



Bringing Together Over 20 Years of
Ecological Excellence

Tyrer Ecological Consultants Ltd, Formby Business Centre, 42 Duke Street, Formby, L37 4AT

Further Information Report

January 2022

Westerdale

Gardden Road

Rhosllanerchrugog

Wrexham

LL14 1LP

National Grid Reference: SJ29574623



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1.0 Introduction & Objectives

- 1.1 As part of an ongoing planning application (App. No.: P/2020/0430) to demolish the remains of a collapsed building at Westerdale in Rhosllanerchrugog to allow for redevelopment of the land into 6 new dwellings with associated garages, parking, and landscaping, Ms. S. Worsfold attended the site during November 2018 to undertake a visual assessment of the site to inform an Ecological Impact Assessment (EcIA).
- 1.2 The EcIA highlighted a number of ecological effects at the site, notably relating to bats and breeding birds, whilst a Method Statement in relation to Great Crested Newt (*Triturus cristatus*) (GCN) was recommended to be followed during clearance of the site due to its proximity to the Johnston Newt Sites Special Area of Conservation (SAC) and Stryt Las a'r Hafod Site of Special Scientific Interest (SSSI).
- 1.3 For context the ecological document in relation to GCN issued thus far is as follows:
 - December 2020 – '*Ecological Impact Assessment at Westerdale*' – Susan Worsfold BSc ACIEEM

Natural Resources Wales consultation response

- 1.4 In July 2021 Natural Resources Wales (NRW) issued a consultation response in relation to the EcIA provided by Ms. Worsfold. In brief, the need to provide further information to safeguard populations of GCN at the nearby SSSI/SAC was highlighted, specifically involving the provision of further ecological information that could be used to inform a Habitat Regulations Assessment (HRA) of the application. Further discussion with NRW over email highlighted the need for a GCN Reasonable Avoidance Measures (RAMS) Method Statement and an on-site enhancement plan to prevent risk of disturbing / injuring GCN during the works and ensure local populations aren't impacted through loss of terrestrial habitat. This document is intended to provide this further information.

2.0 Method Statement

Objectives

- 2.1 Development related activities on the application site (named above), such as building demolition, piling, vegetation clearance, or excavation in areas of suitable newt habitat, for example, may potentially affect Amphibians that may inhabit the local area. As a result, safeguards must be applied to protect these species; the Method Statement below outlines sequential measures to be implemented to ensure these objectives are achieved.

Summary

- 2.2 To avoid harm to individual GCN, it is proposed temporary amphibian fencing is erected along the eastern application site boundary to deter GCN that may be present within the vicinity from entering the site from the direction of the nearby designated sites during the works. Within the fenced area, vegetation will be cut back under the supervision of a licensed ecologist and carefully hand searched for GCN before complete clearance. Any rubble or brash piles will be similarly hand searched immediately prior to clearance. Should Great Crested Newts be found during the search, works must cease immediately and a European Protected Species Mitigation Licence (EPSML) will likely to be required from NRW prior to continuation of the works.

Pre-works understanding

- 2.3 Before any works commence at the application site all site contractors/stakeholders will be briefed with a 'Tool-box' talk of the potential for protected species to occur on site by an assigned Ecological Clerk of Works (ECoW), including amphibians and reptiles, what to look out for and what to do if animals are found. This talk should cover ID aids and legal ramifications of an offence through reckless behaviour.
- 2.4 Contractors/stakeholders will ask any questions as required following the toolbox talk, before signing the Audit Form (see overleaf) which will be kept by the Ecologist/ECoW for audit trail.
- 2.5 Following the toolbox talk an "Environmental Champion" will be appointed, likely to be the Site Manager, who will be responsible henceforth to report to the ECoW throughout the work schedule at agreed intervals in the absence of ecological supervision.
- 2.6 Photograph(s) of relevant protected species will be displayed at the site office memo board and/or kept by the contractor's personal being for visual reference purposes.
- 2.7 Construction works are to only take place during daylight hours 8.00am-6.00pm as opposed to the night time, when amphibians are most active.

Pre-works

- 2.8 Timings:
- Juvenile and adult amphibians are most vulnerable to harm during their **hibernation period considered to be November to February** inclusive. Where possible site clearance works should avoid this sensitive period. If this is not possible works carried out during this sensitive period (between November – February) should take into account the potential presence of hibernating animals within rubble piles, assorted items lay about site, areas of dense vegetation, for example.

- Pre-works erection of temporary one-way amphibian fencing along the eastern site boundary to direct newts away from the site during the works; the installation will be supervised by the licensed ecologist and the Environmental Champion will monitor and repair the fence on a daily basis (see Figure 2.1). Newt grids will be installed at the site access points (see Figure 2.2).
- Pre-commencement check - a walkover and hand search is to take place by an Ecologist/ECOW before any rubble, pile, bulky item or vegetation clearance.

2.9 Habitat manipulation prior to works (March-Oct)

- 3 to 5 days prior to stripping the site bare of vegetation in prep for development, it is recommended that habitats are first trimmed in phases; initially strimmed to 150mm in height using mowers, brush cutters or similar approved cutting method. Strimming should commence directionally east to west across the site at all cutting phases allowing animals to move off site, or towards desired or retained areas. ***N.B. To avoid impacts to nesting birds, some vegetation may require clearance prior to March (for example dense scrub or ivy). This clearance should be undertaken under supervision of the ecologist, and only when GCN are likely to be active, i.e. when night time temperatures remain above 3°C and there have been no ground frosts or snowfall in the preceding week. Alternatively cutting could be undertaken in September-October after the breeding bird season.***
- Once vegetation is cut to 150mm a further hand search should take place within 72 hours. Following the hand search, when herpetofauna are confirmed absent, the vegetation should then be cut to ground level (or below 100mm), raked bare and maintained at this sward thereafter during the construction period. Habitat manipulation like this will discourage animals from using the areas thus less likely to be harmed by works on site.
- Brash piles to be accumulated on hardstanding and all brash piles to be removed within 48 hours of dumping to avoid being utilised by species seeking shelter.
- A hibernaculum will be constructed within a designated ecology area under instruction of the Ecologist (see Enhancement Plan). Any herptiles found during the work schedule will be carefully relocated to the hibernacula acting as a safe receptor zone within the safety of the buffer zone throughout the work schedule.

