Norish Ltd., Wrexham Industrial Estate

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Biodiversity Mitigation Strategy

TSL Projects Ltd.

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EXECUTIVE SUMMARY

Contents	Summary
Site Location	The site is located at Norish Ltd, Unit 13 Ash Rd South, Wrexham Industrial Estate, LL13 9UG in Wrexham and is centred at Ordnance Survey National Grid Reference SJ 38036 50371 (Figure 1).
Previous Reports / Surveys	• Preliminary Ecological Appraisal (Just Mammals Ltd., 2024) • GCN eDNA Survey (Marches Ecology, 2024) • Norish Limited, Wrexham Industrial Estate GCN Survey Report (Tetra Tech, 2024) • Norish Limited, Wrexham Industrial Estate National Vegetation Classification V2 (Tetra Tech, 2025) • Norish Limited, Wrexham Industrial Estate Great Crested Newt Conservation Plan V2 (Tetra Tech, 2025)
Scope of this Document	Mitigation Strategy for great crested newts (GCN), dingy skipper and grizzled skipper to support planning application P/2024/0247 for the proposed development at Norish Ltd., Wrexham Industrial Estate and a GCN European Protected Species Licence (EPSL) application to Natural Resources Wales (NRW).
Mitigation Works Required	**GCN** • Secure a GCN EPSL from NRW. • Pitfall trapping of terrestrial habitat due to be lost to the proposed development and relocation of trapped amphibians to the wildlife receptor area (mid-March to October inclusive). • Ongoing habitat management of ponds and scrub for no less than a period of 25 years. • Reprofiling of Ponds 1A and 1B to create two distinct ponds (Pond 1 and Pond 2) • Marginal plug planting of Ponds 1 and 2 to increase suitable egg-laying substrate • Creation of three hibernacula and five refuge piles within retained habitats on site. • GCN population monitoring surveys biennially. • Adherence to precautionary working methods and timing restrictions. **Dingy and Grizzled Skippers** • No net loss of skipper habitat. • Implementation of one butterfly bank in retained grassland to the south of the site with limestone aggregate and dingy / grizzled skipper food plants. • Enhanced planting of other grasslands to increase butterfly habitat.

Contents	Summary
	• Adherence to timing restrictions. **Habitats** • Seed collection and relocation to lower value grasslands on site. **Other Notable Species** • Adherence to precautionary working methods and timing restrictions for breeding birds, badger, hedgehog, other amphibians and reptiles.
Enhancement	• Enhancements to available GCN breeding habitat on site by creating two distinct ponds. • Enhancements to compensate for the loss of terrestrial GCN habitat include a minimum of five brash piles and three hibernacula. • Create habitat mosaic including vital bare ground required by grizzled skipper through selective ground scarification.

1.0 INTRODUCTION

Tetra Tech Limited (Tetra Tech) was commissioned by TSL Projects Ltd. in 2024 to prepare a mitigation strategy to support a planning application submitted to Wrexham County Borough Council (P/2024/0247) and to support a great crested newt (GCN) *Triturus cristatus* European Protected Species Mitigation Licence (EPSML) application to Natural Resources Wales (NRW).

This report has been prepared by Tetra Tech's Consultant Ecologist Bronwyn Dennis, BSc (Hons) and the conditions pertinent to it are provided in Appendix A.

GCN are a European protected species, full details of that protection, including types of offences and relevant environmental and planning policy position are provided in Appendix B.

The grizzled skipper *Pyrgus malvae* and dingy skipper *Erynnis tages* butterflies occur in isolated locations on the Wrexham Industrial Estate and are a conservation priority in Wales (Butterfly Conservation, 2024). Both species are found in warm habitats that provide shelter and sparse vegetation, such as woodland edges and rides, unimproved grassland, and brownfield sites.

1.1 BACKGROUND

The site is located at Norish Ltd, Unit 13 Ash Rd South, Wrexham Industrial Estate, LL13 9UG in Wrexham and is centred at Ordnance Survey National Grid Reference SJ 38036 50371 (Figure 1). The site comprises a large metal industrial building, a smaller brick office building and areas of hard standing for associated parking and access. The buildings are surrounded by an area of other neutral grassland, dense scrub predominantly comprised of willow *Salix* sp. and hawthorn *Crataegus monogyna*, and broadleaf woodland. There is also willow carr onsite and an area of marshy grassland.

Within the area of scrub and woodland to the south-east of the site, there is a ditch and a pond complex which comprised of two waterbodies (labelled within this report as Pond 1A and Pond 1B) which have combined and formed a pond complex (Figure 1). Pond 1A is located within the willow carr, and Pond 1B is located adjacent to the marshy grassland and is surrounded by mixed scrub.

The chilled food distribution centre is proposed to be extended to include a new cold store, blast freezer, plant building and production extension. The proposal also includes the associated landscaping works to include a new car park, loading docks and to improve site access (P/2024/0247). As part of the proposed plans in Appendix C drawing 'TCSW-ASA-90-VS.ZZ-D-A-9003_(S2-P15)_GA Site Plan – Overall', terrestrial habitat comprised of MG9 grassland will be lost in the western area of the site, in addition to some small areas of grassland adjacent to the existing cold store building in the east. It is currently understood that the extensive area of grassland in the eastern area of the site, Ponds 1A and 1B, and the areas of scrub and woodland across the site will be retained as part of the development proposal.

Prior to this report, associated surveys undertaken in the site included (and these reports should be read in conjunction with this document);

- Preliminary Ecological Appraisal (Just Mammals Ltd., 2024)
- GCN eDNA Survey (Marches Ecology, 2024)
- Norish Limited, Wrexham Industrial Estate GCN Survey Report (Tetra Tech, 2024)
- Norish Limited, Wrexham Industrial Estate National Vegetation Classification V2 (Tetra Tech, 2025)

- Norish Limited, Wrexham Industrial Estate Great Crested Newt Conservation Plan V2 (Tetra Tech, 2025)

A 'small' GCN population was identified during the population assessment (English Nature, 2001), (Tetra Tech, 2024) in addition to breeding being confirmed during both the eDNA (Marches Ecology, 2024) and population assessment.

Food plants for grizzled and dingy skipper were identified during the National Vegetation Classification Survey (NVC) (Tetra Tech, 2024)in the MG9 grassland (Rodwell, 1992)on both the western and eastern areas of the site. Furthermore, recent desk study records for both grizzled and dingy skipper are present within 100m of the site centroid and 10m of the site boundary.

1.2 PURPOSE OF THE REPORT

The Mitigation Strategy for the site is intended to cover the construction phase and first five years post-construction and is structured as follows:

- Specification of measures that will be implemented during the construction phase to avoid and minimise impacts on important GCN, grizzled skipper and dingy skipper features;
- Specification of measures that will result in the creation of features of GCN, grizzled skipper and dingy skipper value as part of the development of the site;
- Specification of measures to maintain any new habitats and ecological features for their ecological value for the first five years following construction; and
- Provision of a monitoring schedule which outlines the commitment to ensure that these measures are implemented, reviewed and adjusted as appropriate over time.

The mitigation strategy considers the unique features of the site, the local area and the proposed development and is based on currently available information. If the development proposal is altered substantially, or significant new ecological information comes to light, then this plan should be revised accordingly by the Project Ecologist.

1.3 RELEVANT LEGISLATION

GCN are a European protected species, full details of that protection, including types of offences and policy position are provided in Appendix B.

Dingy skipper and grizzled skipper are both listed on Section 7 of the Environment (Wales) Act 2016, as UK BAP Priority Species (JNCC, 2007), and as high on the Butterfly Conservation priority list (Butterfly Conservation, 2024).

1.4 NATIONAL PLANNING POLICY

The national planning policy guidance is found principally in Planning Policy Wales Edition 12 (PPW) dated July 2024 (Welsh Government, 2024). The document is supported by a series of Technical Advice Notes (TANs). A short summary of the main points directly relevant to the ecological assessment of the development is provided below.

Paragraph 6.4.3 states that the planning system has a key role to play in helping to reverse the decline in biodiversity and increasing the resilience of ecosystems, at various scales, by ensuring appropriate mechanisms are in place to both protect against loss and to secure enhancement. Addressing the consequences of climate change should be a central part of any measures to conserve biodiversity and the resilience of ecosystems. Development plan strategies, policies and development proposals must consider the need to:

- support the conservation of biodiversity, in particular the conservation of wildlife and habitats;
- ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats;
- ensure statutorily and non-statutorily designated sites are properly protected and managed;
- safeguard protected and priority species and existing biodiversity assets from impacts which directly affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water and soil, including peat; and
- secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks.

Paragraph 6.4.5 states that planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions, and that development should not cause any significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversity. The diversity of, connections between, the scale, the condition and the adaptability of ecosystems must be taken into account.

Paragraph 6.4.21 states 'Planning authorities must follow a step-wise approach to maintain and enhance biodiversity and build resilient ecological networks by ensuring that any adverse environmental effects are firstly avoided, then minimized, mitigated, and as a last resort compensated for; enhancement must be secured wherever possible'.

Full details of legislation, National Planning Policy Framework (NPPF) and additional policy relevant to the ecology and development of the site are provided in Appendix B.

1.5 WREXHAM BIODIVERSITY ACTION PLAN

The Wrexham Local Biodiversity Action Plam (LBAP) was adopted in 2011. Local planning guidance note 32 pertains to biodiversity and development. A short summary of the main policies directly relevant to the ecological assessment of the development is provided below.

Policy PS2 states that development must not materially detrimentally affect countryside, landscape / townscape character, open space, or the quality of the natural environment.

Policy PS11 states that encouragement will be given to proposals which improve the biodiversity value of sites and to the establishment of local nature reserves where the nature conservation and landscape interest of the land will be protected and enhanced.

Policy EC6 states that development within or close to sites of biodiversity interest will only be permitted where the need for development outweighs the need to safeguard the intrinsic nature of conservation value of the site. Where such development is permitted, damage should be kept to a minimum and compensation should be provided. Measures to improve the biodiversity value of sites and enhance their natural conservation interest will be supported.

Full details of Wrexham LBAP policies relating to biodiversity and development are provided in Appendix B.

2.0 ROLES AND RESPONSIBILITIES

2.1 THERMOTRAFFIC LTD.

The land manager / owner responsibilities during Operational Phase include the following:

- To adhere to the relevant provisions made within this document for at least 25 years.
- To ensure / secure ongoing funding is available to be able to adhere to the relevant provisions made within this document for at least 25 years.
- To ensure the site is appropriately managed by granting either a long-term lease or long-term management agreement to a body that accords with the definition of “responsible” under Part 7 of the Environment Act (2021).
- To appoint a Biodiversity Champion (see 2.3) to oversee that the created habitats on site are managed as per the management plan for at least 25 years.
- To appoint a suitability qualified ecologist to monitor the condition of habitats and report on success / failure of establishment, including making recommendations for any remedial action.
- Keep record of habitat monitoring for at least 25 years.
- Ensuring that remedial action is taken where necessary for at least 25 years.
- Contact a suitably qualified ecologist when further information if required.

2.2 BIODIVERSITY CHAMPION

A Biodiversity Champion (BC) will be nominated to influence site activities during the Construction and Operational Phases in line with the recommendations of this report. The BC does not need to be an ecologist but will be familiar with this report as well as the site and have sufficient authority and presence on site to influence activities. Usually, a member of the lead contractor team takes this role during the site Construction Phase. The BC nominated during the construction phase may not have regular site presence; therefore, the role of BC can be transferred to a new individual (such as the management agent or land agent) once management of the site is transferred into the Operational Phase.

During the Operational Phase the role of a BC is to provide advice to the site workers on all pertinent ecological issues as highlighted by this document as well as associated preceding documents and to check that the ecological protection and mitigation measures as specified, are correctly implemented.

General responsibilities of the BC are:

- Overseeing that all site contractors know to report any ecological concerns/issues to BC (e.g. any invasive non-native species (INNS)and specific diseases on site);
- Make sure all contractors are aware of and adhering to the biosecurity measures outlined in this document and in the GCN Conservation Plan (Tetra Tech, 2025);
- Check and record that an overview of the site’s ecological constraints are included within the contractor/worker inductions as appropriate;
- Undertaking weekly checks of the semi-permanent newt fencing during March-October, reducing to monthly checks during November-February;

- Supervising and monitoring the implementation and habitat creation measures as set out in this document;
- Transferring information of the BC role to the next BC between the Construction Phase and Operational Phase or prior to leaving the position for any reason; and
- Contacting an ecologist with uncertainties about ecological issues surrounding the project proposals.

