corylus Avellana (Hazel) | 30% |
| Prunus Spinosa (Blackthorn) | 10% |
| Acer Campestre (Field Maple) | 10% |
| Lix Aquifolium (Holy) | 10% |

ISSUED FOR PLANNING

KEY

- Business Park Boundary.
- 14" Water Main (STW).
- - - Development Exclusion Zone, Water Main.
- Foul Rising Main (STW).
- - - Development Exclusion Zone, Rising Main.
- · - · - Underground Cable (BT).

Rev	Date	Description	By	Chkd

Engineering Design Services

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01545 572513

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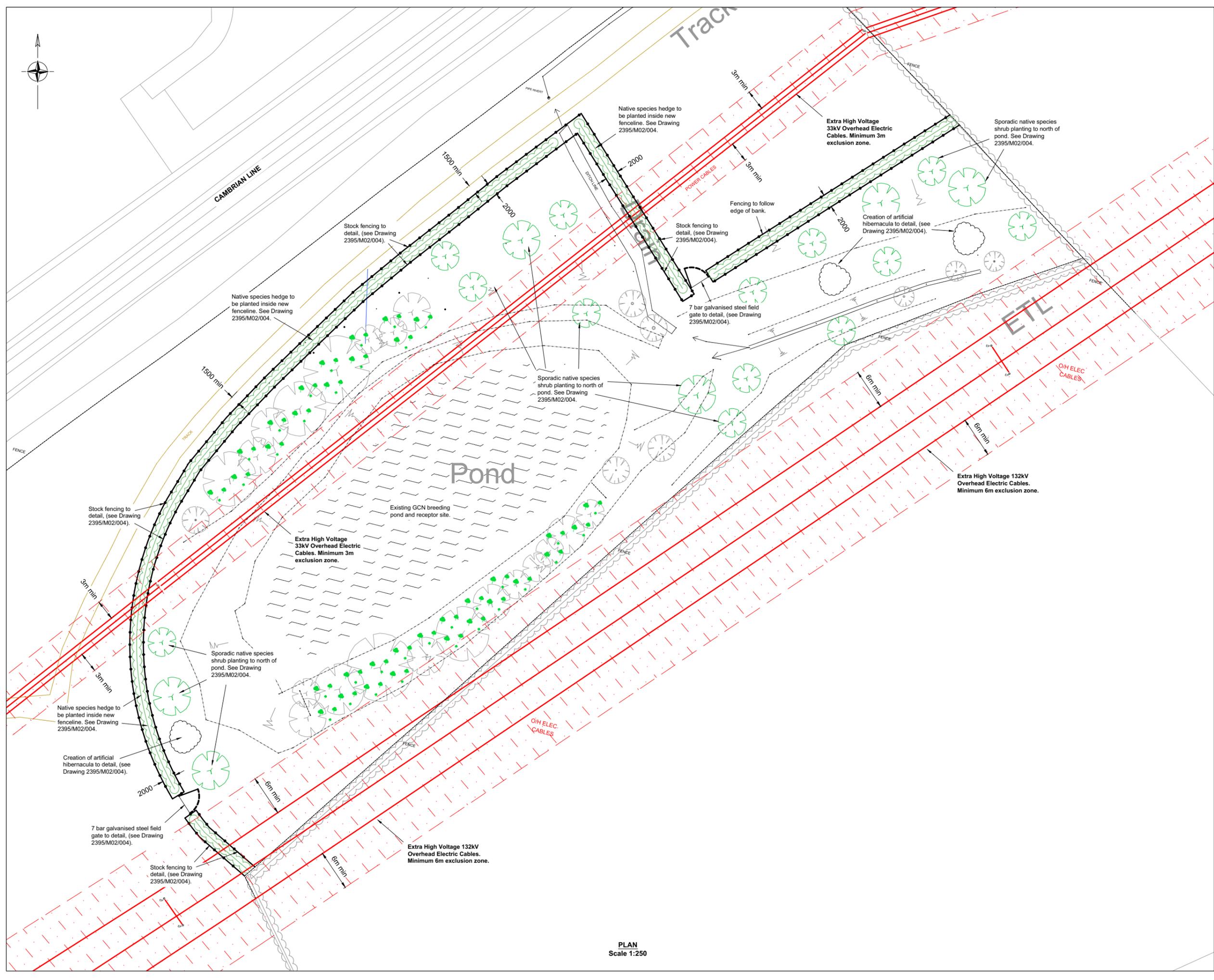
Powys

Abermule Business Park Development.

Landscaping and Ecology Plan.

By LMC checked DB Scale at A1
Date 25/04/18 **As Shown**

Project Number **H2395** Drawing Number **2395/P03/009**



PLAN
Scale 1:250

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Notes

- 1) Drawing to be used in conjunction with Drawing 2395/M02/004 - Pond Works Construction Details, and Planting Specification.
- 2) Works to be undertaken under direction of Ecologist.
- 3) **Overhead Electricity Cables in area of works. No machinery to be used within the exclusion zone.**
- 4) No shrub planting to be undertaken within exclusion zone.