During works

- 2.10 Any clearance works to areas of interest/ refugia as considered applicable by the Ecologist (such as log piles, brick piles) or loss of existing dense vegetative features, should only commence after a careful visual inspection (Hand Search) has been carried out and the Ecologist has determined that no animals are present and is satisfied no animals are at risk. Any animals found that are not European Protected Species (EPS) will be removed from harm's way and placed into the hibernaculum, species pending and following correct protocols/biosecurity measures.
- 2.11 In order to ensure the temporary amphibian fence is maintained in an appropriate condition, the Environmental Champion will undertake daily checks at the end of the working day, and any overhanging vegetation will be removed to ensure the barrier cannot be breached. If minor tears are noted in the membrane, these will be repaired using duct tape.

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If there are major breaches in the fencing, the ecologist will be contacted, and a repair programme devised to ensure there is no risk of GCN accessing the construction site.

- 2.12 For the full duration no works are to extend off site in the areas adjacent to the red line boundary or within agreed buffer zones/fencing. No pallets, skips or otherwise are to be placed upon areas of dense vegetation and should instead only be placed on flat, cleared ground.
- 2.13 The impact of works on adjacent habitats will be avoided by the clear demarcation of the works area. All work must strictly be in accordance with all relevant Pollution Prevention Guidelines published by the Environment Agency which may include, but is not limited to, PPG1 (general), PPG5 (works in, near, or liable to affect watercourses) and PPG6 (work at construction & demolition sites).
- 2.14 Contingency/emergency plans should be drawn up to address chemical spillage, drainage, collision, etc.
- 2.15 Machinery and materials to remain on bare ground and reasonable efforts must be made to avoid creating piles, or accumulated aggregates. Materials that require piling will be stored within areas of bare ground above ground level, using pallets to prevent reptiles and amphibians from seeking shelter below.
- 2.16 Any excavated materials stored overnight will be searched prior to being used as infill.
- 2.17 Where excavations/trenches are excavated it should be ensured that they are not left open overnight to avoid amphibians falling into them and becoming trapped. If trenches cannot be filled in after the working day for whatever reason, an escape mechanism such as wooden planks of 10 cm wide should be placed in them at a 45-degree diagonal angle, to serve as an escape mechanism to small animals including mammals and herpetofauna.
- 2.18 Excavations should be checked in the morning on a daily basis for the presence of any animals that may have fallen in during the night. Excavations should be backfilled as soon as possible.
- 2.19 All site operatives will maintain a watching brief throughout the work schedule and report any issues, anomalies or discrepancies to the ecologist or wildlife champion as appointed.
- 2.20 If any newts are found work must stop immediately and contact should be made with the assigned licensed, qualified ecologist / ECoW.
- 2.21 At no point should any person handle a reptile without the express permission of the Ecologist.
- 2.22 Any frogs or toads found should be carefully caught using wet gloves, placed (where capture is possible and humane) in a ventilated box using dampened gloved hands and released into suitable nearby like for like habitat that will be unaffected by the proposed works. Toads should not be touched using non-gloved hands as they secrete a toxin through their skin, and they should not be handled for longer than is necessary.
- 2.23 Plastic netting, wire coils or similar hazardous features should not be left on the ground, to avoid entanglement. Aggregates/constructional materials should be stored on pallets as opposed to the storing on the ground.

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- 2.24 If in the event a GCN is found work must cease; the Ecologist will be made aware of the finding and will appraise the situation providing further advice. Site staff must be made aware that if GCN are found there is a correct procedure in place to follow, and failure to halt works may result in committing an offence. At no point should any person handle a GCN or suspected GCN. Unlicensed handling is illegal and untrained handling may cause the newt unnecessary stress and injury.

A guide to timings

- 2.25 Table 2.1 below outlines the correct timings in which to undertake the prescribed RAMs.

Table 2.1: Timings for RAMs to be undertaken at Westerdale

Operation	Months												Notes
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Early understanding													
Toolbox Talk	Any time prior to works												Soon as possible for early understanding
Appoint Wildlife Champion	Following toolbox talk												-
Pre-works													
Buffer zone demarcation & signage	Pre-habitat manipulation & hand search												To avoid encroaching in sensitive area
Erection of newt exclusion fencing	Pre-habitat manipulation & hand search												To prevent GCN from accessing the site
Hand-search on site by Ecologist			Y	Y	Y	Y	Y	Y	Y	Y			Prior to habitat manipulation
Habitat Manipulation			Y	Y	Y	Y	Y	Y	Y				Staggered, as described, to allow animals to move away
Establishment of buffer zones during management	During habitat manipulation												Specifics To be sanctioned by LPA
Hibernaculum creation in buffer zone			Y	Y	Y	Y	Y	Y	Y	Y			To provide a receptor area for translocated animals