General responsibilities of the BC during the Operational Phase are:

- Overseeing that the created habitats on site are managed as per the management plan;
- Overseeing the maintenance of ecological fencing and the (ecological) mitigation area;
- Overseeing mowing as per the requirements in this document;
- Checking the success of new habitats and ensuring that remedial action is taken where necessary;
- Checking the health of any animals found on site (e.g. Chytrid and Ranavirus);
- Liaising with an appropriately licensed ecologist to organise required GCN monitoring; and
- Contacting ecologist or relevant organisation if any issues arise.

Where additional issues are identified, or where it is considered that revised maintenance regimes are needed, the BC must contact a suitably qualified ecologist who can make changes to management prescriptions as appropriate.

The BC will take photographs, make logbook entries of inspections and produce progress reports as appropriate to evidence that the above responsibilities are being upheld. This monitoring and review process will be carried out as an integral part of the overall management plan.

2.3 CONTRACTOR RESPONSIBILITY

An Ecological Clerk of Works (ECoW) will be appointed by the contractor to conduct a site walkover with the Biodiversity Champion at the beginning of the project to point out features and points of interest.

This management plan will be distributed to all relevant personnel involved in the construction works.

The contractor responsibilities include the following:

- To adhere to the relevant provisions made within this document;
- Provide a toolbox talk based on information provided in ECoW walkover; and
- To contact the Biodiversity Champion, and/or if necessary, the ECoW, regarding any uncertainties or activities that may impact on ecological features on site.

3.0 CONSTRUCTION MANAGEMENT PLAN

3.1.1 Toolbox Talk

All construction workers will be provided with a 'Toolbox Talk' presentation prior to commencing work on site so that they are made aware of the ecological issues relating to the site, in particular the presence of a wildlife receptor area, GCN, grizzled skipper, dingy skipper, nesting birds, badger *Meles meles*, hedgehogs *Erinaceus europaeus* and common toad *Bufo bufo* which are all are potential constraints to development. This talk will follow this Mitigation Strategy and detail the important ecological features on site, identifying their locations and explain the purpose of the Mitigation Strategy. Initially this presentation will be delivered by an Ecologist however it is anticipated that subsequent presentations will be incorporated into the general Health and Safety briefing which is given to all workers when they first visit the site.

A copy of this Mitigation Strategy and the Tool Box Talk will be kept on site at all times.

3.1.2 General Good Practice

A safe system for the correct storage of materials / chemicals on site should be implemented to ensure that materials are stored in a suitable manner as to avoid potential impacts on vegetation. This is particularly important with liquids/ chemicals which should not be stored near vegetated areas or watercourses and should be stored on an impermeable base. This will protect habitats to be retained within the site and habitats adjacent to the site.

Appropriate cleaning / maintenance of machinery / tools on site should be undertaken at a sufficient distance from vegetated areas. Failure to do so may result in contaminated water entering the soil and reducing / increasing soil pH and increasing contaminant / sediment levels. It is anticipated that an appropriate Pollution Prevention Control Plan will be in place during the construction phase.

Although the presence of construction waste on site is unavoidable, it is recommended that all waste is stored appropriately and is removed at the earliest opportunity to avoid contamination of the ground and degradation of soil quality. Contractors should also avoid leaving construction waste on site as it may be used as a place of refuge for wildlife, which may then become injured/killed when the waste is removed.

In order to minimise the risk of harm to wildlife:

- All excavations should be either covered at the end of the day (preferable) to prevent access and if this is not possible, they should be left with a ramp, to allow anything which has fallen in, with a means of escape;
- All pipes over 200 mm in diameter should be capped at night, to prevent animals, such as badgers, from entering;
- To minimise disturbance of nocturnal species, night-time working should be avoided wherever possible and if necessary, light spill should be minimised and directed away from mature and boundary vegetation; and
- Maintain access across the construction site for wildlife by not blocking or storing equipment along retained habitats, such as hedgerows and woodland edges.

3.2 FENCING

During construction ecological features and retained habitats will be protected against inadvertent damage during works by the erection of protective fencing (orange flexinet, heras fencing or similar) prior to works on site commencing, under the supervision of the ECoW and in line with other protections measures (such as root protection zones) (Martin Boardman & Associates, 2024).

The features that will be protected include;

- the eastern MG9 grassland,
- the strip of neutral grassland- semi-improved (Just Mammals Ltd., 2024) along the southern boundary of the site;
- woodland;
- scrub;
- Ponds 1A and 1B; and
- The Wildlife Receptor Area

The fencing will be inspected daily for damage and repaired as required.

3.3 WILDLIFE MITIGATION AREA

Prior to construction a receptor area will be established in the eastern MG9 grassland and southern boundary semi-improved neutral grassland through a series of habitat enhancements and the creation of ecological features for GCN, grizzled skipper and dingy skipper. These are discussed in further detail as appropriate below in Sections 4.1 and 4.2.

Contractors will be made aware of the presence of the wildlife mitigation area during the Tool Box Talk and instructed to not enter it under any circumstances.

3.4 LIGHTING STRATEGIES

A lighting plan for the construction and operation phases should be designed and implemented in accordance with the outdoor lighting guidance provided within Gunnel *et al* (2012) and the Institute of Lighting Professionals Guidance Note 08/23 (ILP, 2023). The lighting strategies should:

- Avoid construction lights illuminating retained habitats (e.g. hedgerows and woodland edges);
- Not provide excessive lighting i.e. use minimum required for health and safety;
- Eliminate upward pointing light such that light spill is at or near horizontal;
- Use light sources that emit minimal ultra-violet light and avoid blue and white wavelengths;
- Lights should peak higher than 55 nm or use glass lantern covers to filter ultra violet light;
- Reduce height of lighting columns;
- Use embedded road lights to illuminate roadways;
- Light only high-risk stretches of road/areas;
- Limit times of lighting to provide dark periods;
- Use lighting design software to predict where light spill will occur before instructing lighting plans;
- Avoid using reflective surfaces under lights; and

- Use temporary close boarded fencing until vegetation matures to shield sensitive areas from lighting.

3.5 RETAINED HABITATS

3.5.1 Woodland and Scrub

The woodland and scrub are not proposed to be impacted during the proposed development and barriers should be installed to establish woodland and scrub protection zones.

Should removal of any woodland or scrub be required, an ECoW will be required due to potential constraints posed by GCN, grizzled skipper, dingy skipper, nesting birds, badger, hedgehogs and common toad.

3.5.2 MG9 and Neutral Grassland

The MG9 on the western side of the site and the neutral grassland to the south of the site are excluded from the development and will be managed sympathetically for protected species through relaxed mowing regimes (one autumn annual hay cut) and the planting of larval food plants for dingy and grizzled skipper (See Section 5.2). This area will be protected by barriers to prevent the vegetation and soil being compacted and damaged from site works.

3.5.3 Water bodies

All water bodies within the site will be retained and are located within Wildlife Receptor Area. GCN, common toad and other common amphibians are potential constraints to the water bodies within the site. These areas will be protected by barriers (in the form of orange flexinet / Heras fencing or similar) to separate them from the construction works areas.

Additional General Good Practice measures as detailed in Section 3.1.2 will further protect water features.

4.0 PROTECTED AND NOTABLE SPECIES

4.1 GREAT CRESTED NEWT

A 'small' sized population (English Nature, 2001) of GCN has been recorded during surveys of ponds located within the site. Both Ponds 1A and 1B were confirmed as GCN breeding ponds (Tetra Tech, 2024).

The proposed mitigation measures are summarised below. As part of the EPSML application process to NRW, a detailed Method Statement providing full details of the proposed mitigation measures will need to be submitted.

3.1.1 Mitigation Strategy

Temporary Amphibian Fencing

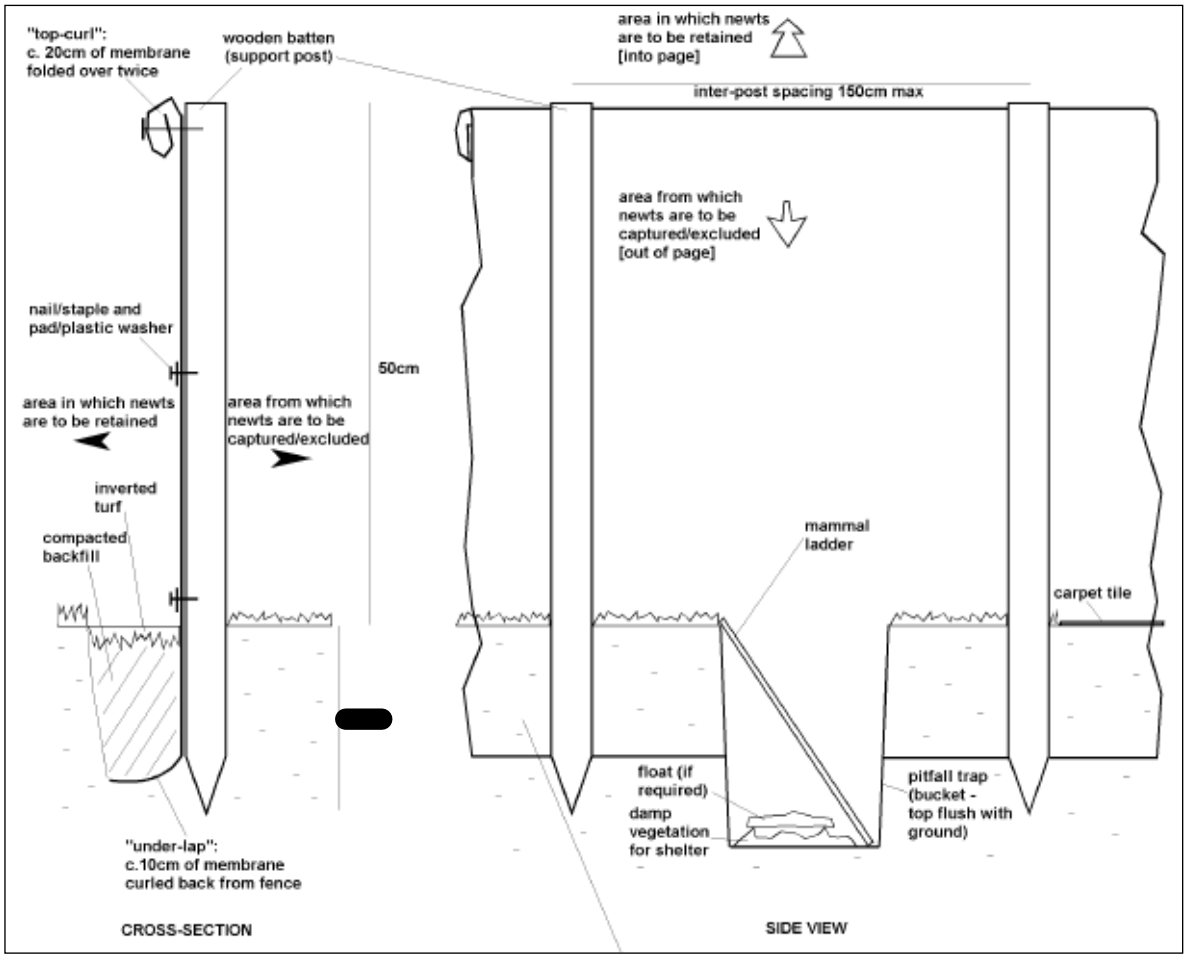
Prior to development clearance and construction commencing on the site, temporary amphibian fencing (TAF) will be erected around the site boundary to prevent amphibians from entering the development area.

The fence will extend vertically below ground, to prevent burrowing animals getting underneath it and will extend vertically above ground sufficiently high to deter animals climbing over (see Drawing 1).