Amendments				
Rev	Date	Description	By	Chkd
B	15/02/18	Amendment to location of fencing and hibernacula. Addition and amendment of gates.	LMC	
A	08/12/17	Addition of survey info. Addition of Statutory Undertakers apparatus. Amendment to fenceline locations. Amendment from single to double fencing.	LMC	

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 South: Newbold Engineering, Cambrian Way, Brecon, Powys, LD2 7RH

CSCC-CWIC Powys

Abermule Business Park Development - Newtown Bulk Recycling Facility.

Ecological Mitigation - Pond Works Plan.

By: LMC	Checked: DB	Scale at A1: 1:250
Date: 27/11/17		
Project Number: H2395	Drawing Number: 2395/M02/003	Revision: B



DO NOT SCALE

NOTES (NEWT MITIGATION)

BUSINESS PARK ONLY

- GULLY POTS AND DRAINAGE CHANNELS SHOULD BE OFFSET APPROX. 100mm AWAY FROM THE KERBLINE.
- GULLY POT LADDERS AND ANGLED TYPE KERBSTONES SHOULD BE USED THROUGHOUT THE BUSINESS PARK AREA.

RECYCLING BULKING FACILITY

- RECYCLING BULKING FACILITY TO BE FENCED IN PERMANENT NEWT EXCLUSION FENCING.

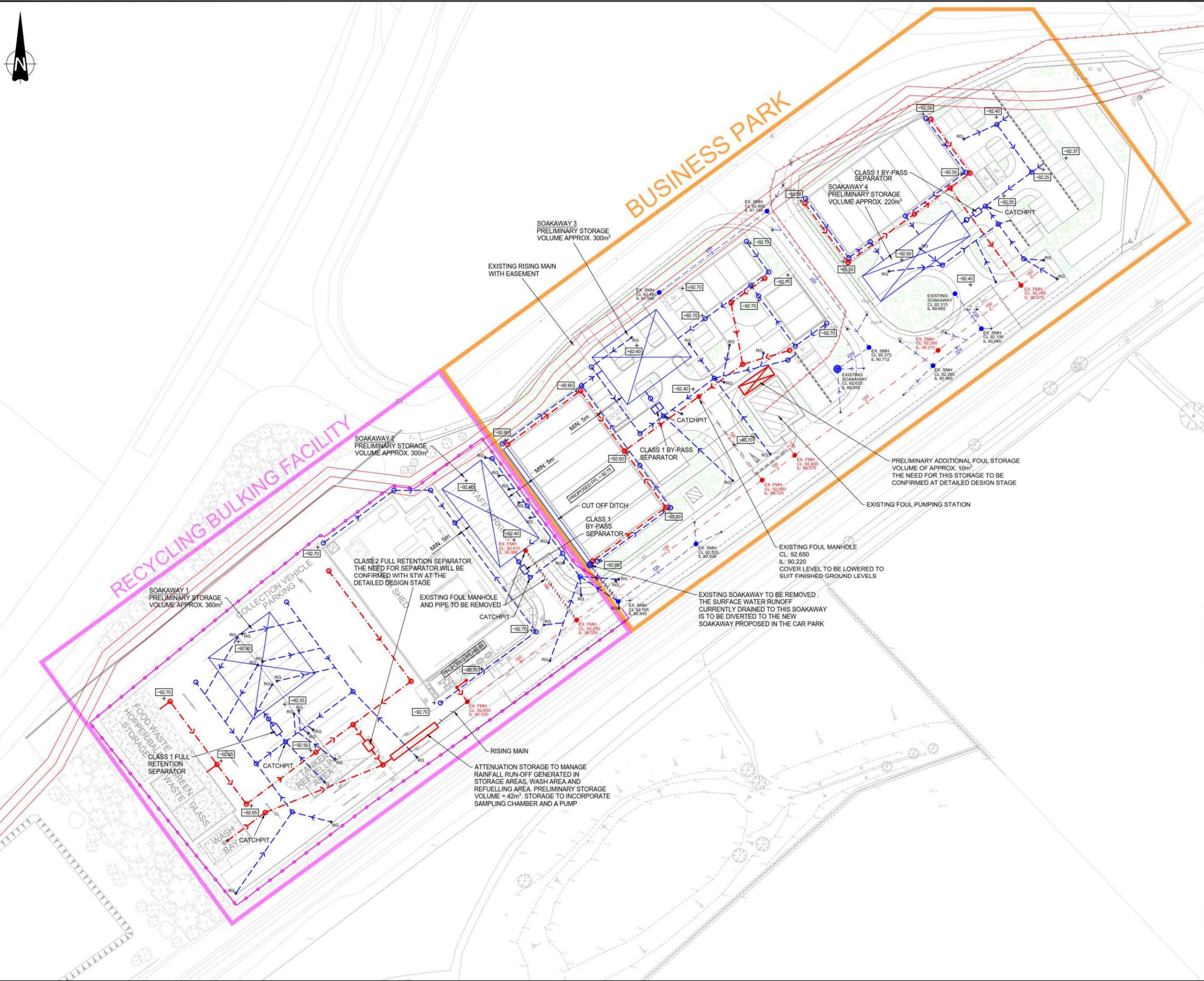
NOTES (GENERAL)

- DO NOT SCALE FROM THIS DRAWING. WORK TO FIGURED DIMENSIONS ONLY.
- SOAKAWAY VOLUMES WERE ESTIMATED FOR THE 1 IN 100 YEAR EVENT WITH 20% CLIMATE CHANGE ALLOWANCE.