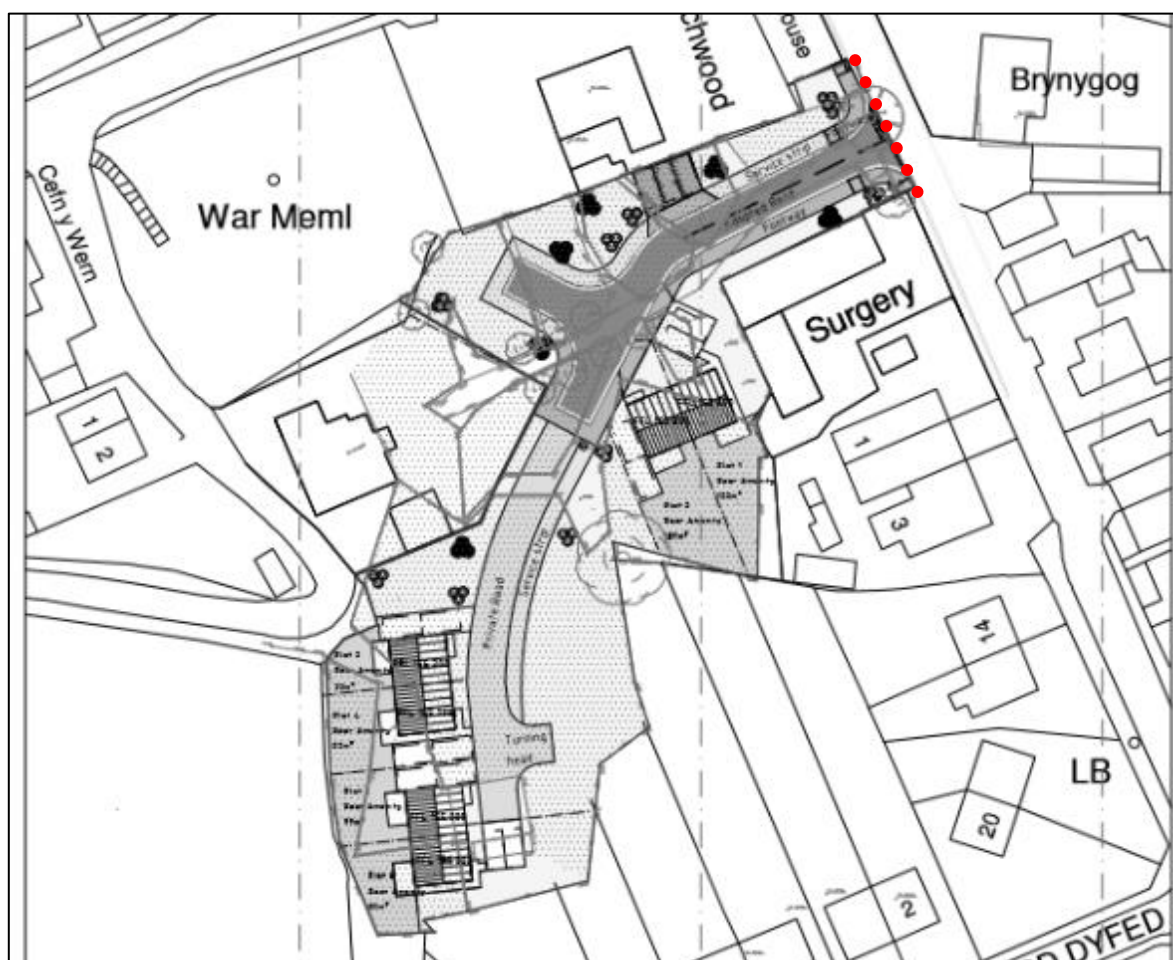


Figure 2.1: The application site with the proposed one-way, temporary amphibian exclusion fencing marked in red (adapted Blueprint Architectural Ltd).

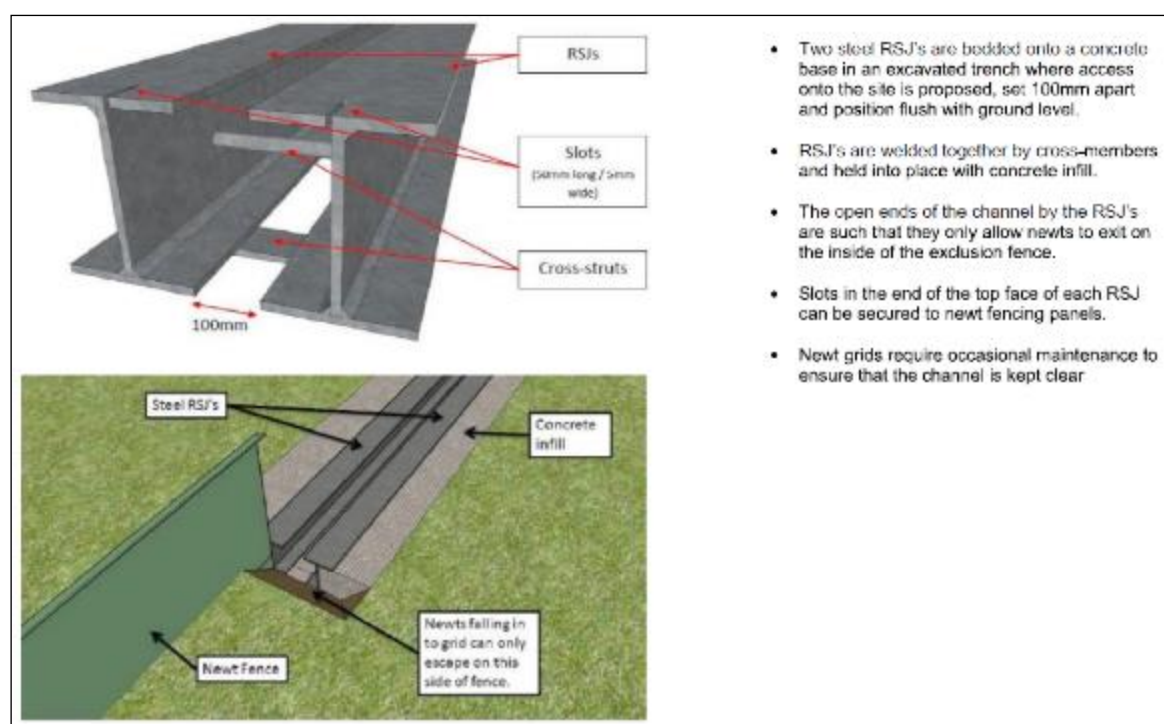


Figure 2.2: Newt grid site access illustration.

Identification Aids:

Great Crested Newt (*Triturus cristatus*)



Identification Tips

- Largest Newt in the UK, up to 16cm in length, but juveniles are smaller,
- Big & black animal with rough, warty skin,
- Orange/yellow colouring on belly,
- Irregular black blotches on belly,
- Toes banded black/orange (yellow toe nails),
- Male has a jagged crest on its back which sags when not in the water, and a separate smoother crest along tail, white stripe on tail too,

DO If a GCN is discovered during works, STOP ALL WORKS in the area, inform your site manager and contact the project ecologist IMMEDIATELY .	DON'T Do not touch or handle a GCN they are very delicate – and it is against the law. Penalties for breaking the law include unlimited fines, imprisonment and seizure of equipment. DO NOT RISK BREAKING THE LAW
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For any questions call Tyrer Ecological Consultants Ltd

Tel: 01704 875 781

Toolbox Talk Audit Form
Tyrer Ecological Consultants Ltd

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3.0 Enhancement Plan

- 3.1 Due to the application site's proximity to the aforementioned SSSI and SAC, both of which are cited in part for their populations of GCN, NRW has recommended that on-site enhancement / compensation for GCN be incorporated into the design of the planning application to maintain the favourable conservation status of GCN in the area. The following Enhancement Plan, if followed in tandem with advice from a suitably qualified drainage technician, will enhance the site for GCN and thus increase favourability of the area for this species.
- 3.2 Figure 3.1 below displays the current plans for the application site, including the creation of recreational areas to be planted with trees (paler green polygons) and amenity gardens (darker green polygons). The 2020 EcIA recommended the creation of a hibernaculum, which has been demarcated with a blue star.



