



Appendix 1. Management plan for Stoke Park Farm (Rowley Green Meadow)

NCP Compensation site agreement code: 267-SPFA

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1. Document history

Version/date (month/year)	Description	Newt Conservation Partnership approval (sign and date)	Compensation provider approval (sign and date)
Draft June 2024	For review by Compensation provider		
1.0 July/August 2024	Final document before work commences		

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1 Introduction

1.1 Terms of reference

This document (the management plan) was prepared by Newt Conservation Partnership and includes pond creation and terrestrial habitat plans and a 25-year management plan for Stoke Park Farm (Rowley Green Meadow), referred to from hereon as 'the site'. The document forms Appendix 1 of the agreement between the landowner, Eastleigh Borough Council (the 'compensation provider'), and Newt Conservation Partnership (the 'compensation partner'). The creation and restoration of habitat for great crested newt at the site will provide compensation for development impacts as part of the NatureSpace District Licensing scheme for great crested newt in the Hampshire and Isle of Wight region.

Newt Conservation Partnership is a community-benefit society whose sole purpose is to create, manage and monitor great crested newt habitat to provide compensation for the impacts of developments for the NatureSpace District Licensing scheme for great crested newt. District licensing works at the landscape scale and aims to support the conservation of great crested newt with funds from developers (see here for further information: <https://freshwaterhabitats.org.uk/projects/newt-partnership/>). It does not support development per se but instead provides an alternative to conventional great crested newt licensing via Natural England.

Newt Conservation Partnership applies best practice principles for the creation, restoration and management of aquatic and terrestrial habitat for great crested newt (see references in Section 5). Our work is supported by advice from leading national non-governmental organisations for the conservation of amphibians and freshwaters: Amphibian and Reptile Conservation Trust (ARC) and Freshwater Habitat Trust (FHT).

1.2 Roles and responsibilities

The initial restoration or creation of compensation sites is carried out by Newt Conservation Partnership in collaboration with and subject to the approval by the compensation provider (Section 3).

The management of the site for a 25-year period is the responsibility of the compensation provider who will receive an annual fee for that purpose. Specific management measures for each habitat are provided in Section 4. However some of the responsibility for post-creation/restoration management, e.g. if major adjustments are required to ponds post-creation, may be retained by Newt Conservation Partnership, as shown in summary Table 1.

1.3 Management plan review and approval

New Conservation Partnership will continue to provide advice and technical support for the landowner throughout the 25-year management period. Regular monitoring of great crested newt and its habitat at the site by Newt Conservation Partnership or its agents will inform review and adjustments to this management plan. A full review of the management should take place every 5 years.

Each new version of the management plan requires signed approval by both parties (see above sign off table).

1.4 Great Crested Newt lifecycle and requirements

Great crested newts migrate to ponds and other water bodies in spring to breed, with adults typically leaving ponds from around late May-July, but otherwise spend most of their time on land. Great crested newts use a variety of terrestrial habitat, including woodland, scrub, hedgerows and grassland – basically anywhere that provides moist, sheltered conditions and a good supply of invertebrate prey.

Typically, great crested newts breed in permanent or semi-permanent ponds. Following courtship in the spring, eggs are laid individually on submerged aquatic plants where the female folds the leaf with her hind feet, laying an egg in the fold. Great crested newt larvae are very tiny and hard to see when they first emerge, but are much easier to detect in ponds from about June onwards. The larvae are very characteristic, having large feathery gills and a large tail 'fin' with black blotches etc., but are particularly vulnerable to predation, as they swim in the open water where they are easily detected by predators – such as fish, dragonfly larvae and other amphibians. Over the summer the larvae continue to grow, developing limbs (forelimbs first), and the body colour deepens, with the orange and black colouring developing on the belly. Gradually the gills and tail 'fin' reduce and their body becomes warty. In late summer (c. 16 weeks) newt larvae metamorphose and leave the pond. It is important to note that to allow for some young to emerge, breeding ponds need to hold water until at least August in most years.

Great crested newts tend to prefer to breed in medium to large ponds (e.g. between 200 and 750m² in area), with lots of aquatic vegetation, and have unshaded water areas, and no fish. Ponds which occasionally dry out are good for the species as this prevents fish and other predators from becoming established. Having a cluster of ponds, with good connectivity between ponds, hibernation and foraging areas etc., is preferred by the species, as this allows metapopulations¹ to develop.

Poor water quality and excessive disturbance of ponds by dogs or people can also negatively affect great crested newts.

Further information about great crested newt are including the reference section (Section 5).



(Photos above left to right: great crested newt egg © Pete Case; great crested newt larvae © Neil Phillips; adult great crested newt © Neil Phillips)

¹ Metapopulation definition: A regional group of connected populations of a species

2 The site

2.1 Location and current landuse

Rowley Green Meadow at Stoke Park Farm is approximately 8 hectares in surface area. Stoke Park Farm is owned by Eastleigh Borough Council (EBC) and is located near Bishopstoke, in the Borough of Eastleigh, Hampshire. The site is not on a floodplain and there is no public access, so fish introduction by people is unlikely.