Drift Fencing and Pitfall Trapping

Drift fencing will be installed within the perimeter of the TAF in accordance with the Great Crested Newt Mitigation Guidelines 2001. At approximately 5 m intervals, a minimum of 50 pitfall traps / ha will be sunk into the ground running alongside the drift fencing. Pitfall traps will comprise plastic buckets which are sunk into the ground flush with fencing, with the top of the plastic buckets just below ground level. These will be installed by hand. Plastic containers will have a small drainage hole drilled into the base of each. Pitfall traps will have some damp vegetation placed within to provide shelter and cover for animals that are captured. Please note, pitfall trapping is restricted to the active season for amphibians (mid-March to October inclusive). The pitfall traps will be checked daily by a GCN licensed surveyor, prior to 11am (or temperatures in excess of 15˚C). All animals captured will be recorded by species, sex and life-stage before being transported to the dedicated translocation receptor site.

Installation of drift fencing and pitfall traps will be undertaken under the supervision of an ECoW.



Drawing 1. Indicative Drift / Exclusion Fencing with Pitfall Trap Installation Specification

Refuge Mats

To improve capture efficiency and increase the capture effort, refuge mats will also be laid out at approximate 5 m intervals within the perimeter of the TAF (in addition to the drift fencing and pitfall traps). These refuge mats will be checked daily by a GCN licensed surveyor, prior to 11am (or temperatures in excess of 15˚C). Once identified and recorded all captured GCN, smooth newts *Lissotriton vulgaris*, palmate newts *Lissotriton helveticus*, common toads and common frogs *Rana temporaria* will be transported in a lidded bucket with moist vegetation to the dedicated translocation GCN receptor site.

Trapping Duration

This process will continue for a minimum of 30 days, with traps and refuge mats checked every morning. After 25 days, the first five day set of consecutive days with no recorded GCN captures will mark the end of the trapping and translocation process and the site can be considered to be clear of GCN.

GCN Exclusion Completion

Upon completion of GCN trapping, once the internal TAF area is considered 'excluded of GCN', an ECoW will be present for the removal of the internal drift fencing and back filling of the pitfall trap holes to ensure no GCN have crawled into any small crevices or gaps. Where spoil heaps, brash or potential refuge sites are present the ECoW will undertake a fingertip search for GCN to ensure no GCN are still present.

Following the supervised removal of the drift fencing site clearance activities may proceed within the TAF perimeter.

The TAF will remain in place and be regularly monitored and maintained to ensure its efficacy, for the duration of the construction phase. Checks of the TAF should occur daily when the site is active and during the active season for amphibians (mid-March to October inclusive). During the hibernation period (November to February inclusive), checks of the TAF should occur monthly.

The named licenced ecologist will attend site quarterly to ensure compliance with the licence.

Wildlife Mitigation Area

Prior to construction the following habitat enhancement and creation of ecological features will be undertaken.

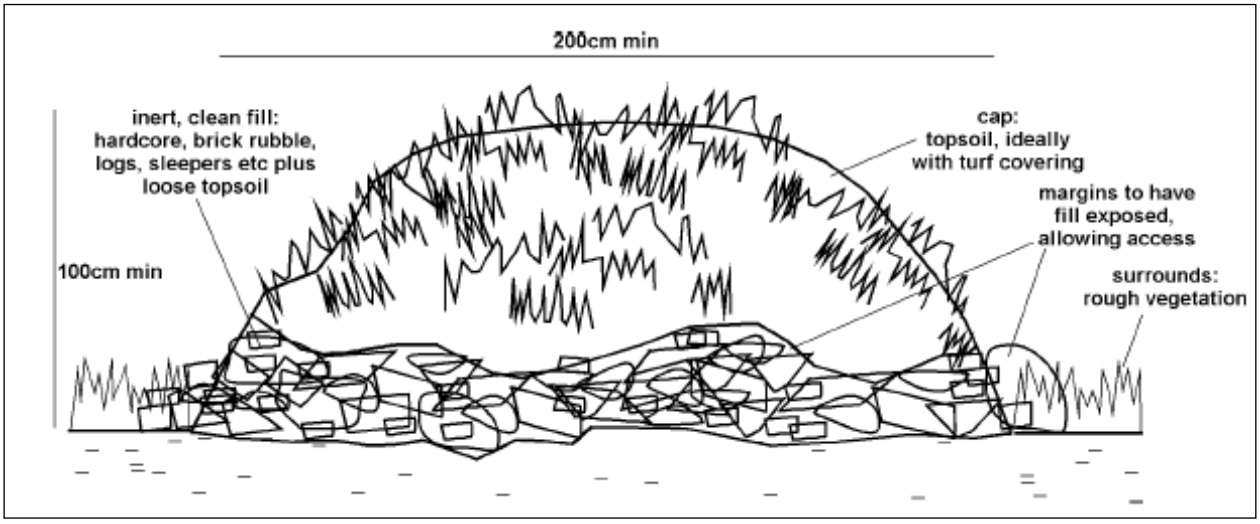
- Three refugia to be created in the receptor area prior to commencement of trapping.
- Two hibernacula to be created prior to commencement of trapping.
- Two additional refugia to be created upon completion of the works.
- One additional hibernaculum to be created upon completion of the works.

Hibernaculum and Refugia

In total three dedicated GCN hibernaculum will be created in the Wildlife Mitigation Area.

An additional five refugia will also be created within the receptor area by stacking logs, brash, branches, removed site vegetation and leaf litter during site clearance activities. The piles should be stacked neatly and uniformly, which creates a more tightly packed refugia. As they decompose, the refugia will hold more moisture and become increasingly valuable habitat (Amphibian and Reptile Conservation Trust, 2024).

The design of the hibernacula will follow that set out in the *Great Crested Newt Mitigation Guidelines* (English Nature 2001 - Drawing 2 below) and will include the use of brick rubble, logs and loose top soil, with a covering of turf. The standard hibernacula will each be c. 2 m in diameter, 4 m in length and c. 1 metre in height.



Drawing 2 (Taken from the Great Crested Newt Mitigation Guidelines 2001)

Pond Enhancement

Pond Reprofiling

Ponds 1A and 1B will be reprofiled and made into two distinct ponds (Pond 1 and 2). The surface area of each reprofiled pond will be 150-300m^2 with the final pond shapes to be based upon site topography and condition of the ground. The ponds will be drained of water to enable the best shapes and gradients to be achieved.

The works will be undertaken by an external contractor who has experience completing habitat management works for conservation. The works will be undertaken using plant machinery and will be supervised by a GCN licenced ECoW. Toothed buckets will be used on plant machinery where possible to prevent accidental injuring or killing of GCN.

The pond draining will be undertaken with ECOW supervision in October-November 2025, when adult and juvenile newts are likely to have left the ponds. This will ensure that any individuals found during the pond works can be safely moved before they enter the terrestrial hibernation/ aquatic overwintering period. The water levels will be lowered in a controlled manner using a pump which will be fitted with a fine mesh membrane that will catch any individuals present within the pond. Water levels will be lowered and reinstated in such a manner so that one water body will always hold some water. Pumping will be closely monitored by the ECoW, with any individuals moved from one water body to the other, until the reprofiling works have been completed. It is acknowledged that this may result in some individuals being 'double handled', however this solution is considered preferable to holding animals potentially overnight in temporary containers should both waterbodies be fully pumped out.

Excess leaf litter sediment build up in Pond 1 will be removed once the pond is drained. Leaf litter over time can lead to excess sediment in the pond and reduces the areas of suitable live egging material. Leaf litter break down over time can also impact water quality by increasing the nitrogen content and biological oxygen demand. The requirement for dredging of leaf litter will be assessed biennially throughout the 25-year management period.

Following the re-profiling the ponds, the (clean) spoil arising from the digging will be left as non-compacted mounds to allow the formation of the three proposed hibernacula on site combined with other materials. The ponds will then be left to refill naturally.

The ponds will offer a range of deep water with variable depths made (up to a maximum of 2m centrally), marginal and marshy zones will also be re-formed around the edges. These profiles and features supply a range of microhabitats for pond fauna and will also allow for the MG9 grassland immediately surrounding the ponds to be retained.

Scrub Management

Pond 1A (Pond 1) is located within dense scrub and is heavily shaded by willow, Pond 1B (Pond 2) lies adjacent to this and is also bordered by dense scrub. Areas of the surrounding scrub and woodland will need to be removed to enable access to complete the reprofiling works.

Management of the scrub surrounding the ponds will be conducted under the presence of a GCN licenced ECoW throughout the 25-year management period (October-February inclusive). Warm ponds are favourable for amphibian growth and development and although trees and scrub can help maintain a warm microclimate, excess shading can reduce pond water temperature.

Management will include selective removal of overhanging vegetation to create open and sheltered areas in addition to increasing sunlight in the pond. No more than 60 % of the pond shoreline should be shaded, with less shading preferable. The southern shoreline is also best unshaded (Baker, T, Buckley, Gent, & Orchard, 2011). The removal of scrub around the pond edges will also help reduce the need for dredging the pond due to leaf litter in the future.

Trees, branches and scrub that are felled as part of this habitat management should be retained onsite to contribute to onsite refugia and for the creation of new log and brash piles in the future.

Pond Planting:

To provide suitable breeding conditions for the following breeding season, both ponds will have native plug planting provided at a suitable density of 2-3 marginal plants per metre, number and maturity to provide suitable conditions.

Planting will be undertaken in early spring/ summer months and will follow the guidance provided by the provider.

Shallow areas, less than 10cm -30 cm deep, support the greatest range of pond plants which creates an optimal habitat for aquatic invertebrates. Beds of submerged aquatic vegetation provide egg-laying substrates for newts, microhabitat for prey species and refuge from predators (Baker, T, Buckley, Gent, & Orchard, 2011). Some native and locally occurring aquatic vegetation will be introduced to the enhanced ponds based on the recommendations provided below.

Floating and submerged plants to be 100 % of one or more of the following species:

- Broad leaved pondweed Potamageton natans
- Fringed water lily *Nymphoides peltata*
- Curled pondweed *Potmogeton crispus*
- Rigid hornwort *Ceratophyllum demersum*
- Water starwort(s) *Callitriche spp.*

Emergent vegetation (20 %) will be made up of one or more of the following species:

- Branched bur-reed *Sparganium erectum*
- Reed sweet grass *Glyceria maxima*
- Greater pond sedge *Carex riparia*

Marginal and fringing vegetation (80%) will be made up of from one or more of the following species with a minimum introduction of 40 individual plants:

- Water mint *Mentha aquatica*
- Lesser spearwort *Ranunculus flammula*
- Soft rush *Juncus effusus*
- Jointed rush *Juncus articulatus*
- Common spike rush *Eleocharis palustris*
- Water forget me not *Myosotis scorpioides*
- Purple loosestrife *Lythrum salicaria*
- Ragged robin *Lynchnis flos-cuculi*
- Marsh marigold *Caltha palustris*

- Marsh woundwort *Stachys palustris*
- Gipsywort *Lycopus europeaus*
- Cuckoo flower *Cardamine pratensis*
- Water plantain *Alisma Plantago aquatica*
- Brooklime *Veronica beccabunga*
- Wild angelica *Angelica sylvestris*
- Yellow flag iris *Iris pseudocurus*
- Reed canary grass *Phalaris arundinacea*

The ponds will be managed to prevent the loss of open water habitat; similarly, marginal and emergent vegetation will require management to ensure habitat types are maintained and do not succumb to natural colonisation.

Monitoring

Upon completion of the works, the onsite GCN population will require monitoring to ensure that the mitigation and management of the site are functioning.

Although the onsite population was recorded as "small" (English Nature, 2001), it likely contributes to the larger metapopulation present within wider Wrexham Industrial Estate. As such population size class assessments and HSI assessments of the ponds will be required biennially for the duration of no less than 25 years (2026, 2028, 2030, 2032, 2034, 2036, 2038, 2040, 2042, 2044, 2046, 2048, 2050 and 2051). The population size class assessments will be based on 2-3 torch counts; with the results being uploaded to the Wales GCN Monitoring scheme.

If fish or other INNS are recorded, then these surveys will be carried out annually.

Section 6.4.36 of the Planning Policy Wales (Edition 12) and its relevance to the planning decision process includes a requirement that the proposal will not be detrimental to the maintenance of a favourable conservation status for species within the natural range. The proposals therefore consider the capability of demonstrating no detriment to a favourable population. As GCN have a longevity of 12-15 years and favourable conservation status needs to be considered over multiple generations, long-term surveillance is required for informing both the current conservation status (CCS) of a population and the detail of management works and so a 25-year monitoring plan will be put in place.