LEGEND

- PROPOSED FOUL DRAINAGE
- EXISTING FOUL DRAINAGE TO BE ABANDONED/REMOVED
- PROPOSED SURFACE WATER DRAINAGE
- EXISTING SURFACE WATER DRAINAGE TO BE ABANDONED/REMOVED
- PROPOSED ROAD GULLY
- PROPOSED DRAINAGE CHANNEL
- PROPOSED SOAKAWAY (UNDERGROUND CRATE SYSTEM ALLOWING INFILTRATION)
- EXISTING FOUL DRAINAGE
- EXISTING SURFACE WATER DRAINAGE
- EXISTING FOUL RISING MAIN
- MINIMUM PROPOSED FINISHED GROUND LEVEL

File name: \\UK.VSPGROUP.COM\CENTRAL DATA\PROJECTS\70019430\WASTE TRANSFER - ABERMULE MODELS AND DRAWINGS\01 - WIP\01 MODEL\70019430-DP-01_P01.DWG, printed on 23 April 2018 16:50:32, by Giles, Benjamin



P01	17/04/2018	BRG	FIRST ISSUE	BRG	ES
REV	DATE	BY	DESCRIPTION	CHK	APP

DRAWING STATUS: **PRELIMINARY**

3rd Floor, Kings Orchard, 1 Queen St, Bristol, BS2 0HQ, UK
T+ 44 (0) 1179 306 200
wsp.com

CLIENT:

SITE/PROJECT: **ABERMULE BUSINESS PARK DEVELOPMENT**

TITLE: **PRELIMINARY FOUL AND SURFACE WATER DRAINAGE LAYOUT**

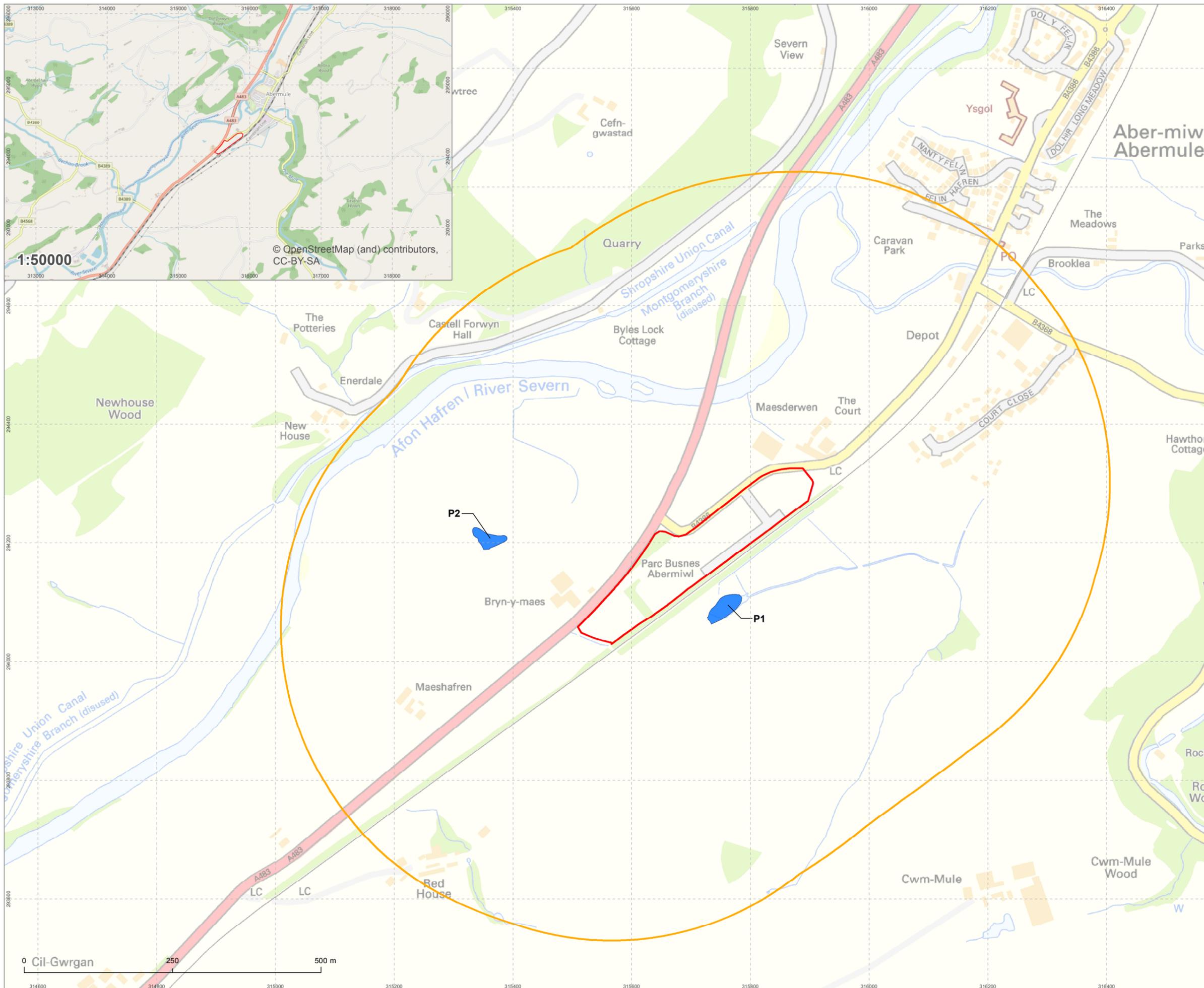
SCALE @ A1:	1:500	CHECKED:	JP	APPROVED:	CS
PROJECT NO:	70019430	DESIGNED:	ES	DATE:	FEBRUARY 2018
DRAWING NO:	70019430-DP-01_P01	DRAWN:	BRG	REV:	P01