Figure 3.1: Proposed site layout (Blueprint Architectural Ltd, 2021)

- 3.3 Following comment by NRW, further measures are recommended to be incorporated into the design to enhance the site for GCN and other common amphibians. The proposed drainage scheme for the site (Figure 3.2 below) includes the creation of four SuDS basins along the western extent of the site. These basins will reduce surface water runoff rate and store water during heavy rainfall; however, they can also be designed to provide benefits to biodiversity at the site and therefore the land on the western site boundary provides an opportunity to create a connected corridor of wildlife areas, which can be continued south along the eastern site boundary. To enhance the development site for GCN and other amphibians, it is therefore recommended that these areas of the site are replanted with native species and managed as marshy grassland / wildflower meadows, thus providing terrestrial habitat around the attenuation areas that will favour such species; the hibernaculum referenced during the EcIA and RAMs provided above would be created in this area and the attenuation areas should be managed as rain gardens, bioswales, or other attenuation areas.

New hedgerows along the southern, eastern, and western boundaries are proposed in the EcIA; these would provide soft borders that allow free movement of fauna, whilst also creating additional commuting corridors and habitat for a range of species.

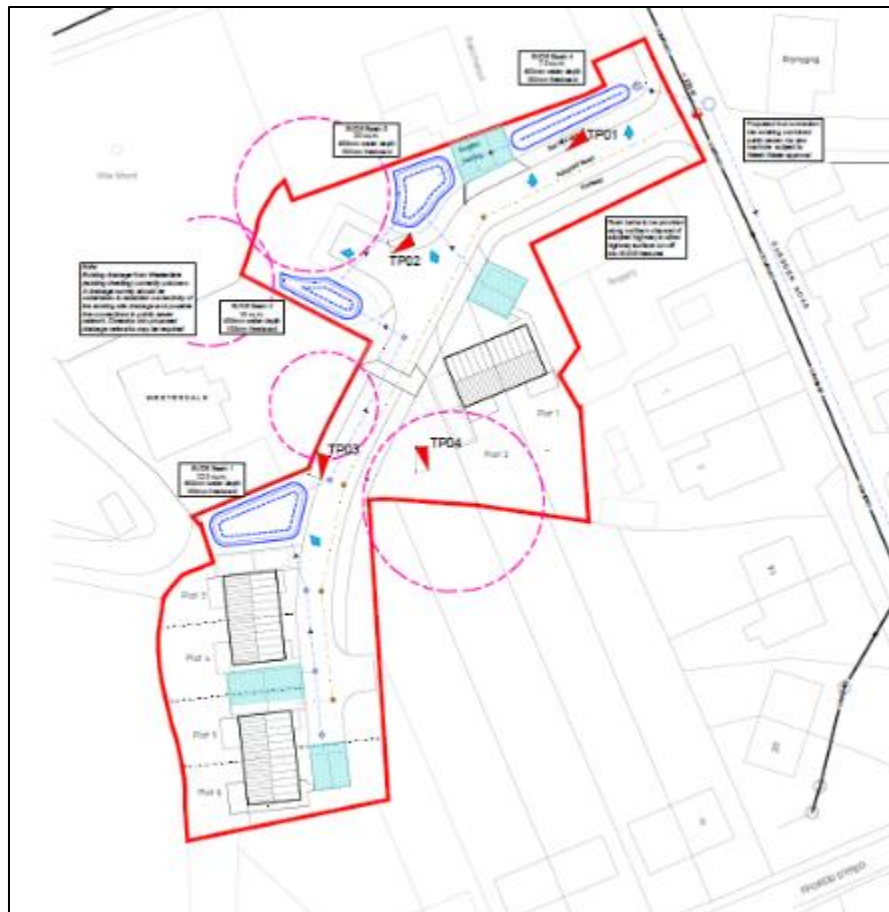


Figure 3.2: Proposed drainage scheme (*Coopers Chartered Consulting Engineers, 2020*)

Creating new shelter / hibernacula for GCN

- 3.4 To create areas of refuge habitat likely to be used by amphibians, and compensate for areas of habitat loss, the steps outlined below should be followed to create new refuge/hibernation habitat. A Hibernaculum can be made using existing features on site (reclamation) or new features brought to the site, and should be created as to provide shelter with thermal cover (such as tarpaulin or turf) and have discrete access points for small animals (Figure 3.3).
- 3.5 To construct a hibernaculum (*Baker et. al*, 2011):
- Remove the turf from the footprint of the hibernaculum and set aside.
 - On well-drained soil excavate to a depth of approximately 50 cm and set aside spoil (this is unnecessary on poorly drained soils).
 - Fill the footprint or pit with core material. Materials likely to retain moisture are preferable, such as cut timber, brash and grubbed up tree roots. Other material such as inert hardcore, bricks, rocks, and building rubble may also be used. Materials that will decompose should not be placed beneath heavy components such as bricks or rocks, to reduce the risk of collapse.
 - Pack the larger spaces within the core materials with wood chippings, loose topsoil or spoil.
 - Cover the hibernaculum with the turves removed from the footprint.
 - Take care not to create structures that might attract rodents, such as piles of rubble with many entrance holes. There has been no rigorous investigation of the optimum size of hibernacula, but larger hibernacula are probably more useful than small constructions because they contain a variety of different microhabitats and are more likely to maintain stable conditions.
 - A suggested minimum size is 4.0 m long by 2.0 m wide by 1.0 m deep. 2.0 x 2.0 x 1.0 metres (length x width x height) as a minimum.
 - Place near to the water attenuation area as indicated below.