Specific details and further information regarding the mitigation and monitoring for GCN are included within the GCN Conservation Plan (Tetra Tech, 2025), which will be adhered to throughout the construction and operational phases of the development.

4.2 GRIZZLED SKIPPER AND DINGY SKIPPER

Early successional habitats are declining across the Wrexham Industrial Estate. In strategic locations, the creation of bare ground scrapes or the introduction of crushed aggregates can attempt to replicate this habitat, providing important habitat niches and encouraging the establishment of beneficial flora for grizzled and dingy skipper such as wild strawberry *Fragaria vesca*, bird's-foot trefoil *Lotus corniculatus*, agrimony *Agrimonia eupatoria* and creeping cinquefoil *Potentilla reptans*.

Scarification

Early successional habitats and bare ground provide an important resource within the overall brownfield mosaic and can function as 'stepping stones' to improve connectivity for invertebrates within sites and between sites. Scarification includes the creation of earth scrapes which produces a mosaic of sparsely vegetated patches that provide breeding, nectaring and warm basking areas. Scrapes are suitable in open areas and woodland rides.

There is no defined size or shape for scrapes, however, a square / rectangular shape of no less than 2.5 m by 2.5 m is recommended to prevent scrapes becoming swamped by surrounding vegetation. A maximum area of scrapes should not cover more than 10 % of the total habitat area.

If the desired food plants for grizzled skipper and dingy skipper do not naturally colonise the scrapes, plug planting of suitable species i.e. bird's foot trefoil and creeping cinquefoil should be completed.

Butterfly Banks

One butterfly bank should be created within the retained grassland onsite. The butterfly bank will provide a range of breeding habitats for grizzled and dingy skipper. A "C" shaped structure in an open location is recommended to ensure a variety of aspects and an unshaded south-facing bank are created, however, many different designs of bank can be effective. Recommended placement is indicated on Figure 3.

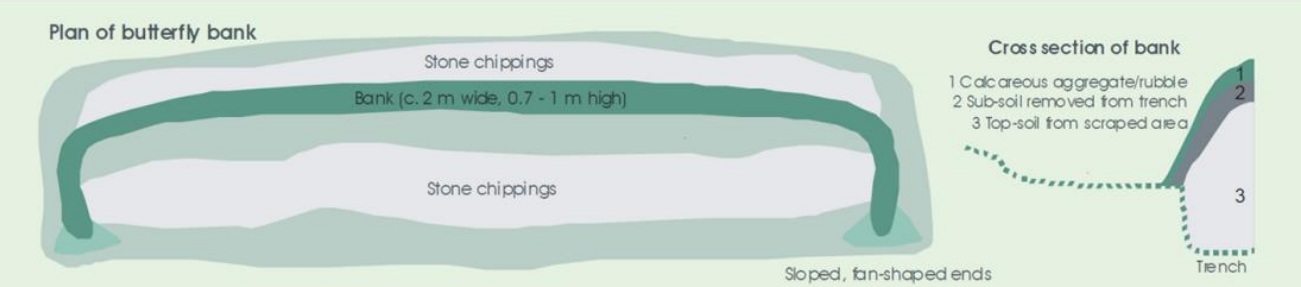
Butterfly banks should be created in accordance with guidance from Butterfly Conservation (Butterfly Conservation, 2024) and are comprised of topsoil from scarification scrapes and aggregate i.e. limestone. To create a butterfly bank, a rectangular area approximately 50 m long by 10 m wide and 30 cm deep should be scraped. This should be oriented east / west. Within this scraped area, a "c" shaped trench should be dug measuring 50 m to 60 m long by 2 m wide and a further 30 cm to 100 cm deep. The previously removed top-soil should be placed into the "C" shaped trench to form the base of the bank. The ends of the bank should also be scraped and re-arranged to create a sloped fan shape. The previously removed sub-soil is then placed over the created bank to cap it. The bank should be compacted and covered in calcareous aggregate. The remaining scaped area adjacent to the bank should be covered in stone chippings. The bank should then be seeded and plug planted using the appropriate species as listed below.

Grizzled skipper:

- Wild strawberry
- Creeping cinquefoil
- Agrimony
- Barren strawberry *Potentilla sterilis*
- Tormentil *Potentilla erecta*
- Salad burnet *Sanguisorba minor*

Dingy skipper:

- Common bird's foot trefoil
- Horseshoe vetch *Hippocrepis comosa*
- Greater bird's foot trefoil *Lotus pedunculatus*



Drawing 3: **Planned for the Creation of a Butterfly Bank.**

4.3 OTHER NOTABLE SPECIES

Given the biodiversity identified onsite, mitigation provisions for other notable species identified during the PEA (Just Mammals Ltd., 2024) or considered likely present onsite have been included below.

3.3.1 Nesting Birds

All breeding wild birds, their nests and eggs are protected by the Wildlife and Countryside Act 1981 (as amended) against intentional disturbance, damage and destruction during the nesting season (generally considered to be March to September inclusive although some species are known to breed throughout the year).

Vegetation removal activities should take appropriate seasonal precautions, with works be conducted outside the bird nesting season (taken to be March to September inclusive). Note that woodpigeon can nest all year round. In exceptional circumstances where the breeding season cannot be avoided, the vegetated areas to be cleared must be searched by a suitably-experienced Ecologist to ensure that no active nests are present.

Once the check is complete, and providing no active bird nests have been found, a window of 48 hours will be granted within which vegetation that has been checked can be removed. Once this time has passed a further nest check will be required in case a bird has started nesting within this time.

If a nest is found during a check a suitable buffer zone will be set-up by the Ecologist within which no works may occur until the Ecologist has monitored the nest, found that the nestlings have fledged and thus the nest has become inactive, and confirmed that the buffer zone can be lifted. For many small bird species a typical buffer zone would be a 5 m radius from the nest.

3.3.2 Badger and Hedgehog

Badgers and their setts are protected under the Protection of Badgers Act 1992 and the National Planning Policy Framework stipulates that considering their welfare and mitigating for damage to their habitat are material considerations when considering planning applications.

Due to the highly mobile nature of badgers, it is recommended that the site is subject to a pre-commencement badger survey in the preceding two to six months before the scheme's start date. This would be completed by a suitably qualified Ecologist. The pre-commencement survey will advise if any new badger setts have been established within the working area and if the mitigation and method statement requires amendments.

The following precautionary working methods will be adhered to during site clearance works in order to prevent accidental harm to badgers and hedgehogs.

Timing and Duration

- Works will be restricted to daylight hours, when badgers are less likely to be active;
- Duration of vegetation clearance works will be kept to as short a time period as possible (and in line with other species limitations).

Toolbox Talk

- A Toolbox Talk will be provided to the vegetation clearance contractors, outlining which habitats on site are suitable to support badgers and hedgehogs, their legislative protection and recommended actions should a badger or hedgehog be identified on site.

Ecologist Supervision

Vegetation clearance will be supervised by a suitably experienced ECoW using the following methods:

- The ECoW will conduct a search of each habitat parcel to be cleared; for badger and / or their setts and hedgehogs.
- If necessary, the contractor will clear small sections of vegetation, using hand tools only, to facilitate access to denser areas.
- Once the ECoW has searched the area to be cleared, plus a 30 m buffer, and confirmed no badgers or setts are present, vegetation can be cleared to ground.
- A search, by hand, by an ECoW for hedgehogs is carried out immediately prior to removing any dense vegetation and brash piles. This is to be restricted to periods when hedgehogs are likely to be active (April- October). If any hedgehogs are found, they should be moved to a safe area away from the development works.
- If works are to be undertaken outside of this period (during the winter / period when hedgehogs are likely to be in hibernation) an ECoW will undertake a pre-works walkover and check vegetation / refugia likely to be used by hedgehog. If discovered, a temporary buffer zone will be implemented, or if there is a risk of impact to the hedgehog's welfare, the animal will be taken into care. A hedgehog rescue contact should be identified before works are undertaken in the winter months.

Additional General Good Practice measures as detailed in Section 3.1.2 will further protect badger and hedgehog.

Should a badger or badger sett be discovered at any point during the site clearance, works will halt and an Ecologist contacted for advice.

3.3.4 Other Amphibians and Reptiles

Two common amphibian species: smooth newt and common toad are present within the waterbodies on site.

The common toad in Wales is listed under Section 7 of the Environment (Wales) Act 2016; therefore, it is recognised as a 'Species of Principal Importance' for the conservation of biodiversity. This section replaces the duty in section 42 of the NERC Act 2006. The Welsh Ministers will publish, review and revise lists of living organisms and types of habitat in Wales, which they consider are of key significance to sustain and improve biodiversity in relation to Wales. The Welsh Ministers must also take all reasonable steps to maintain and enhance the living organisms and types of habitat included in any list published under this section and encourage others to take such steps.

All British reptiles are protected from intentional killing, injuring and sale under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This legislation aims to protect them from persecution and also exploitation in the pet trade. The site has some suitability to support reptile species and there are records of common lizard *Zootoca vivipara* and grass snake *Natrix helvetica* within the wider industrial estate.

The following precautionary working methods will be adhered to during site clearance works in order to prevent accidental harm to badgers and hedgehogs.

Timing and Duration

- Site works should be undertaken in line with the reptile habitat management calendar (Drawing 4) (Edgar, Foster, & Baker, 2010)
- Duration of vegetation clearance works will be kept to as short a time period as possible (and in line with other species limitations).

Toolbox Talk

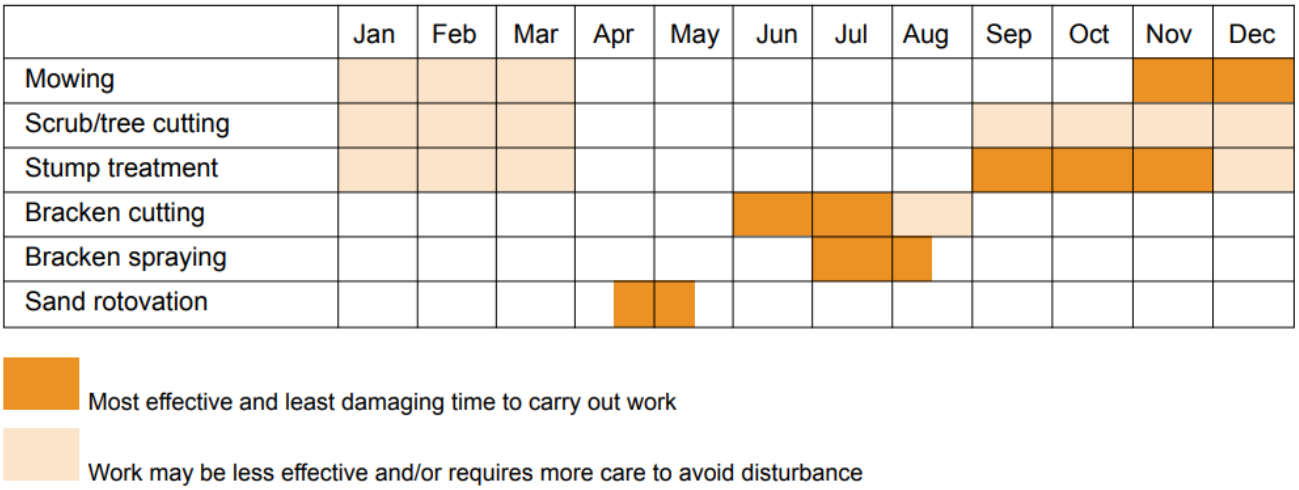
- A Toolbox Talk will be provided to the vegetation clearance contractors, outlining which habitats on site are suitable to support amphibians and reptiles, their legislative protection and recommended actions should amphibians or reptiles be identified on site.

Ecologist Supervision

Vegetation clearance works will need to be supervised by a suitably experienced ECoW using the following methods:

- The ECoW will conduct a hand search of the grassland and scrub areas to be affected. The vegetation will be strimmed to a 15cm height.
- Strimming should commence directionally (south to north) across the site to allow amphibians and reptiles the opportunity to disperse. A further hand search will commence.
- Once the ECoW has searched the area to be cleared, strimming can commence to strip the site. This should also proceed directionally (south to north). Any animals found will be collected and moved by the ECoW.
- A search, by hand, by an ECoW will be carried out immediately prior to removing any dense vegetation and brash piles. This should be undertaken during both the breeding and hibernation periods. Should any animals be found during these searches, a buffer zone will be determined by the ECoW.