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Legend

- Pond surveyed
- Site boundary
- 500 m radius from site boundary

Note:
Great crested newt survey results from Gerald Longley's 2017 report GLEC-0896b-01.

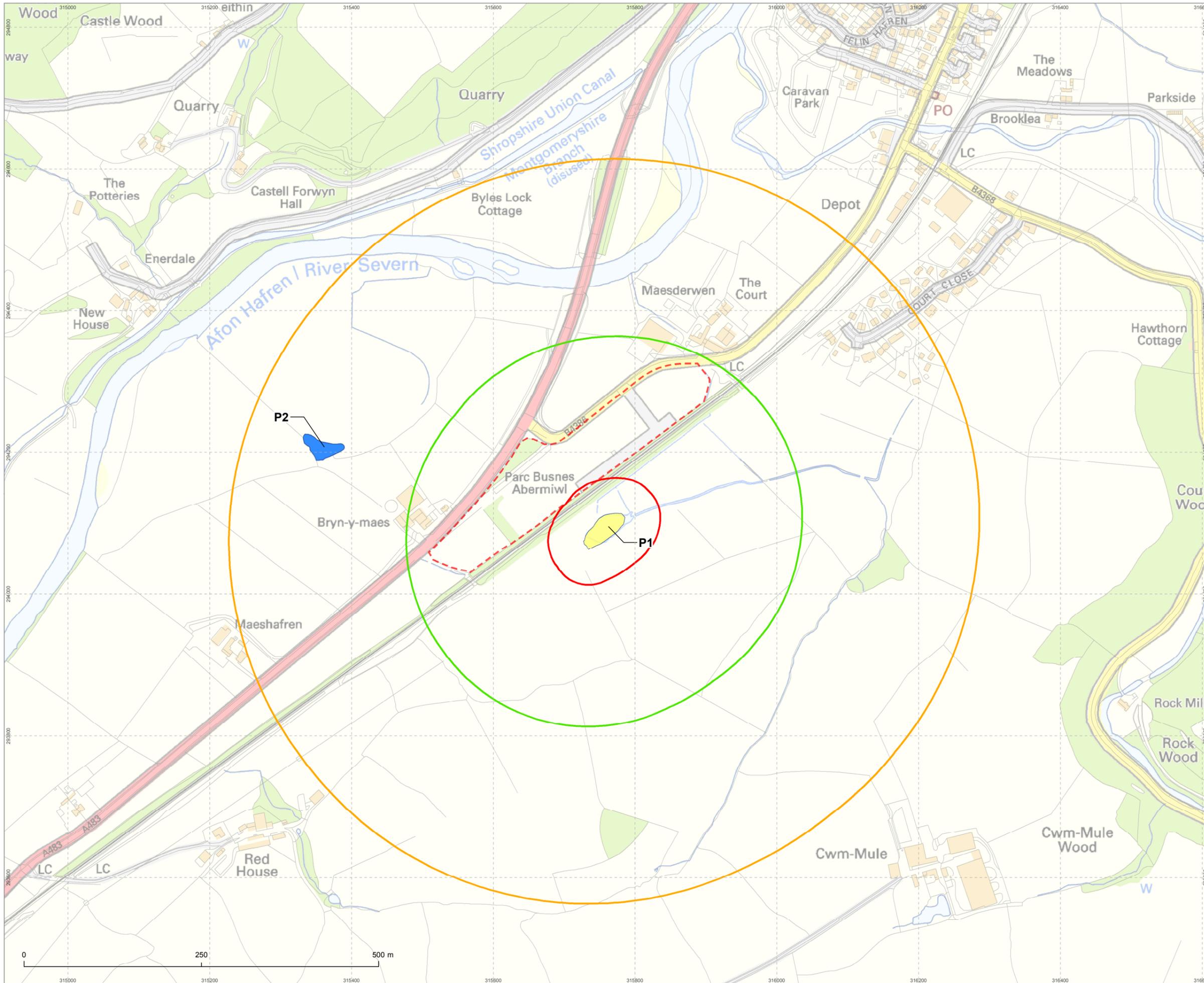


Project		Abermule Business Park	
Drawing		Great Crested Newt Survey Area	
Client		Powys County Council	
Drawing Number	C126868-03-01	Revision	00
Scale @ A3	1:6000	Date	June 2018
Approved By	HE	Drawn By	CD



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C126868-03-02

Legend

- Pond surveyed - GCN present
- Pond surveyed - no GCN present
- Site boundary
- 50 m radius from GCN pond (P1)
- 250 m radius from GCN pond (P1)
- 500 m radius from GCN pond (P1)

Note:
Great crested newt survey results from Gerald Longley's 2017 report GLEC-0896b-01.