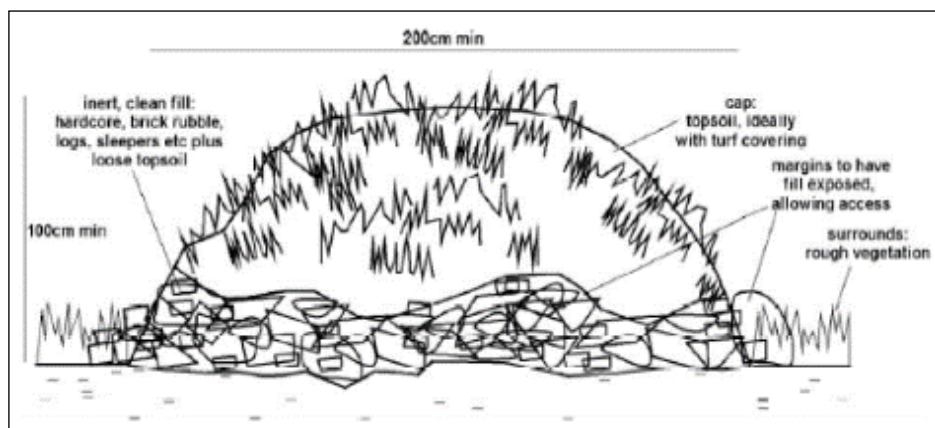


Figure 3.3 - Suggested hibernaculum design (GCN Mitigation Guidelines)

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Creating a marshy grassland / wildflower meadow

- 3.6 The soil should be prepared prior to cultivating and seeding, with the final grading of topsoil agreed by the Landscape Architect. All areas to be seeded should be cultivated to 150mm depth with all weeds, stones, and refuse larger than 50mm removed to tip (see Biosecurity Risk Assessment, section 3.0). Cultivated soil should be rolled and raked to produce a tilth 25mm deep, with hand cultivation used where machine work is not feasible. Seed sowing must immediately follow preparation of the seed bed.
- 3.7 Sowing should be undertaken during calm weather in autumn; any areas where germination fails should be re-seeded. Sowing should be undertaken in transverse directions and the seed should be raked or harrowed in.
- 3.8 The seed mix should be a native wetland appropriate mix, for example EM8 – Meadow Mixture for Wetland from Emorsgate Seeds; species include forbs such as Black Medick (*Medicago lupulina*), Yellow Rattle (*Rhinanthus minor*), Pepper Saxifrage (*Silene acaulis*) and Meadowsweet (*Filipendula ulmaria*), along with grasses including Red Fescue (*Festuca rubra*), Crested Dogtail (*Cynosurus cristatus*), Common Bent (*Agrostis capillaris*) and Quaking Grass (*Briza media*).
- 3.9 No pedestrian or vehicular traffic should cross the sown areas during cultivation, seeding or until the species have established.

Creating a Rain Garden / Bioswale

- 3.10 Rain Gardens are planted, shallow basins with free-draining soil which can be integrated into Sustainable Drainage Systems (SuDS) to improve water quality, reduce flood risk, and improve biodiversity through provision of wetland habitat that can support a variety of flora and fauna.
- 3.11 The area in which the Rain Garden is to be constructed should be demarcated, then dug out to a maximum depth of 150-450mm at the centre and draining end (in the case of Westerdale, this will be at the north-western end of the site), with removed soil compacted to create a berm or raised lip around the garden.
- 3.12 A permeable channel should be dug from the centre to the draining edge to allow excess water to flow out – this channel or ‘swale’ can be filled with gravel and / or pebbles. Soil can then be added back into the Rain Garden – if the soil is not fast-draining then sand and gravel can be added to improve drainage.
- 3.13 The Rain Garden should then be planted with a mixture of suitable native species; an indicative list might include:
- Hemp Agrimony (*Eupatorium cannabinum*)
 - Yellow Iris (*Iris pseudocorus*)
 - Pendulous Sedge (*Carex pendula*)
 - European Water-plantain (*Alisma plantago-aquatica*)
 - Marsh Marigold (*Caltha palustris*)
 - Soft Rush (*Juncus effusus*)
 - Water Mint (*Mentha aquatica*)
 - Water Forget-me-not (*Myosotis scorpioides*)
 - Brooklime (*Veronica beccabunga*)
 - Purple Loosestrife (*Lythrum salicaria*)
 - Ragged-robin (*Lychnis flos-cuculi*)
 - Upright branched bur-reed (*Sparganium erectum*)

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These should be planted in single species stands of three plants, with the stands spaced 500mm apart.

- 3.14 During periods of heavy rainfall, the Rain Garden will collect water forming ephemeral pools which are favoured by amphibians, with the surrounding meadow grassland providing commuting and foraging opportunities. Figure 3.4 below displays an indicative landscape plan for the western region of the site, to enhance the site for GCN and other more common amphibians.
- 3.15 It is further recommended that any new road drainage should incorporate suitable measures to ensure the risks of newts falling into gully pots (roadside drains) is minimised. This should include using permeable surfaces and/or soakaways rather than gully pots where possible or providing a dropped kerb or inset kerb stone immediately adjacent to any gully pots. A distance of ~100mm between the kerb and any gully pots is required, permitting newts to effectively navigate the kerbstones safely (see Figure 3.5).

Creating a native species rich hedgerow

- 3.16 Hedgerows act as semi-natural boundary feature that can provide food and shelter for a wide variety of native fauna. Planting should be undertaken between November and March, outside of periods of flooding or frost.
- 3.17 Whips (young tree saplings) should be planted at a density of 3-5 per metre, with a gentle 'zig-zag' pattern utilised to create a denser hedgerow. Tree guards may be required to protect the whips from predation from rabbits and other herbivores; biodegradable / compostable varieties are widely available. The base of the hedge can be protected from excessive weed growth with either a thick layer of mulch or biodegradable matting; once established the hedge will shade out competing ruderals and require less protection.
- 3.18 A wide variety of native woody and climbing species make excellent hedgerow plants, including:
- Blackthorn (*Prunus spinosa*)
 - Common Beech (*Fagus sylvatica*)
 - Common Ivy (*Hedera helix*)
 - Dog-rose (*Rosa canina*)
 - Dogwood (*Cornus sanguinea*)
 - European Hornbeam (*Carpinus betulus*)
 - Field Maple (*Acer campestre*)
 - Guelder Rose (*Viburnum opulus*)
 - Hawthorn (*Crataegus monogyna*)
 - Holly (*Ilex aquifolium*)
 - Honeysuckle (*Lonicera periclymenum*)
 - Wayfaring tree (*Viburnum lantana*)