Additional General Good Practice measures as detailed in Section 3.1.2 will further protect amphibians and reptiles.



Drawing 4: Reptile habitat management calendar (Edgar, Foster, & Baker, 2010)

5.0 OPERATIONAL MANAGEMENT PLAN

This section provides details of the proposed management of the retained, enhanced and created habitats and features following the completion of the construction programme. The management proposals below assume that created habitats have established successfully; if created habitats and vegetation (or parts thereof) have failed, then remedial action should be taken to re-establish them in the next annual cycle under the guidance of the Project Ecologist.

Please note that it is the responsibility of TSL Ltd. and the appointed BC to ensure that the mitigation and management of the site is completed and maintained (see Section 2.1).

Wildlife-friendly practices will be employed where possible, with species selection and management practices (e.g. dead-heading) working towards providing flowers throughout spring and summer, to maximise the nectar resource across the site. This will in-turn increase invertebrate diversity across the site and provide food for other species.

5.1 FENCING

At the end of the construction phase the TAF will be removed under supervision of an ECoW and under the correct conditions i.e. March to September inclusive and in temperatures above 5°c.

As best practice it is recommended that the receptor area for GCN, grizzled skipper and dingy skipper be fenced off permanently in addition to informative signage which highlights that the area is a “Wildlife Receptor Area”. This will promote the success of new planting and seeds establishing through reduced disturbance and degradation of habitat. It will also reduce direct disturbance to wildlife (GCN) using these areas and waterbodies.

Permanent fencing erected at the end of construction phase should be checked annually for damage and repaired as required.

5.2 GRASSLAND MANAGEMENT

The remaining areas of grassland on site will be managed sympathetically for GCN, grizzled skipper and dingy skipper.

The area of semi-improved neutral grassland along the southern boundary of the site will be managed and sown to compensate for loss of MG9 grassland with grizzled skipper and dingy skipper habitat in the western area to the site. During the first year of management, rotovation and the application of mulch mat should be conducted to suppress grass growth. During the second year of management, sowing of wildflower seed (mixture of arable & perennial species, including relevant larval foodplants of grizzled / dingy skipper butterflies, as previously listed) should be implemented.

Selective areas within all areas of retained grassland should be subject to ground scarification. This will create areas of early successional habitats and bare ground that produces a habitat mosaic. A maximum area of scrapes should not cover more than 10 % of the total habitat area. Scrapes are created by removing a triangular wedge of soil approximately 20 cm deep using machinery. The scrapes should be included within the grassland management regime. The overall aim is to maintain about 50 % of the

surface of the scrapes area as bare ground with 50 % covered by early successional vegetation. Therefore, it is recommended that these remain unseeded. Once the area of bare ground falls below 50 %, management will be required. Young scrub should be cut and pulled up by the roots at an early stage. If the scrapes become too vegetated, the process should be repeated by re-scraping the surface. How frequently these areas will require intervention will depend on the soil type. This will be assessed by an Ecologist alongside GCN monitoring surveys in Years 2, 6 and 10 following the completion of the works.

Relaxing typical intensive management regimes (e.g. mowing) for grassland can benefit wildlife and allow colonisation by native species without necessarily detracting from existing public amenity value. Grassland to be subject to an annual autumn hay cut to maintain glade and remove scrub. This will ensure that the seed has dropped from the herbs and grasses present. The mowers / cutting method should be undertaken so that a sward height of 20 cm is retained as ground cover. This will prevent ground scalping, which can encourage the invasion of weeds, and will also retain good cover for GCN, maximising the foraging availability as well as ground cover opportunities. Cutting must take place during daylight hours (to reduce the chance that GCN are present) and the operative be vigilant in case GCN, grizzled skipper or dingy skipper are present foraging within the sward.

The timing of cutting is crucial and will be left until after the grasses and other plants have flowered and seeded (usually late June to late August inclusive). A late summer / early autumn mow (with the clippings removed) will help keep scrub and dominant grasses from proliferating.

Providing that the continuity of mowing is maintained over the years, then wildflowers will be able to flower and set seed between cuts. If this mowing regime is varied however and the area cut at another time, then wildflowers will be lost.

Additionally the grasslands will not be fertilised as this will encourage the domination of the sward by a few highly competitive species. The sward must be at its longest in the summer and shortest in the spring and autumn when most grassland species germinate.

Furthermore, grass clippings will be collected after cutting and not allowed to degrade on the lawn surface; this maintains nutrient levels at a low level and encourages species diversity.

5.3 PONDS 1A AND 1B

4.3.1 Vegetation Management

The pond maintenance will be undertaken in order to ensure that the habitats created are as optimal as possible for GCN breeding.

Vegetation management works within the ponds will be timed to occur between September and January (inclusive) to avoid the amphibian breeding season. The aim of managing the ponds will be to keep at least one third as open water; this will benefit amphibians and also prevent vegetation build up which will reduce the flood storage capacity of the pond.

Ponds 1A and 1Bwill be managed and maintained as described in detail below in addition to the following prescriptions:

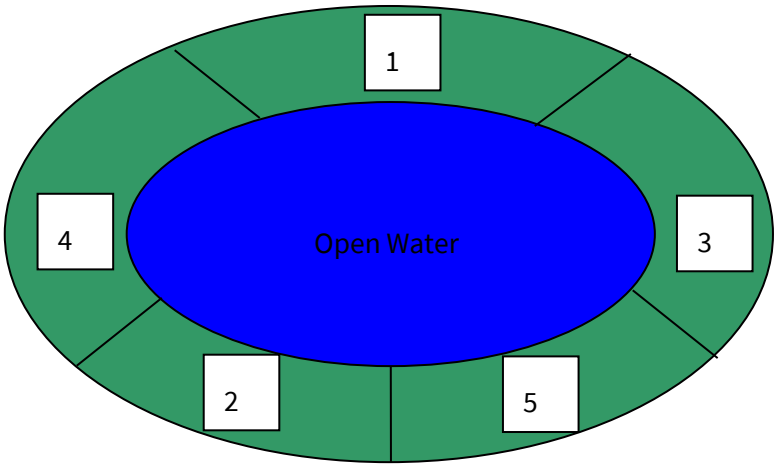
- Clearance of shading tree or scrub cover around pond margins to open up the southern and south east aspects;

- Desilting and clearance of leaf fall (as deemed necessary through annual pond management);
- Checking for fish presence and removal through appropriate measures;
- Checking for and removal of dumped rubbish.

All of the planting at both ponds will be covered by an aftercare arrangement, which will stipulate that any plants which die within five years of planting will be replaced. This will ensure that any failing areas are replaced by like-for-like stock to ensure that the site develops as intended.

It is not considered that, beyond the replacement of failed planting, any management of the emergent vegetation planting will be necessary in the first three years. After this time, emergent vegetation in the ponds, should be removed as part of a five-year rotation to open up an equivalent of 20 % of the perimeter area as part of each cut. This will create clear channels out into the main open water areas, helping to maintain a diversity of marginal conditions within the ponds. The arisings should be left for a week to allow invertebrates to move back into the water prior to their removal.

An example of the proposed emergent vegetation management scheme is provided below: if the sections 1 to 5 below represent the areas of emergent vegetation to be cut, then in Year 4: section 1 is cut and removed. In Year 5: section 2 is cut and removed etc. This cutting rotation will continue such that each section is cut once every 5 years.



When clearing out ponds, leave any plants and debris along the edge for a few days or so, before removing. This allows any trapped wildlife to return to the water.

4.3.2 Open Water

It will also be necessary to monitor vegetation encroachment into the open water habitat annually both for potentially invasive species such as common reed, but also to identify the potential establishment of any invasive non-native species such as:

- Canadian Pondweed or Waterweed *Elodea canadensis*
- Floating pennywort *Hydrocotyle ranunculoides*
- New Zealand Pigmyweed *Crassula helmsii*

These non-native species can spread rapidly and choke small waterbodies. Should any such encroachment by invasive non-native species be identified, it will be necessary to remove these inundations as soon as feasibly possible.

4.3.2 Algal Blooms

Algaes are naturally occurring aquatic plants. Not all are harmful and those that are, often become so only when triggered by a certain environmental condition or a combination of conditions.

Some factors likely to trigger a problem are:

- Increased nutrient levels in the water, which in a domestic situation is often a result of high numbers of fish
- Long periods of calm hot weather
- Low water levels
- Lack of adequate water circulation

5.4 HIBERNACULA

The GCN Hibernacula will not require maintenance once constructed. The hibernacula should be inspected once annually during the first five years to check that the overlying turf is establishing and check for damage. If required, the management team should be contacted to undertake remedial action. A GCN licenced Ecologist will need to be present during remedial works given the protected status of this species.

5.5 BUTTERFLY BANK

The long-term maintenance of the butterfly bank will include weeding of any vigorous or invasive weeds or developing scrub to maintain sparse diverse vegetation with bare ground patches. If needed, vegetation can be trimmed, however, at least half of the bank should be left vegetated. A regime of cutting half every other year could be implemented alongside grassland management.

It may also be necessary to re-create patches of bare ground on the bank by scraping small patches free of vegetation.

6.0 PROGRAMME

Table 1 sets out the ecological receptor, estimated timing, actions and monitoring during the construction and operational phases. This should be read in conjunction with Table 2 in the GCN Conservation Plan (Tetra Tech, 2025).

Table 1: Ecological Receptor and Habitat Management Timetable

Ecological Receptor	Overarching Action	Details	Year/s	Timing
GCN	Toolbox talk (TBT) to be delivered by ECoW or BC	TBT in particular reference to amphibians.	When required, see timing.	Pre-commencement and upon commencement of new site personnel.
	Pond Management/ Enhancement	Weed growth removal (by hand or excavator)	Annually	Autumn – Winter to avoid breeding amphibians and birds.
		Clearance of shading tree/ scrub cover around pond margins	Every 2 to 3 years	Autumn – Winter to avoid breeding amphibians and birds.
		Desilting and clearance of leaf fall	Every 2 to 3 years	Autumn – Winter to avoid breeding amphibians and birds.
		Checking for fish presence and removal through appropriate measures	Annually	Autumn – Winter to avoid breeding amphibians.
		Checking for and removal of dumped rubbish	Annually	Autumn – Winter to avoid breeding amphibians.
		Checking for vegetation encroachment into open water habitat (invasive species)	Annually	Autumn – Winter to avoid breeding amphibians and birds.
		Monitoring of algal blooms	Annually	Spring – Summer as this is when algal blooms are most likely to develop.
		Planting of new aquatic marginal plants	When required, see timing.	Early spring

Ecological Receptor	Overarching Action	Details	Year/s	Timing
	Creation	Creation of three hibernacula	When required, see timing.	Two to be completed pre-commencement and one upon completion of the works.
		Creation of five refuge piles (log piles)	When required, see timing.	Three pre-commencement and two upon completion of pond scrub management following works.
	Presence of Ecologist or ECoW	Required during vegetation removal, fence installation, other digging works and consulted during unexpected finds.	When required, see timing.	As and when required.
	Pitfall trapping and translocation	Trapping of GCN terrestrial habitat due to be lost to proposed development.	When required, see timing.	Pre-commencement. Minimum of 30 trapping days to take place March – October inclusive.
	Monitoring	Population monitoring of onsite GCN	Upon completion of the works.	Years 2, 6 and 10.
Grizzled Skipper/ Dingy Skipper	TBT to be delivered by ECoW	TBT in particular reference to protected invertebrates	When required, see timing.	Pre-commencement and upon commencement of new site personnel.
	Presence of Ecologist or ECoW	Required during vegetation stripping of development area.	When required, see timing.	As and when required.
	Grassland management/ enhancement	Rotovation and mulch mat	Year 1 of management	Autumn or Spring.
		Seed collection	When required, see timing.	Autumn following meadow cut upon completion of rotovating.
		Enhanced planting	Year 2 of management	Autum or Spring.