Project		Abermule Business Park	
Drawing		Great Crested Newt Survey Results Map	
Client		Powys County Council	
Drawing Number	C126868-03-02	Revision	00
Scale @ A3	1:5000	Date	June 2018
Approved By	HE	Drawn By	CD



MIDDLEMARCH ENVIRONMENTAL

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TERRESTRIAL HABITAT

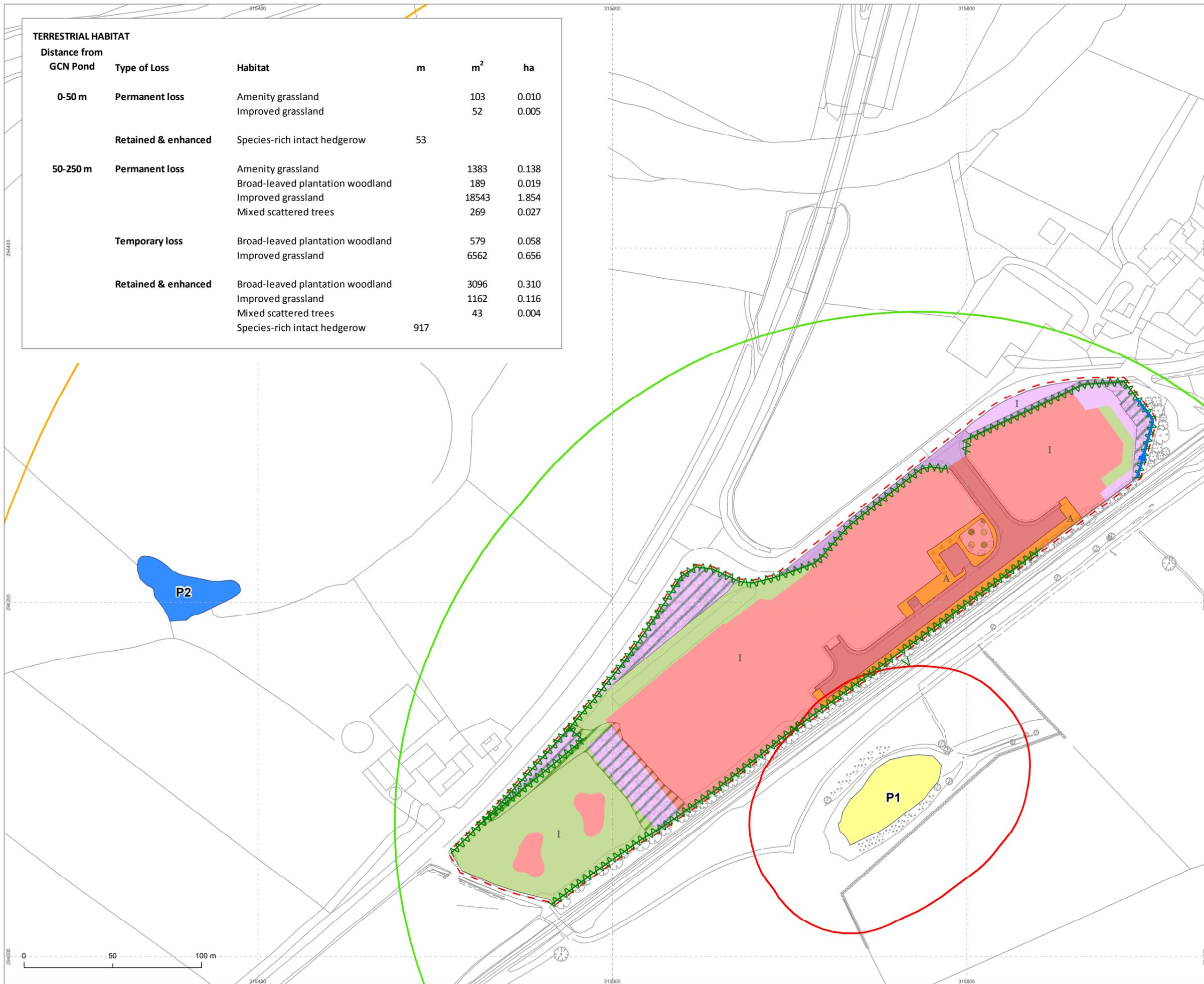
Distance from GCN Pond	Type of Loss	Habitat	m	m ²	ha
0-50 m	Permanent loss	Amenity grassland		103	0.010
		Improved grassland		52	0.005
	Retained & enhanced	Species-rich intact hedgerow	53		
50-250 m	Permanent loss	Amenity grassland		1383	0.138
		Broad-leaved plantation woodland		189	0.019
		Improved grassland		18543	1.854
		Mixed scattered trees		269	0.027
	Temporary loss	Broad-leaved plantation woodland		579	0.058
Retained & enhanced	Temporary loss	Broad-leaved plantation woodland		6562	0.656
		Improved grassland			
	Retained & enhanced	Broad-leaved plantation woodland		3096	0.310
		Improved grassland		1162	0.116
		Mixed scattered trees		43	0.004
	Species-rich intact hedgerow	917			

Legend

- Permanent loss
- Retained and enhanced
- Temporary loss
- Pond surveyed - GCN present
- Pond surveyed - no GCN present
- 50 m radius from GCN pond (P1)
- 250 m radius from GCN pond (P1)
- 500 m radius from GCN pond (P1)
- Phase1 habitats * :**
- Species-rich intact hedgerow
- Running water
- A Amenity grassland
- Broad-leaved plantation woodland
- Building
- Hardstanding
- I Improved grassland
- Mixed scattered trees

Note:
Great crested newt survey results from Gerald Longley's 2017 report GLEC-0896b-01.