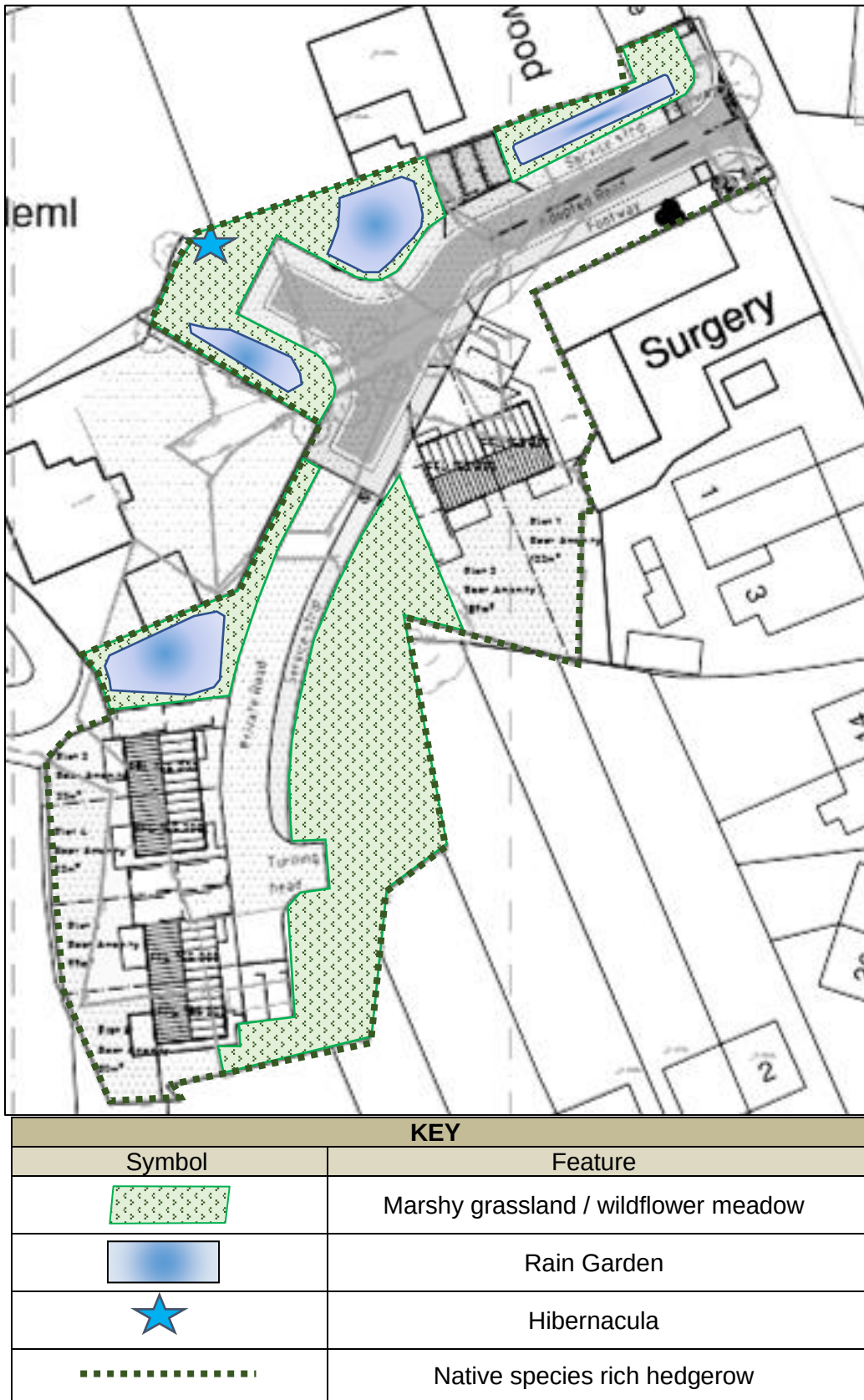


Figure 3.4: Proposed enhancement with key (adapted *Blueprint Architectural Ltd, 2021*)

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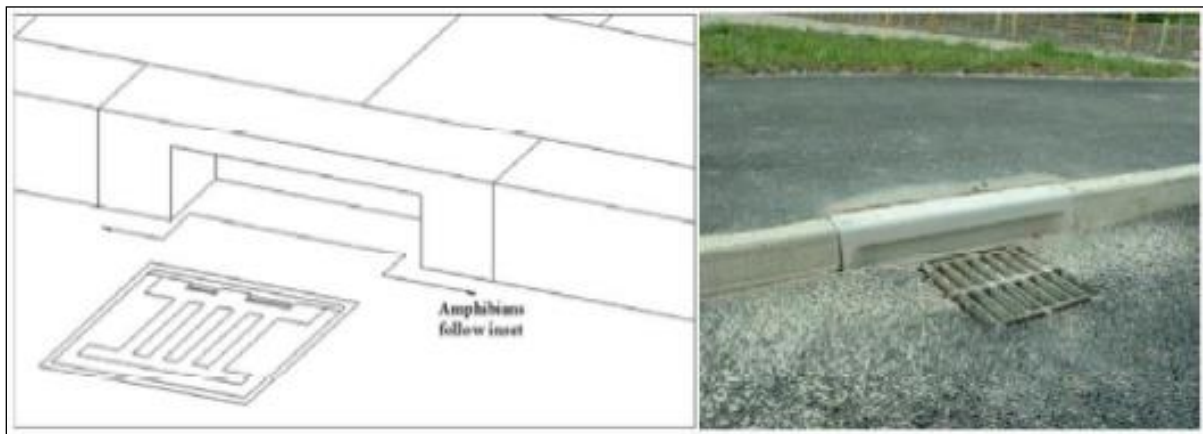


Figure 3.5 - Suggested kerb/gully pot use

Management plan

- 3.19 To retain the favourable conservation status of GCN and other common amphibians at the site, long-term management of the enhancement measures will be required; Table 3.1 below outlines management recommendations and timings for the newly created wildlife enhancement at the south-west of Westerdale.

Table 3.1: Timings for management operations to be undertaken at Westerdale

Operation	Months											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Hedgerows												
Inspection				Y								
Notes	Inspect for damage or disease annually											
Replanting	Y										Y	
Notes	Fill any unwanted gaps in hedge											
Trimming	Y								Y			
Notes	No trimming to occur until hedge has reached minimum 1.5m height. Sides may be trimmed annually to encourage denser growth in years 1-4. Subsequent years where necessary to prevent encroachment beyond the desired area.											
Meadow Grassland												
First year mowing			Y					Y	Y			
Notes	Cut and remove growth in early spring to a height of 70-100mm to allow Yellow Rattle to establish, then subsequently twice in late summer-early autumn after it has gone to seed.											
Second-third year mowing			Y				Y	Y	Y			
Notes	An early spring cut in March keeps back lush growth of undesirable ruderals and should be followed by the main summer cut in late July and two autumn cuts in August and September. All cuts should be to a height of 40-75mm.											
Subsequent years									Y			

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Notes	Half the grassland should subsequently be cut in September, alternating the halves each year to prevent establishment of dense scrub.										
Rain Garden											
Second and fifth year clearance	Y										
Notes	Removal of any accumulated rubbish or undesirable plant species, dredging of any slow-decaying vegetation causing reduced waterflow.										