Ecological Receptor	Overarching Action	Details	Year/s	Timing
		Mowing	Annually	Autumn
	Creation	Scarification	When required, see timing.	Year 1 of management and when required.
		Butterfly bank	When required, see timing.	Pre-commencement
Nesting Birds	TBT to be delivered by ECoW or BC	TBT in particular reference to potential nesting bird habitat.	When required, see timing.	Pre-commencement.
	Nesting bird check	Nesting bird check by ECoW.	When required, see timing.	During the nesting bird season, March to August inclusive.
	General good practice	General good practice measures to provide additional protection	All years.	All year round.
Badgers and Hedgehog	TBT to be delivered by ECoW or BC.	TBT in particular reference to the presence of badgers and hedgehog within the site.	When required, see timing.	Pre-commencement.
	Pre-commencement check	Check for badger and hedgehog.	When required, see timing.	Pre-commencement.
	General good practice	General good practice measures to provide additional protection	All years.	All year round.
Other Amphibians and Reptiles	TBT to be delivered by ECoW or BC.	TBT in particular reference to potential nesting bird habitat.	When required, see timing.	Pre-commencement.
	Supervision by an ECoW.	Vegetation clearance.	When required, see timing.	Pre-commencement.
	General good practice	General good practice measures	All years.	All year round.

FIGURES

Figure 1 – Site Location Plan

Figure 2 – NVC Communities and Larval Food Plants

Figure 3- Mitigation and Enhancement Plan



Site Location Plan

Wrexham Industrial Estate

Thermotraffic Ltd.

Legend

Site boundary

Notes:

Drawn by: DYLAN.GUSSMAN

Checked by: BD

Office: Southampton

Figure No. 1

Revision No. A

19 August 2024

0 30 60 90 120 Meters

Scale 1:3,000 @A3

British National Grid

NGR: 338072E 350402N

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TETRA TECH

3 Sovereign Square
Sovereign Street
Leeds
United Kingdom
LS1 4ER

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Dingy and Grizzled Skipper Larval Food Plant Map

Wrexham Industrial Estate

TSL Projects Ltd.

Legend

- Site boundary
- Creeping Cinquefoil
- Bird's-foot trefoil
- NVC MG9 *Holcus lanatas-Deschampsia cespitosa*
- Bird's-foot Trefoil
- Quadrat Location

W1 W2 W3 W4 W5 E1 E2 E3 E4 E5

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Notes:

Drawn by: DYLAN.GUSSMAN

Checked by: Rob Gavan

Figure No. 2

Revision No. A

19 August 2024

0 20 40 60 80 Meters

Scale 1:1,500 @A3

British National Grid

NGR: 338091E 350382N

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TETRA TECH

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Mitigation and Enhancement Plan

Wrexham Industrial Estate

TSL Projects Ltd.

Legend

- Site boundary
- Pond
- Ecology Area
- Butterfly bank
- Butterfly scrapes
- Hibernacula
- Refugia

1A

1B

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Notes:

Drawn by: AARON.HOWARD

Checked by: Rachel Kerr

Figure No. 3

Revision No. A

13 September 2024

0 20 40 60 80 Meters

Scale 1:1,500 @A3

British National Grid

NGR: 338087E 350392N

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APPENDICES

Appendix A – Report Conditions

Appendix B – Legislation and Policy

Appendix C – Waterbody Descriptions and Photographs

Appendix D – Proposed Development Plan

Appendix E – Proposed Landscape Plan

Appendix F – Proposed Green Infrastructure Plan

APPENDIX A: REPORT CONDITIONS

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The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. Tetra Tech accept no liability for issues with performance arising from such factors.

APPENDIX B: LEGISLATION & POLICY

Habitats Directive

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, or the 'Habitats Directive', is a European Union directive adopted in 1992 in response to the Bern Convention. Its aims are to protect approximately 220 habitats and 1,000 species listed in its several Annexes.

In the UK, the Habitats Directive is transposed into national law via the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales, and via the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland.

Conservation of Habitats and Species Regulations 2017 (as amended)

The 2018 amendments mainly related to the impact of the *People Over Wind* decision and some implications arising for neighbourhood plan development and a range of other planning tools including Local Development Orders and Permission in Principle – see here for full details:

https://www.legislation.gov.uk/uksi/2018/1307/note/made

The 2019 amendments related to the EU exit. Most of these changes involved transferring functions from the European Commission to the appropriate authorities in England and Wales. All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant. The obligations of a competent authority in the 2017 Regulations for the protection of sites or species do not change.– see here for full details:

https://www.legislation.gov.uk/ukdsi/2019/9780111176573

The Regulations make it an offence to deliberately capture, kill, disturb or trade in great crested newt.

Wildlife & Countryside Act 1981 (as amended)

This is the principal mechanism for the legislative protection of wildlife in the UK. Since it was first introduced, the Act has been amended several times.

The Act makes it an offence (subject to exceptions) to:

- intentionally or recklessly kill, injure or take any great crested newt;
- interfere with places used for shelter or protection, or intentionally disturbing great crested newt occupying such places; and
- The Act also prohibits certain methods of killing, injuring, or taking great crested newt.

Environment (Wales) Act

As part of the Welsh Government's commitment to reversing the decline in biodiversity in Wales and increasing the resilience of its ecosystems, the Environment (Wales) Act 2016 aims to build greater resilience into our ecosystems. Biodiversity and well-functioning ecosystems provide natural solutions that build resilience, which in turn help society create jobs, support livelihoods and human well-being, adapt to the adverse impacts of climate change and contribute to sustainable development.

Part 1 of the Environment Act sets out Wales' approach to planning and managing natural resources at a national and local level with a general purpose linked to statutory 'principles of sustainable management of natural resources' defined within the Act.

Section 6 under Part 1 of the Act places an enhanced duty on public authorities to 'seek to maintain and enhance biodiversity' so far as it is consistent with the proper exercise of those functions. In so doing, public authorities must also seek to 'promote the resilience of ecosystems'. This duty replaces the section 40 duty in the Natural

Environment and Rural Communities Act 2006 (NERC Act 2006), in relation to Wales, and applies to those authorities that fell within the previous duty.

Section 7 replaces the duty in section 42 of the NERC Act 2006. The Welsh Ministers will publish, review and revise lists of living organisms and types of habitat in Wales, which they consider are of key significance to sustain and improve biodiversity in relation to Wales. The Welsh Ministers must also take all reasonable steps to maintain and enhance the living organisms and types of habitat included in any list published under this section, and encourage others to take such steps. Certain public authorities will also be required to consider the section 7 list, in complying with the new biodiversity duty under section 6 of the Act. The list is important in assisting public bodies to identify potential issues that they may wish to address in meeting their well-being objectives, in addition to contributing to the well-being goal 'a resilient Wales' (Goal 2). The current Section 7 lists are interim lists which are exactly the same as the previous list under Section 42 of the NERC Act, and is under review in consultation with NRW.

Part 1 of the Act, including Sections 6 and 7, came into force on 21st May 2016.

National Planning Policy (Wales)

The national planning policy guidance is found principally in Planning Policy Wales Edition 12 (PPW) dated July 2024 (Welsh Government, 2024). The document is supported by a series of Technical Advice Notes (TANs) with the most relevant for ecology being TAN 5: Nature Conservation and Planning (Welsh Government, 2009), which provides advice on how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. A summary of the main points relevant to the ecological assessment of the development is provided below.

Paragraph 6.4.2 states that local planning authorities, along with other public bodies, as part of the Environment (Wales) Act 2016 have a duty to take reasonable steps, consistent with the proper exercise of their functions, to further the conservation and enhancement of biodiversity and help maximise contributions to achieve well-being goals.

Paragraph 6.4.3 states that the planning system has a key role to play in helping to reverse the decline in biodiversity and increasing the resilience of ecosystems, at various scales, by ensuring appropriate mechanisms are in place to both protect against loss and to secure enhancement. Addressing the consequences of climate change should be a central part of any measures to conserve biodiversity and the resilience of ecosystems. Development plan strategies, policies and development proposals must consider the need to:

- support the conservation of biodiversity, in particular the conservation of wildlife and habitats;
- ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats;
- ensure statutorily and non-statutorily designated sites are properly protected and managed;
- safeguard protected and priority species and existing biodiversity assets from impacts which directly affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water and soil, including peat; and
- secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks.

Paragraph 6.4.4 states that biodiversity and resilience considerations should be taken into account at an early stage in development planning. All reasonable steps must be taken to maintain and enhance biodiversity and promote the resilience of ecosystems which should be balanced with the wider economic and social needs of business and local communities.

Paragraph 6.4.5 states that planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions, and that development should not cause any significant loss of habitats or populations of species,

locally or nationally and must provide a net benefit for biodiversity. The diversity of, connections between, the scale, the condition and the adaptability of ecosystems must be taken into account.

Paragraphs 6.4.11, 6.4.14 and 6.4.22 state that planning authorities must have regard to the relative significance of international, national and local designations in considering the weight to be attached to nature conservation interests, and that the international and national responsibilities and obligations for conservation should be fully met. Statutorily designated sites must be protected from damage and deterioration, with their important features conserved and enhanced by appropriate management. Statutorily protected species protected under European or UK legislation, or under Section 7 of the Environment (Wales) Act 2016 are material considerations if a development would result in disturbance or harm to the species or its habitat, and the range and population of the species should be sustained

Paragraph 6.4.21 states 'Planning authorities must follow a step-wise approach to maintain and enhance biodiversity and build resilient ecological networks by ensuring that any adverse environmental effects are firstly avoided, then minimized, mitigated, and as a last resort compensated for; enhancement must be secured wherever possible'.

Paragraphs 6.4.24-26 also gives emphasis to the importance of trees, hedgerows and woodlands (especially ancient woodland) and states 'Ancient woodland and semi-natural woodlands and individual ancient, veteran and heritage trees are irreplaceable natural resources, and have significant landscape, biodiversity and cultural value. Such trees and woodlands should be afforded protection from development which would result in their loss or deterioration unless there are significant and clearly defined public benefits; this protection should prevent potentially damaging operations and their unnecessary loss. In the case of a site recorded on the Ancient Woodland Inventory, authorities should consider the advice of NRW.'

Related to these Biodiversity and Ecological Network policies, Section 6.2 gives weight to the protection and enhancement of multi-functional green infrastructure, which is important for sustainable management of natural resources. Green infrastructure should be incorporated into development through appropriate site selection and use of creative design.

Circular Letter CL-05-04 reaffirmed the Welsh Government's commitment to ensuring that designated sites and species of nature conservation importance are protected from damage and deterioration, with their important features conserved by appropriate management. The letter advised that under specific circumstances a pre-commencement condition should be attached to planning consents requiring the applicant to provide the LPA with a copy or their European Protected Species (EPS) Licence (once issued by NRW). The Circular Letter was withdrawn in March 2018 in an attempt to reduce the number of pre-commencement conditions, with LPA's advised to instead use a replacement informative (to be attached to all relevant consent notices) to avoid unnecessary duplication controls of other legislation.

Wrexham Local Biodiversity Action Plan (LBAP)

Local Biodiversity Action Plans (LBAP) identify habitat and species conservation priorities at a local level (typically at the County level) and are usually drawn up by a consortium of local Government organisations and conservation charities.

Some LBAP's may also include Habitat Action Plans (HAP) and/or Species Action Plans (SAP), which are used to guide and inform the local decision-making process.

Within the Wrexham LBAP, policies PS2, PS11, EC4 and EC6 pertain to 'Biodiversity and Development'. A summary of these policies is provided below:

- **Policy PS2**: Development must not materially detrimentally affect countryside, landscape/townscape character, open space, or the quality of the natural environment

- **Policy PS11**: Encouragement will be given to proposals which improve the biodiversity value of sites and to the establishment of local nature reserves where the nature conservation and landscape interest of the land will be protected and enhanced.
- **Policy EC4**: Development proposals should provide for the conservation and management of hedgerows, trees, orchards, woodland, wildlife and other natural landscape and water features, and include new planting in order to enhance the character of the landscape and townscape. Development which results in the loss or significant damage to valuable trees, important hedgerows or ancient woodland sites will not be permitted.
- **Policy EC6**: Development either within or close to sites of biodiversity interest will only be permitted where it can be clearly demonstrated that the need for the development outweighs the need to safeguard the intrinsic nature conservation value of the site. Where such development is permitted, damage should be kept to a minimum, and compensatory measures should be provided. Measures to improve the biodiversity value of sites and enhance their natural conservation interest and landscape quality including the establishment of local nature reserves, will be supported.