* Phase1 habitats are based on Gerald Longley Ecological Consultants Ltd 2017 report GLEC-0896a-01

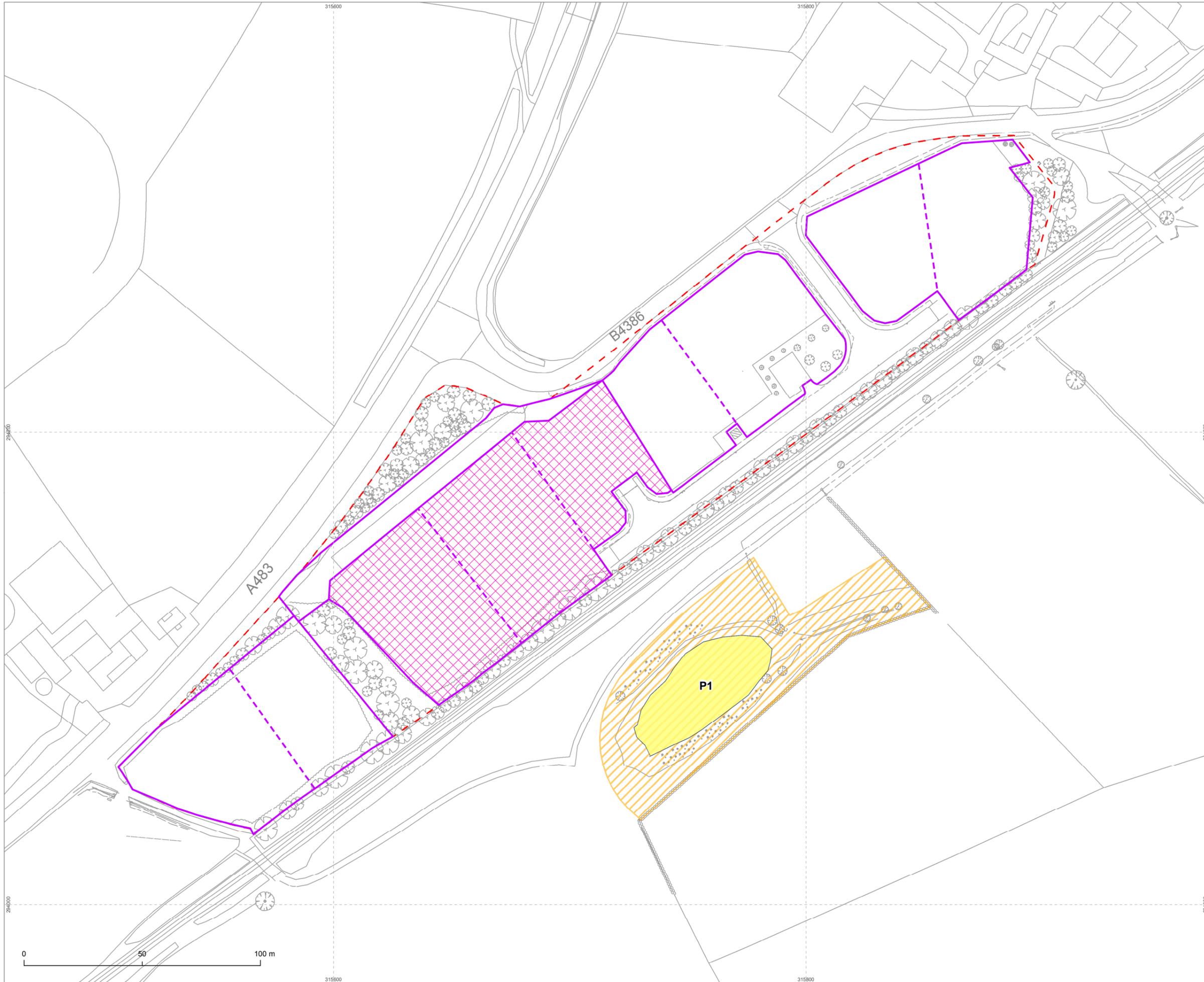


Project		Abermule Business Park	
Drawing		Impacts Map	
Client		Powys County Council	
Drawing Number	C126868-03-03	Revision	00
Scale @ A3	1:2000	Date	June 2018
Approved By	HE	Drawn By	SKS

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C126868-03-04

Legend

- GCN exclusion fencing - drift
- GCN exclusion fencing - temporary
- ▨ Upon completion of development works, area to be fenced off using permanent GCN exclusion fencing
- ▨ Receptor site
- ▨ Pond surveyed - GCN present
- ▨ Pond surveyed - no GCN present
- Site boundary

Note:
Great crested newt survey results from Gerald Longley's 2017 report GLEC-0896b-01.