4.0 Habitats Regulation Assessment Informative

4.1 Introduction

- 4.1.1 As a part of the advice in regard to the planning application at Westerdale, NRW recommended further information should be submitted to the Council to inform a Habitats Regulations Assessment (HRA), to be carried out under regulation 63 of the Conservation of Habitats and Species Regulations 2019 (as amended) prior to determination of the planning application.
- 4.1.2 The HRA would aim to assess the potential for impacts upon amphibian populations at a nearby designated sites, namely the Johnston Newt Sites SAC and River Dee and Bala Lakes SAC. This document aims to compile the necessary information required for the Council as the 'competent authority' to undertake the HRA.

Johnston Newt Sites SAC

- 4.1.3 The Johnston Newt Sites Special Area of Conservation comprises three plots of land located approximately 160m to the east, 1.0km to the north-east, and 1.2km to the south-east of Westerdale, with a total approximate area of 69 hectares. Habitats present include inland water bodies, wetland, grassland, and woodland; however, the only feature of European importance for which the site is designated is the Annex I population of GCN which is one of the largest known in Great Britain. Due to the application sites proximity to the SAC, the potential exists for an increase in direct and indirect pressures that will negatively impact the conservation objectives on the SAC, notably including recreational pressure from the addition of 6 new dwellings.

River Dee and Bala Lakes SAC

- 4.1.4 The River Dee and Bala Lakes Special Area of Conservation is an extensive stretch of riverine habitat which, at its closest point, is approximately 4.0km to the south of the application site but extends to the east, west, and south-west with an approximate total area of 2334 hectares. The site is designated for supporting two Annex II species, namely Floating Water-plantain (*Luronium natans*) and Atlantic Salmon (*Salmo salar*) and one Annex I habitat "Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation". A number of additional qualifying species including Otter (*Lutra lutra*) are present, and despite its distance from the SAC the application site does fall within the catchment area of the river and thus holds the potential to cause an increase in the amount of phosphate/phosphorus in the watercourse.

4.2 Relevant Legislation

4.2.1 Several habitats, species and statutory designated sites receive legal protection across the UK under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, referred to as the 'Habitats Regulations' henceforth.

4.2.2 European designated sites can include: -

- Special Areas of Conservation (SAC) and candidate SAC (cSAC) designated under the Habitats Directive,
- Special Protection Areas (SPA) and potential SPA (pSPA) designated under the Birds Directive,
- Ramsar sites, designated under the Convention on Wetlands of International Importance; and,
- European Marine Sites (EMS).

4.2.3 Under the Habitat Regulations, competent authorities are required to consider impacts of any plans / projects which are likely to have significant effects on European designated sites – either alone or in combination with other plans / projects. The assessment of the potential effects is termed a Habitat Regulations Assessment (HRA), which is split into four stages, as described below:

- Stage 1 is a screening stage to determine if the development is likely to have a likely significant effect on a European site, and therefore if a full Appropriate Assessment (AA) is required;
- If required, Stage 2 refers to an AA which is used to determine whether the project will adversely affect the integrity of any given European site(s), in view of their conservation objectives. Conservation objectives specify the overall target for a site's qualifying features (habitats and species/populations listed in Annex I and II) in order for that feature to be maintained or restored, to reach favourable conservation status;
- Stage 3 is triggered if significant adverse effects are identified in stage 2. This stage requires alternative options to be examined to avoid significant impacts on European sites; and
- If it is deemed that the project should proceed for Imperative Reasons of Overriding Public Interest (IROPI), Stage 4 comprises an assessment of compensatory measures which would be required.

4.2.4 The responsibility of undertaking an HRA lies with the competent authority, which is responsible for granting consent for the scheme – in the case of Westerdale, this will be Wrexham County Borough Council. However, it is the applicant's obligation to provide information to the competent authority to enable them to undertake the assessment, or to determine if an AA is required. In this case, the applicant is Blueprint Architectural Ltd.

4.2.5 Under the Habitat Regulations, the competent authority also has an obligation to consult with statutory nature conservation organisations – in this case Natural Resources Wales.

4.3 Stage 1 - HRA Screening

4.3.1 The aims of HRA Screening Stage 1 are to establish whether the construction phase or operation phase of the residential development is likely to have a 'significant effect' on European designated sites.

4.3.2 In this stage the following information is required:

- Identification of internationally designated sites,
- Identification / understanding of conservation objectives of each interest / qualifying feature (see sections 4.1.3 & 4.1.4),
- Estimation of the likely magnitude, duration, location and extent of effects of the changes on internationally designated sites, as far as can reasonably be predicted; and,
- Identification of whether any element of the development will likely have a significant effect on any feature of interest, either alone or in combination with other projects / plans.

4.3.3 Tables 4.1 and 4.2 outline the potential impacts the proposed application at Westerdale might have upon the qualifying features of the nearby designated sites, with a summary of HRA screening outcomes provided in Table 4.3.

Table 4.1 – HRA Screening of construction phase

Site	Qualifying features	Potential for effects on Qualifying features	Is the scheme likely to have a significant effect on European site(s) alone?	Effect in combination with other plans / projects?
Johnston Newt Sites SAC	<u>Annex II Species:-</u> Great Crested Newts (<i>Triturus cristatus</i>)	The proposed works will occur within 160m of the designated site at its closest point. Nutrient input by way of run-off from construction aggregates is unlikely affect the nearby SAC due to the site's location in a developed area, with proposed drainage of the site leading into the existing public sewer system. GCN are a qualifying species for the SAC designation which have been recorded locally. Therefore, there is potential for direct killing / disturbance during construction activities subject to their presence on site. Contamination from air pollution may occur during construction. However, given the distance of the proposed buildings from the designated site and scale of works, contamination via air pollution is considered unlikely. Increased risk of transmission of Schedule 9 (WCA) listed species subject to their presence in the area; however, no Schedule 9 (WCA) listed species were identified during the field visit in 2018.	Yes	Yes
River Dee and Bala Lakes SAC	<u>Annex I Habitats:-</u> H3260 Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation. <u>Annex II Species:-</u> Atlantic Salmon (<i>Salmo salar</i>) Floating Water-plantain (<i>Luronium natans</i>)	The proposed works will occur at around 4.0km from the River Dee and Bala Lakes in a location where there is recreational disturbance and residential development. Nutrient input by way of run-off from construction aggregates is likely to have a deleterious effect on habitats and species within the SAC due to the location of the application site within the River Dee catchment area.	Yes	Yes