APPENDIX C: WATERBODY DESCRIPTIONS AND PHOTOGRAPHS

Waterbody Descriptions & HSI Score

The purpose of these descriptions is to help determine the waterbodies' suitability as breeding habitat for GCN. Therefore, where available, information on water depth, water quality, bank profile, presence of aquatic, emergent and surrounding vegetation, as well as suitability of the surrounding terrestrial habitat has been provided. A grid reference is provided for each waterbody; see Figure 2 for their locations.

#	OS Grid Ref.	Approx. Size	Description	Photograph of Pond	HSI	
					Score	Category
1A	SJ 38198 50266	600 m^2	Pond located within willow carr.		0.66	Average

1B	SJ 38161 50254	200 m^2	Pond surrounded by mixed scrub and other neutral grassland with tall herbs. The pond contains high cover of emergent aquatic vegetation including soft rush *Juncus effusus*.			

APPENDIX D: PROPOSED DEVELOPMENT PLAN "TCSW-ASA-90-VS.ZZ-D-A-9003_(S2-P15)_GA SITE PLAN – OVERALL"

Do not scale this drawing
ashton smith to be notified of discrepancies in figured dimensions
Contractors must check all dimensions from site
This drawing is copyright and is for use on this site only
This drawing is to be used solely for information as entitled
For other information refer to the latest revision of any cross referenced drawing

N

Fire Road

Proposed Main Plant Building

Existing Cold Store Building

Existing Maintenance Corridor

Existing Low Bay Marshalling

Existing Offices

Existing Loading Docks

Existing Dawson Units

Proposed High Bay Racking

Fire Road

14 Overspill Car Parking Spaces

Proposed Link Corridor

Proposed Low Bay Marshalling

Proposed Loading Docks

Level Access

Existing Service Yard

39 Car Parking Spaces

Existing Office

Production Extension

Production Extension Corridor

10 Blast Freezers

New Access Road

7000 mm

18022 mm

HGV Parking

Turning Head

Car Access & Egress

HGV Access & Egress

1 GA Site Plan - Overall
1 : 250

0m 5m 10m 15m 20m 25m
VISUAL SCALE 1:250

REV	DATE	DESCRIPTION	DRAWN BY	CHECK BY
P15	2025-01-15	Drawings updated for Section 73 submission	RND	RAA
P14	2024-12-16	External door (NB-00-22) omitted from new Low Bay	RND	RAA
P13	2024-11-13	Drawings updated for Section 73 submission	RND	RAA
P12	2024-09-13	Drawing pack updated following confirmation of Plant & Production Extension layout	RND	RAA
P11	2024-07-17	Updated following review	RND	RAA
P10	2024-07-04	Updated following comments	RND	RAA
P09	2024-06-19	Scheme updated	RND	RAA
P08	2024-03-15	Issued for full Planning	RAA	-
P07	2024-02-16	Issued for Planning	RAA	-
P06	2024-02-15	Updated line with comments from meeting dated 2024-02-14	RAA	-
P05	2024-02-12	Updated with building survey and minor alterations to fences	RAA	-
P04	2024-02-05	Bollards, barriers and additional details added	RAA	-
P03	2024-01-30	Site layout updated	RAA	-
P02	2024-01-18	Site layout updated	RAA	-
P01	-	Initial Drawing Issue	-	-

REVISIONS

PROJECT TITLE
Project Sakura

DRAWING TITLE
GA Site Plan - Overall

RIBA STAGE	STATUS		DRAWN BY	CHECKED BY
3	PLANNING		RAA	-
SHEET	SCALE	DATE	SUITABILITY	REVISION
A0	1 : 250	2024-01-15	S2	P15

DRAWING NO.
TCSW - ASA - 90 - VS.ZZ - D - A - 9003 _ (S2 - P15)

BIM MODEL NUMBER: TCSW-ASA-ZZ-VS.ZZ-M3-A-0001_(S0-P05)

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TSL
Thermotraffic®
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AshtonSmith
Beyond Design

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Tel: 01423 522882 Fax: 01423 565104
www.ashtonsmith.co.uk

JOB NO. 21158

APPENDIX E: PROPOSED LANDSCAPE PLAN – TC24206 LA1 LANDSCAPE STRATEGY V11

Project Sakura

Landscape Strategy

LA.**1**

Ash House

T23 T25 T26 T29 T30 T32 T20 T03

Overspill Car Parking Spaces

- Application boundary line
- Extent of land under same ownership
- Existing trees to be retained. Black dash denotes root protection area
- Existing trees to be removed
- Existing vegetation (predominately scrub) to be retained - approximate extent. **NOTE:** Measures are recommended along the northern edge of the scrub habitat to encourage bee orchids to colonise. Refer to Just Mammal's Preliminary Ecological Appraisal which also suggests hand broadcasting of a cover crop such as Emorsgate EM6 seed mixture.
- Marshy grassland to be retained
- Neutral grassland to be retained
- Existing pond to be retained
- Proposed tree planting to mitigate for trees lost due to the development and to help increase biodiversity.

  Proposed tree species within the marshy grassland to the east to include Alnus glutinosa (common alder), Betula pubescens (downy birch), and Salix alba (white willow).

  Proposed tree species within the semi-improved neutral grassland at the north, south and west to include Quercus robur (common oak), Caprinus betulus (hornbeam), Sorbus aucuparia (rowan) and Tilia cordata (small leaved lime).
- Proposed planting areas including the rain garden to the north for amenity and biodiversity value.

  Proposed plant species around the new car park in the south to include:

  Choisya ternata (Mexican orange blossom), Prunus laurocerasus 'Zabeliana' (cherry laurel 'Zabeliana'), Lonicera nitida 'Maygreen' (shrubby honeysuckle), Pachysandra terminalis (Japanese spurge), and Cistus x corbariensis (hybrid rock rose).

  Proposed plant species at the rain garden to the north to include:

  Cornus alba 'Sibirica' (westonbirt dogwood), Hydrangea 'Preziosa' (Hydrangea), Hypericum calycinum (rose of Sharon), and Geranium 'Johnson's Blue' (Cransebill).
- Swales to be seeded with a suitable species-rich grass mix such as Emorsgate EM8 'Meadow Mixture for Wetlands'.
- Indicative location of proposed crevice bat rocket box, on a 5m pole. Placement to be located at the border of the scrub and marshy grassland and not too close to trees
- Indicative location of proposed bird box, to be installed along the eastern boundary on mature trees.
- Indicative location of proposed Hibernacula
- Indicative location of proposed Refugia
- Orange flexinet / heras fencing
- Indicative location of Butterfly bank
- Indicative location of Butterfly scrapes

* Refer to Biodiversity Mitigation Strategy (March 2025) for further detail regarding installation and timings of provision

0 5 10 15 20 25 metres

Scale 1:400 @ A0

North

TC24206 Landscape plans v11.dwg

21 March 2025

tir collective LANDSCAPE ARCHITECTS

Floor 7, Brunel House, 2 Fitzalan Road, Cardiff, CF24 0EB

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APPENDIX F: PROPOSED GREEN INFRASTRUCTURE PLAN – TC24206 GI1 GREEN INFRASTRUCTURE STATEMENT AND PLAN V11



Building with Nature (BwN): Standards Framework

BwN describes "individual Standards that collectively form a definition of **high-quality green infrastructure**." There are 6 Core Standards, 2 Wellbeing Standards, 2 Water Standards and 2 Wildlife Standards as below. This GI Plan/Statement signposts the standards:

CORE Standards

Standard 1 - Optimises Multifunctionality and Connectivity
Standard 2 - Positively Responds to the Climate Emergency
Standard 3 - Maximises Environmental Net Gains
Standard 4 - Champions a Context Driven Approach
Standard 5 - Creates Distinctive Places
Standard 6 - Secured Effective Place-keeping

WELLBEING Standards

Standard 7 - Brings Nature Closer to People
Standard 8 - Supports Equitable and Inclusive Places

WATER Standard

Standard 9 - Delivers Climate Resilient Water Management
Standard 10 - Brings Water Closer to People

WILDLIFE Standards

Standard 11 - Delivers Wildlife Enhancement
Standard 12 - Underpins Nature's Recovery

Developments should seek to retain existing habitats within the proposal and avoid the loss of vegetation where possible. If this is not possible, developments should seek to mitigate for the loss of habitats and/or provide enhancement measures to provide net benefits for biodiversity.

The wider development seeks to implement, enhance and manage new habitats within the Landscape Character Areas. Within the site, new planting includes trees, shrubs herbaceous plants, and grass seeding

New tree planting will be proposed within the site. **[BwN 1, 2, 3, 7, 11,12]**

Ground cover planting at the rain garden to the north and around the car park area will provide visual interest, and increase biodiversity. **[BwN 1, 2, 3, 7, 11]**



Ornamental and rain garden planting

Introduction

This **Green Infrastructure Plan/Statement** relates to a proposed extension building, new access, and parking at the Norish chilled food distribution centre, Wrexham industrial estate, North Wales. The site currently comprises *"semi-improved neutral grassland, marshy grassland, standalone water, dense scrub (including willow carr), mixed woodland, hardstanding and buildings."* (Ref: Just Mammals Limited).

Refer also to the Landscape Strategy by Tir Collective Landscape Architects, the Preliminary Ecological Appraisal by Just Mammals Limited, the Biodiversity Mitigation Strategy by TSL Projects Ltd. on behalf of Tetra Tech Group Ltd. and the Arboricultural Report by Martin Boardman & Associates.

Policy Context

Planning Policy Wales (PPW)

PPW aims to contribute towards the delivery of sustainable development, embedding the principles of the Well-being of Future Generations (Wales) Act 2015. PPW ingrains Placemaking Wales Charter and how sustainable development can be achieved through implementing placemaking.

Section 6.2 sets out **green infrastructure** should be given early consideration in development proposals and how it should be integrated into developments.

Paragraph 6.2.12 states " A **green infrastructure statement should be submitted with all planning applications**. This will be proportionate to the scale and nature of the development proposed and will describe how green infrastructure has been incorporated into the proposal... The green infrastructure statement will be an effective way of demonstrating **positive multi-functional outcomes** which are appropriate to the site in question and must be used for demonstrating how the **step-wise approach has been applied**."

Paragraph 6.2.14 states "Development proposals should be informed by the priorities identified in green infrastructure assessments and locally based planning guidance. The **Building with Nature standards** represent good practice and are an effective prompt for developers to **improve the quality of their schemes and demonstrate the sustainable management of natural resources**."

Section 6.4 describes **biodiversity and ecological networks** and provides a summary of the **Step-Wise Approach** and how it should be used to "**maintain and enhance biodiversity, build resilient ecological networks and deliver net benefits for biodiversity** by ensuring that any adverse environmental effects are firstly avoided, then minimised, mitigated, and as a last resort compensated for."[1]

Paragraph 6.4.12 states "providing evidence in the Green Infrastructure Statement that the step-wise approach has been followed, a scheme of enhancements must be provided to ensure a **net benefit for biodiversity**."
In relation to **trees, woodland and hedgerows, paragraph 6.4.37** sets out their importance for biodiversity and "connecting habitats for resilient ecological networks and make an essential wider contribution to landscape character, culture, heritage and sense of place..."