Project		Abermule Business Park	
Drawing		Great Crested Newt Exclusion Fencing Plan	
Client		Powys County Council	
Drawing Number	C126868-03-04	Revision	00
Scale @ A3	1:1500	Date	June 2018
Approved By	HE	Drawn By	CD



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Legend

- GCN hibernacula
- Pond to be monitored
- Abermule Business park boundary
- Enhancement area



Project
Abermule Business Park

Drawing
Ponds to be Monitored

Client
Powys County Council

Drawing Number C126868-03-05	Revision 00
--	-----------------------

Scale @ A3 1:1500	Date June 2018
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Approved By HE	Drawn By SKS
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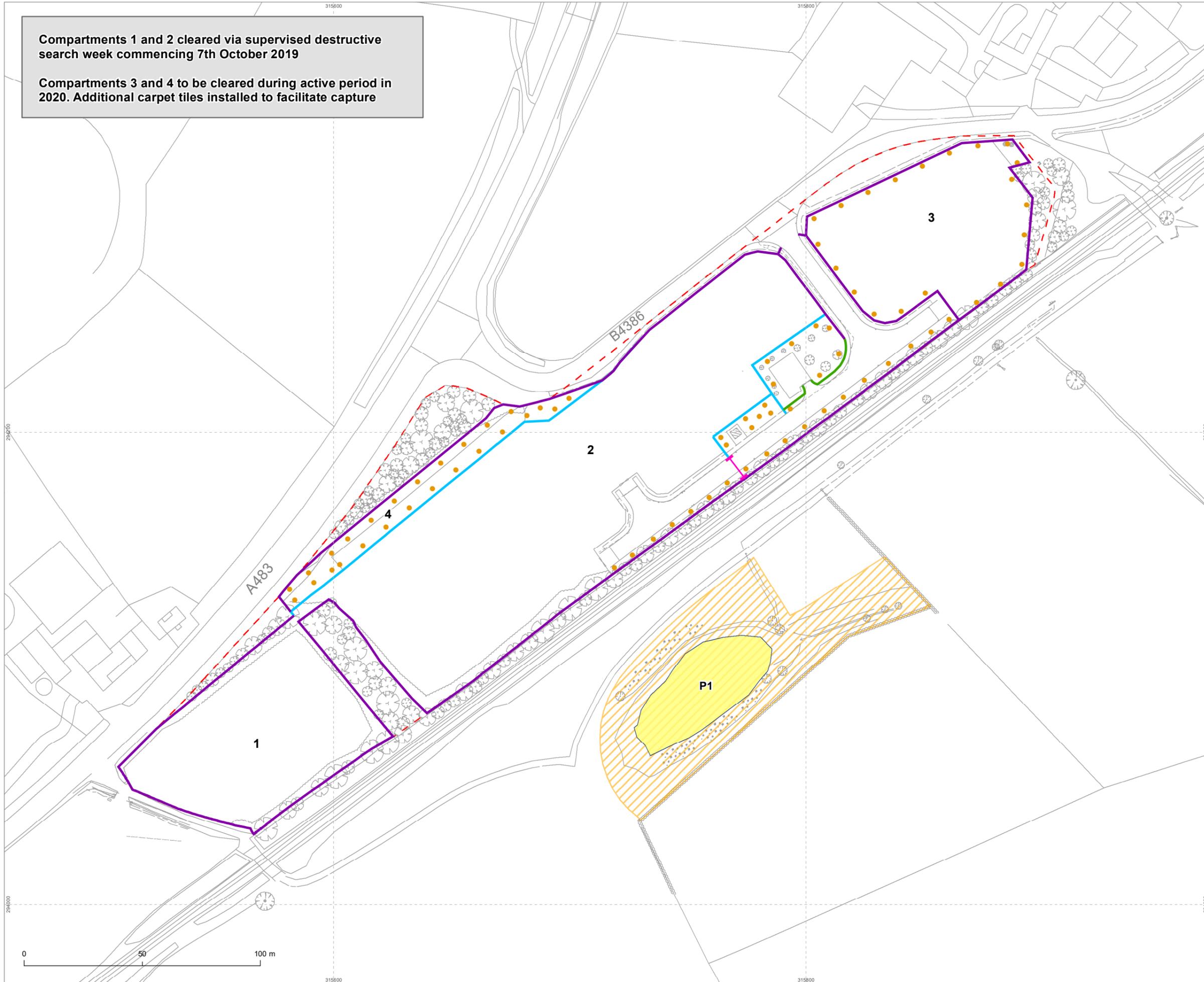
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Compartments 1 and 2 cleared via supervised destructive search week commencing 7th October 2019

Compartments 3 and 4 to be cleared during active period in 2020. Additional carpet tiles installed to facilitate capture



C150856-01-RevE

Legend

- Carpet tiles
- Existing GCN perimeter fence
- Gate feature to be installed in winter 2019/2020 to enclose road cell
- New fence to seal off grass areas
- New fence to subdivide site
- Receptor site
- Pond surveyed - GCN present
- Pond surveyed - no GCN present
- Site boundary

Note:
Great crested newt survey results from Gerald Longley's 2017 report GLEC-0896b-01.