	<u>Qualifying species:-</u> Sea Lamprey (<i>Petromyzon marinus</i>) Brook Lamprey (<i>Lampetra planeri</i>) River Lamprey (<i>Lampetra fluviatilis</i>) Bullhead (<i>Cottus gobio</i>) Otter (<i>Lutra lutra</i>)			
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Table 4.2 – HRA Screening of operational phase

Site	Qualifying features	Potential for effects on Qualifying features	Is the scheme likely to have a significant effect on European site(s) alone?	Effect in combination with other plans / projects?
Johnston Newt Sites SAC	See Table 4.1	The proposed works will occur within 160m of the designated site at its closest point. All new residential developments in proximity to the SAC have the capacity to impact upon the site by way of added recreational disturbance which would have deleterious impacts to qualifying species and/or habitats.	Yes	Yes
River Dee and Bala Lakes SAC	See Table 4.1.	The proposed works will occur at 4.0km from the River Dee and Bala Lakes in a location where there is recreational disturbance and residential development. Due to the distance between the application site and the River Dee and Bala Lakes SAC, impacts by way of significant additional recreational disturbance and degradation to habitats and/or qualifying species are considered to be highly unlikely.	No	No

Table 4.3: Summary of HRA screening

Site name	Are the works likely to impact upon the site in solidarity?	Are the works likely to impact upon the site in combination with other projects?	Appropriate assessment required?
Construction phase			
Johnston Newt Sites SAC	Yes	Yes	Yes
River Dee and Bala Lakes SAC	Yes	Yes	Yes
Operational phase			
Johnston Newt Sites SAC	Yes	Yes	Yes
River Dee and Bala Lakes SAC	No	No	No

4.4 Stage 2 - Appropriate Assessment (AA)

- 4.4.1 Where there are Likely Significant Effects (LSEs), or it is uncertain whether there may be LSEs, an Appropriate Assessment (AA) is required. The scope and approach of the AA should be agreed with Wrexham Country Borough Council which act under the advice of their ecological advisors NRW. For an AA, possible implications of proposals are assessed considering the site's conservation objectives.

Impact Assessment

- 4.4.2 Following the screening described in Section 4.3, the need for an AA has been identified for both sites (see Table 4.3 previous) at the construction phase, and at the recreational phase for Johnstown Newt Sites only. In this section, an assessment of the implications for each site in view of that site's conservation objectives is made, in terms of the magnitude, duration, location and extent of effects.

Mitigation

- 4.4.3 The 'Information to Inform an Appropriate Assessment' (IIAA) section also looks at potential mitigation measures which would be required to determine if the magnitude, duration, location and extent of effects can be reduced / removed. These mitigation measures would form part of the planning consent, including related planning conditions, for the Proposed Scheme, if approved.
- 4.4.4 Mitigation measures can include both avoidance measures and reduction measures, but the former approach is preferred in accordance with the mitigation hierarchy. Mitigation measures for each qualifying feature of the SAC are considered separately.

In-combination Impacts

- 4.4.5 In-combination assessment of impacts should also be made considering the development and other relevant plans / projects.

Integrity test

- 4.4.6 The integrity test requires the competent authority to ascertain if the development (alone and in combination with other plans / projects) will not have a significant adverse effect on a site's integrity, which is defined as:

"the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the level of populations for the species for which it was classified".

Monitoring

- 4.4.7 Details of required monitoring are described, either for the purposes of validating the findings of the AA, or as an early warning which would enable any actions resulting in an unexpected adverse impact to be stopped, paused, reduced, altered, or removed.

Information to inform an Appropriate Assessment (IIAA)

- 4.4.8 As presented in section 4.3, the scheme was identified as having potentially significant effects on European site(s) during the construction and operational phases. Information to inform an Appropriate Assessment for each of the sites is given below.

This information includes an impact assessment comprising descriptions of the qualifying features of the designated sites and their conservation objectives (Table 4.4), as well as in-combination mitigation measures.

Impact Assessment

Table 4.4: Identified LSE's by Phase

Site name	Identified LSE's
Construction Phase	
Johnston Newt Sites SAC	➤ Direct killing/disturbance of fauna during the works
River Dee and Bala Lakes SAC	➤ Nutrient input by way of input could have a deleterious effect on habitats and species in the SAC
Operational Phase	
Johnston Newt Sites SAC	➤ Increased recreational pressure on the SAC from the residents of the 9 new dwellings
River Dee and Bala Lakes SAC	No impacts.

Mitigation for LSE's

For direct killing/disturbance of fauna during the works

- 4.4.9 As presented in the Method Statement (see section 2.0), the implication of a series of Reasonable Avoidance Measures (RAMs) including ECoW supervision, hand searches of terrestrial material, and habitat manipulation will remove the risk of killing or disturbing GCN; it is understood by the applicant that should GCN be identified on site all works must immediately cease, and a European Protected Species Mitigation Licence (EPSML) applied for from NRW. The measures detailed will also protect more common amphibians along with small mammals and other fauna.

For Nutrient input via run-off

- 4.4.10 An existing drainage strategy (*Coopers chartered consulting engineers, July 2020*) details water management methods for the application site; it is recommended that the existing strategy is reviewed alongside the proposed enhancement strategy (see section 3.0) with consideration given to the potential for drainage of phosphates/phosphorus into the River Dee water catchment.

For increased recreational pressure

- 4.4.11 To prevent increased recreational pressure (e.g. foot traffic, dog-walking) at the Johnstown Newt Sites SAC, it is recommended that a welcome pack is provided to all new residents, including details of alternative locations which can be used for recreational activity, to reduce the potential for impacts at the SAC.

Integrity Test

- 4.4.12 It is anticipated that the implementation of the above mitigation measures prior to and during the construction and operational phases allows the competent authority Wrexham County Borough Council with advice from NRW to conclude that there will be no significant adverse effects arising from the proposed scheme on the qualifying features of the designated sites within this report.