The **planting of new trees, hedgerows, groups of trees and areas of woodland** should be promoted as part of new development. Existing trees/ groups of trees, hedgerows and areas of woodland must be protected "where they have ecological value, contribute to the character or amenity of a particular locality, or perform a beneficial green infrastructure function."[2]

In relation to the permanent removal of trees, woodland and hedgerows, it "will only be permitted where it would achieve significant and clearly defined public benefits."[3]

The step-wise approach must also be followed. Where loss is unavoidable, PPW sets out the requirements of replacement planting, which "shall be at a ratio equivalent to the quality, environmental and ecological importance of the tree(s) lost and this must be preferably onsite, or immediately adjacent to the site, and at a minimum ratio of **at least 3 trees of a similar type and compensatory size planted for every 1 lost.**"[4]

1. Paragraph 6.4.11, Planning Policy Wales Edition 12, February 2024
2. Paragraph 6.4.35 Planning Policy Wales Edition 12, February 2024
3. Paragraph 6.4.42 Planning Policy Wales Edition 12, February 2024
4. Paragraph 6.4.43 Planning Policy Wales Edition 12, February 2024

The stepwise approach to maintaining and enhancing biodiversity

The stepwise approach for this Green Infrastructure Plan/Statement is an eight-step process, inspired by Swansea Council's Biodiversity Supplementary Planning Guidance. It is a useful SPG which demonstrates a stepwise approach to development, not just for within Swansea but for developments in other jurisdictions including Wrexham. It comprises the following which are referred to in this GI plan/statement:

- **Step A: Identify and Assess** existing or potential important habitats or species and ecological connectivity corridors.
- **Step B: Avoid** loss of any existing or potential important habitats or species, or fragmentation of ecological connectivity.
- **Step C: Respond and Design -** Identify and assess existing or potential important habitats or species and ecological connectivity corridors.
- **Step D: Mitigate** for any unavoidable harm or loss to important habitats or species or the fragmentation of ecological connectivity.
- **Step E: Compensate -** Address the residual effects of a proposal after avoidance and mitigation have been considered and provide appropriate compensation.
- **Step F: Enhance -** Explore all opportunities to enhance biodiversity and ecosystem resilience, proportionate to the scale and nature of the proposal.
- **Step G: Manage -** Submit and implement long term management plan of agreed and appropriate mitigation, compensation and enhancement measures.
- **Step H: Monitor -** Submit and implement a monitoring plan to ensure that the development and associated mitigation, compensation and enhancement measures deliver the attributes or resilience post-construction.

Landscape Strategy

The landscape strategy is based on retaining where possible existing habitats which immediately surround the existing and proposed buildings and the parking/access area in the south. The existing habitats comprise semi-improved neutral grassland, marshy grassland, and scattered trees as identified by Just Mammals' Preliminary Ecological Appraisal. Further detailed assessment of individual trees and groups of trees/vegetation have been identified within the Arboricultural Report by Martin Boardman & Associates. Wider site habitats which include scrub and woodland will be retained, but any encroachment into these areas will be minimal.

Several existing trees and blocks of vegetation will need to be removed to accommodate the development, but others will need to be removed due to arboricultural reasons, regardless of development plans.

The tree planting will be provided where possible which will help contribute towards amenity and biodiversity values. Species selection will be suitable for location such as those which can tolerate damp conditions. Tree species will also be native and include long-lived, keystone species.

Ornamental shrubs will be provided around the new parking area for visual interest, and species selection will include a combination of flowering evergreen and deciduous plants. The drainage strategy includes swales, but there will be a rain garden to the north. The rain garden will be planted with shrub species to provide year-round interest.

Green Infrastructure

The elements that are considered to form the existing green infrastructure of the site and surrounding context are:

- Mixed woodland, dense scrub and standing water
- Individual trees
- Neutral and Marshy grasslands
- Other habitats of ecological value

The green infrastructure elements are described further here; identifying and assessing existing or important habitat or species and ecological connectivity corridors which have been informed by desktop studies and specialists' reports. The following paragraphs also describe how each green infrastructure element is to be retained, mitigated, and /or enhanced.

Mixed woodland, dense scrub, and standing water

The mixed woodland and dense scrub make an important contribution to landscape character. They are also important green infrastructure elements for their biodiversity and habitat value.

The mixed woodland is *"confined to a small area on a north-east facing slope in the northern area of the site."* (Ref: Just Mammals). The proposals at the site will not affect the mixed woodland area. It will all be retained - **Step A and Step B.**

The dense scrub is *"located around the periphery of the site. It varies in density, ranging between relatively open at the base to complete and impenetrable thicket."* (Ref: Just Mammals). **Step A.**

Some minor areas will be affected by the development proposals, but the majority of the scrub will be retained. The landscape scheme does not propose replacement scrub planting because the vast majority will not be affected by the development. **Step C.**

The scrub area includes species such as bramble, blackthorn, hawthorn, field rose and dogwood which should naturally regenerate in areas where there will be disturbance due to the development. Opportunities for mitigation scrub planting could be created within the neutral grassland area to the north if necessary. **Step D.**

There are *"two distinct areas of standing water or ponds... in the south-east... water levels appear to be relatively low, although it is apparent that water is present all year-round due to the presence of certain floral species."* (Ref: Just Mammals) shown in images below. (Ref: Tetra Tech).



Existing pond 1A



Existing pond 1B

A small sized population of Great crested newts has been recorded during surveys in these areas, along with common toads and other amphibians, and they have been confirmed as breeding ponds. (Ref: Tetra Tech, 2024) **Step A.** To ensure the proposed development will not affect the population of great crested newts mitigation measures have been provided within the Biodiversity Mitigation Strategy (BMS) by TSL Projects Ltd. on behalf of Tetra Tech Group Ltd. This includes detailed descriptions of installation, maintenance and time of provision for mitigation methods, a brief description of which is described below:

- Temporary Amphibian Fencing (TAF) is to be erected around the site boundary to prevent amphibians from entering the development area. Drift fencing will also be installed within the perimeter of the TAF, accompanied by adjacent pitfall traps at 5m intervals, the active use of which to be mid-March to October inclusive. **Step B and Step D**.
- Five Refugia to be created, three prior to commencement of pitfall trapping and two upon completion of the works. These to consist of stacked logs, brash, branches, removed site vegetation and leaf litter during site clearance. **Step E and Step F.**
- Three Hibernacula to be created, two prior to commencement of pitfall trapping and one upon completion of the works. These to consist of brick rubble, logs and loose top soil with a covering of turf. **Step E and Step F.**
- Enhancement of existing ponds. This will involve the selective removal of overhanging vegetation around the water bodies to create open and sheltered areas, in addition to increasing sunlight in the pond. No more than 60% of the pond shoreline should be shaded, with less shading preferable, especially for the southern shoreline. Material removed as part of this enhancement should be retained to contribute to building the Refugia and for new refugia in the future. It is also recommended that pond 1A be de-silted, as a build up of leaf litter is noted to be negatively impacting the water quality and suitable live egging material. **Step E and Step F.**

Individual trees

An Arboricultural Report has been prepared by Martin Boardman & Associates. The tree categorisation within the report forms a source of data for Stepwise approach, **Step A.** The tree survey has identified trees on site and provided categorisations. It noted that there are no Tree Preservation Orders (TPOs) on the site. The survey identified 11 category U trees will need to be removed due to arboricultural reasons.

In order to facilitate the development, 12 trees are to be removed, which are all low category trees (C category).

To address tree loss at the site, the green infrastructure proposals include **Step D**, **Step E** and **Step F**. Mitigation for tree loss is provided through planting 36 new native species trees.

Proposed tree species within the marshy grassland to the east to include Alnus glutinosa (common alder), Betula pubescens (downy birch), and Salix alba (white willow).

Proposed tree species within the semi-improved neutral grassland at the north, south and west to include Quercus robur (common oak), Caprinus betulus (hornbeam), Sorbus aucuparia (rowan) and Tilia cordata (small leaved lime).



Neutral and Marshy Grasslands

Neutral grassland is *"present surrounding the majority of the existing buildings on site. it appears to be regularly managed and is of a uniform height."* (Ref: Just Mammals). In addition *"a collection of circa **20 bee orchid (Ophrys apifera) rosettes** was identified at the southern edge of the site."* **Step A.**

The neutral grassland will be predominantly affected due to the extension building in the west, the creation of a new car park and access road in the south, and smaller building extensions in the east. The bee orchid rosettes will also be affected by the creation of the parking area.

Mitigation for the Orchids as noted in Just Mammal's report include encouraging bee orchids to *"colonise along the northern edge of the scrub habitat through scarifying an area of soil to mimic the level of soil disturbance favoured by bee orchids, as well as enriching the existing soil with lime to create a more calcareous character..."* and "*Hand-broadcasting seeds of a 'cover crop' species...*" such as "*...Emorsgate EM6.*" **Steps C, D and E**.

The marshy grassland in the east will be partially affected due to the creation of a swale and mitigation tree planting, although the creation of these features will help increase biodiversity, contribute towards managing rainwater runoff, and mitigate for existing vegetation being removed.

Other habitats of ecological value

The Preliminary Ecological Appraisal (PEA) prepared by Just Mammals Limited and provides a point of reference for mitigation and biodiversity enhancements. **Step A.**

The PEA provides mitigation recommendations for orchids (see previous paragraphs), otters and badgers, nesting birds and bats.

The mitigation summary provided by the PEA outlines:

- **Orchids** - as per the previous paragraphs.
- **Otters and badgers** - precautionary measures to be undertaken during the construction phase.
- **Nesting birds** - demolition works to be undertaken outside thee bird nesting season and installation of three bird boxes to be provided on mature trees along the eastern boundary.
- **Additional enhancement measures: Bats** - installation of two crevice bat rocket boxes, each on a 5m pole, located at the border of scrub and marshy grassland along the eastern boundary.

All recommendations within the PEA have been reflected and included within the green infrastructure proposal for the site, reflecting **Step D, Step E** and **Step F.**

The Biodiversity Mitigation Strategy (BMS) provides detail of measures to be implemented and maintained in order to avoid and minimise impacts on the following:

- **Great crested newt (and other amphibians)** - as per mitigation measures stated in earlier section of this document under 'Mixed woodland, dense scrub, and standing water'
- **Dingy skipper and grizzled skipper (Butterflies)** - installation of butterfly banks and butterfly scrapes. For detail of construction and maintenance refer to BMS.
- **Badgers and Hedgehogs** - a pre-commencement survey is recommended two to six months before the scheme's start date to establish if any new badger setts have been established. Works will also be restricted to daylight hours and kept to as short a time period as possible. Qualified ecologist to supervise vegetation clearance and implement appropriate measures if any hedgehogs or badgers are discovered.

All recommendations within the BMS have been reflected and included within the green infrastructure proposal for the site, reflecting **Step A, B, D, E** and **F.**

Project Sakura

Green Infrastructure Plan / Statement

GI.**1**

Application boundary line

Extent of land under same ownership

Existing trees to be retained. Black dash denotes root protection area

Existing trees to be removed

Existing vegetation (predominately scrub) to be retained - approximate extent. **NOTE:** Measures are recommended along the northern edge of the scrub habitat to encourage bee orchids to colonise. Refer to Just Mammal's Preliminary Ecological Appraisal which also suggests hand broadcasting of a cover crop such as Emorsgate EM6 seed mixture.

Marshy grassland to be retained

Neutral grassland to be retained

Existing pond to be retained

Proposed tree planting to mitigate for trees lost due to the development and to help increase biodiversity.

Proposed planting areas including the rain garden to the north for amenity and biodiversity value.

Proposed plant species around the new car park in the south to include:

Choisya ternata (Mexican orange blossom), Prunus laurocerasus 'Zabeliana' (cherry laurel 'Zabeliana'), Lonicera nitida 'Maygreen' (shrubby honeysuckle), Pachysandra terminalis (Japanese spurge), and Cistus x corbariensis (hybrid rock rose).

Proposed plant species at the rain garden to the north to include:

Cornus alba 'Sibirica' (westonbirt dogwood), Hydrangea 'Preziosa' (Hydrangea), Hypericum calycinum (rose of Sharon), and Geranium 'Johnson's Blue' (Cransebill).

Swales to be seeded with a suitable species-rich grass mix such as Emorsgate EM8 'Meadow Mixture for Wetlands'.

Indicative location of proposed crevice bat rocket box, on a 5m pole. Placement to be located at the border of the scrub and marshy grassland and not too close to trees

Indicative location of proposed bird box, to be installed along the eastern boundary on mature trees.

Indicative location of proposed Hibernacula

Indicative location of proposed Refugia

Orange flexinet / heras fencing *

Indicative location of Butterfly bank

Indicative location of Butterfly scrapes

* Refer to Biodiversity Mitigation Strategy (March 2025) for further detail regarding installation and timings of provision

0 10 20 30 40 50 metres

Scale 1:750 @ A0

North

TC24206 Landscape scheme v11.dwg 21.03.2025

tir collective LANDSCAPE ARCHITECTS
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