Project		Abermule Business Park	
Drawing		Updated Newt Fencing and Carpet Tiles	
Client		Powys County Council	
Drawing Number	C150856-01-RevE	Revision	RevE
Scale @ A3	1:1500	Date	December 2019
Approved By	TD	Drawn By	VO

MIDDLEMARCH ENVIRONMENTAL

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Notes

1) Development to be in accordance with Abermule Business Park Development, Phasing Plan.

ISSUED FOR PLANNING

Rev	Date	Description	By	Chkd
A	17/07/18	Amendment to Vis Splays.	LMC	JS

Amendments				
------------	--	--	--	--

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 South : Neudol Brynffery, Caeonau Way, Brecon, Powys, LD3 7JR

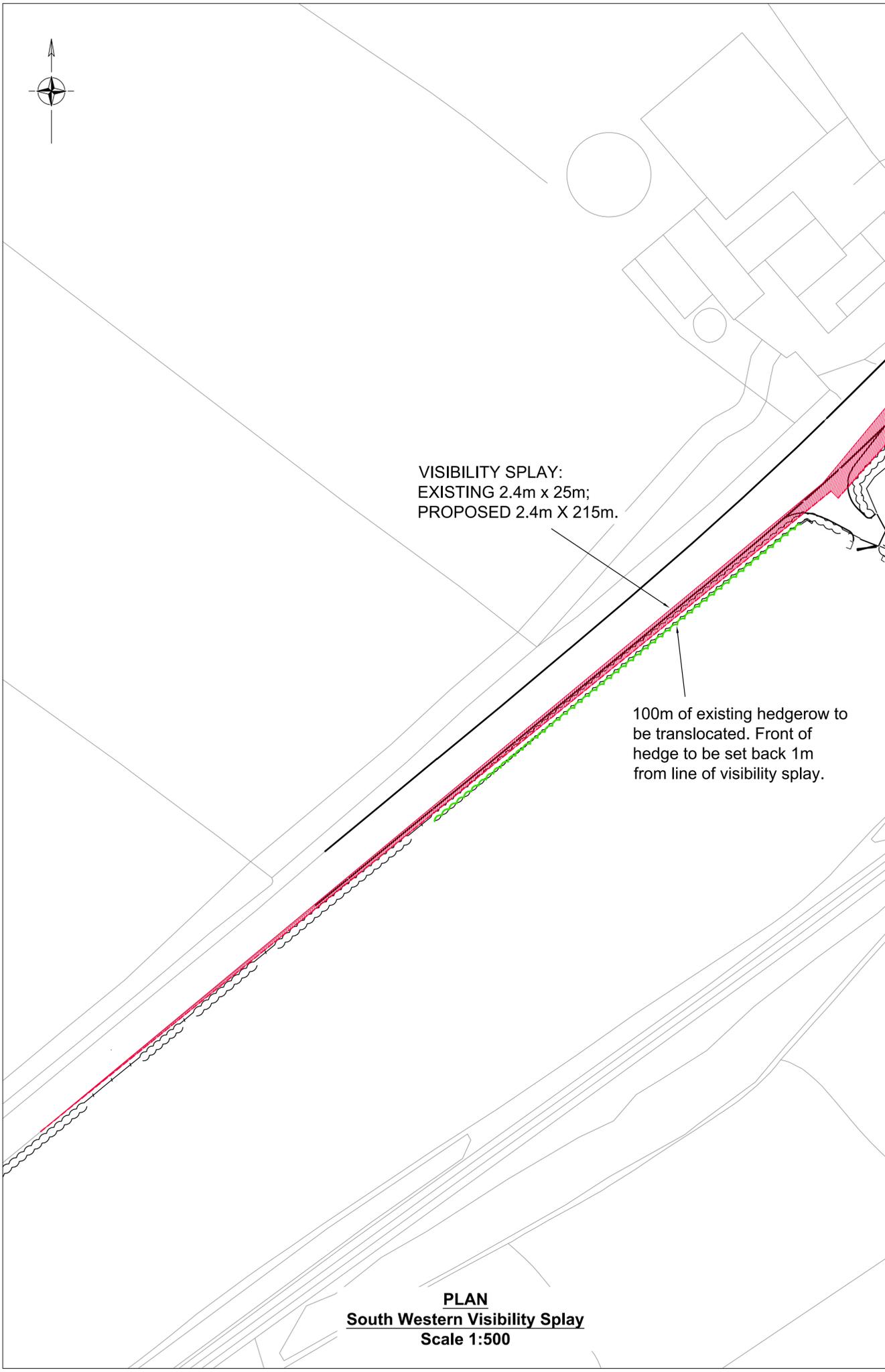
Project: **Abermule Business Park Development.**

Drawing Title: **Amended Field Access & Culvert Full Visibility Splays**

By	JPS	Checked	DB	Scale at A1	1:500
Date	05/07/18				

Project Number	Drawing Number	Revision
H2395	2395/P03/016	A

Drawing Filename : 2395-P03 - Accommodation Works, Field Access Vis Splays
 A.dwg
 Last saved : 17/07/2018



PLAN
South Western Visibility Splay
Scale 1:500



PLAN
North Eastern Visibility Splay
Scale 1:500