The site is vacant agricultural land, used until 2021 for intensive dairy cattle grazing. Since 2021 the grassland has been mown bi-annually. It is bordered by outgrown hedges to the north and west, a stream (Bow Lake) with riparian vegetation and trees to the south (fenced with wire in most places), and a farm track used as a bridleway bordered by a sparse tree line to the west. Beyond the boundaries are further vacant agricultural land owned by EBC and pasture land under other ownership.

The site will be fenced with standard stock fencing along the bridleway boundary to discourage public access.

2.2 Substrate, hydrology and water quality

The British Geological Society GeoIndex Onshore viewer indicates London Clay Formation throughout the site, with some Alluvium at the southeastern boundary by Bow Lake.

The 'Soilscape' data held on the DEFRA MAGIC mapping application shows that the site is classified as having 'Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils' with 'impeded drainage'. The characteristic semi-natural habitats of this soil type are lowland seasonally wet pastures and woodlands.

Test pits were dug in September 2023 and impermeable clay was found in the proposed areas for ponds 1-5, and clay with gravels in the areas of ponds 6 and 7 (see figure 1 for locations). The test pits at 6 and 7 were kept open to assess their water holding capacity. Test pits monitoring results indicate that ponds would hold water in these locations.

The site along with much of the rest of the farm is under-drained for agricultural purposes. Plastic perforated pipes set in gravel in a grid pattern were installed in the 1970's but there may be older drains as well. Unfortunately, the drainage maps have not been located, however ariel photos have revealed the location of some of the drains. They appear to drain to a main drain along the south-western boundary of the site which then enters the Bow Lake at approximately SU 47839 20751. Drains will be removed and blocked in the immediate area of the ponds to ensure that they do not interfere with the ponds' function. Neighbouring land is at a higher altitude than the site so will not be affected by any changes in hydrology on the site.

Nutrient testing of existing water bodies across Stoke Park Farm using rapid test kits shows a mixed picture, with the results given in Table 1 below. Test pit TP6 initially showed some pollution from nitrates (0.5-1 mg/l NO-3) but has been clean since. Test pit 7 has been clean until the most recent test (0.05-0.1 mg/l PO-4, which is low). The water level had dropped considerably at the time of the test which may account for this. The new ponds will be fed by surface water, draining permanent grassland, new scrub and copses which will have no nutrient inputs, so pond water quality should be good, at least once the ponds have settled post-creation.

Table 1. Water quality results from Rapid Test Kits used at the compensation site and surrounding area

Date	Waterbody type	Name of Waterbody (if any)	NO-3 ppm	NO-3 Category	PO-4 ppm	PO-4 Category	Overall score	Notes
14/03/2023	Drain	Drain alongside bridleway	0.5-1	Some pollution	0.02-0.05	Clean	Some pollution	Runs between farmyard and Bow Lake
05/03/2024	Existing online pond	Bow Lake online pond SPF-EP1	5 to 10	Polluted	0.02-0.05	Clean	Polluted	Online with Bow Lake
28/03/2023	Existing pond	Nr boundary with Stoke Park Wood	0.2-0.5	Clean	0.02-0.05	Clean	Clean	
25/09/2023	Existing pond	SANG tree line pond	<0.2	Clean	<0.02	Clean	Clean	
24/05/2024	Existing pond	Ponds below farm yard	<0.2	Clean	>1	Polluted	Polluted	
14/03/2023	Stream	Bow Lake	5 to 10	Polluted	<0.02	Clean	Polluted	
25/04/2024	Stream	Bow Lake	>10	Polluted	0.02-0.05	Clean	Polluted	
05/03/2024	Surface water	Over drain line during flood event	<0.2	Clean	<0.02	Clean	Clean	
25/09/2023	Test pit	SPF-TP7	0.2-0.5	Clean	<0.02	Clean	Clean	
02/11/2023	Test pit	SPF-TP7	<0.2	Clean	<0.02	Clean	Clean	
05/03/2024	Test pit	SPF-TP7	<0.2	Clean	<0.02	Clean	Clean	
25/04/2024	Test pit	SPF-TP7	<0.2	Clean	0.05-0.1	Some pollution	Some pollution	Water level has dropped considerably
25/09/2023	Test pit	SPF-TP6	0.5-1	Some pollution	<0.02	Clean	Some pollution	
02/11/2023	Test pit	SPF-TP6	0.2-0.5	Clean	<0.02	Clean	Clean	
05/03/2024	Test pit	SPF-TP6	<0.2	Clean	<0.02	Clean	Clean	
25/04/2024	Test pit	SPF-TP6	<0.2	Clean	<0.02	Clean	Clean	

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2.3 Long term prospects for great crested newts

The site is located in the Hampshire Belt great crested newt Strategic Opportunity Area (Figure 1). There are good long term prospects for great crested newt at the site, but colonisation may take some years because of the nearest known record is 700m away (Figure 2). There are suitable connectivity features in the landscape between the existing great crested newt population and the compensation site.

2.4 Other considerations

There are no known constraints at the site and the work will not lead to disturbance of existing wildlife. This is because the grassland was recently intensively grazed, and the proposed work will not involve removal of trees or vegetation, or noise/other disturbance after the initial creation/restoration work has been carried out (see next section).

An archaeological watching brief is required at the site.

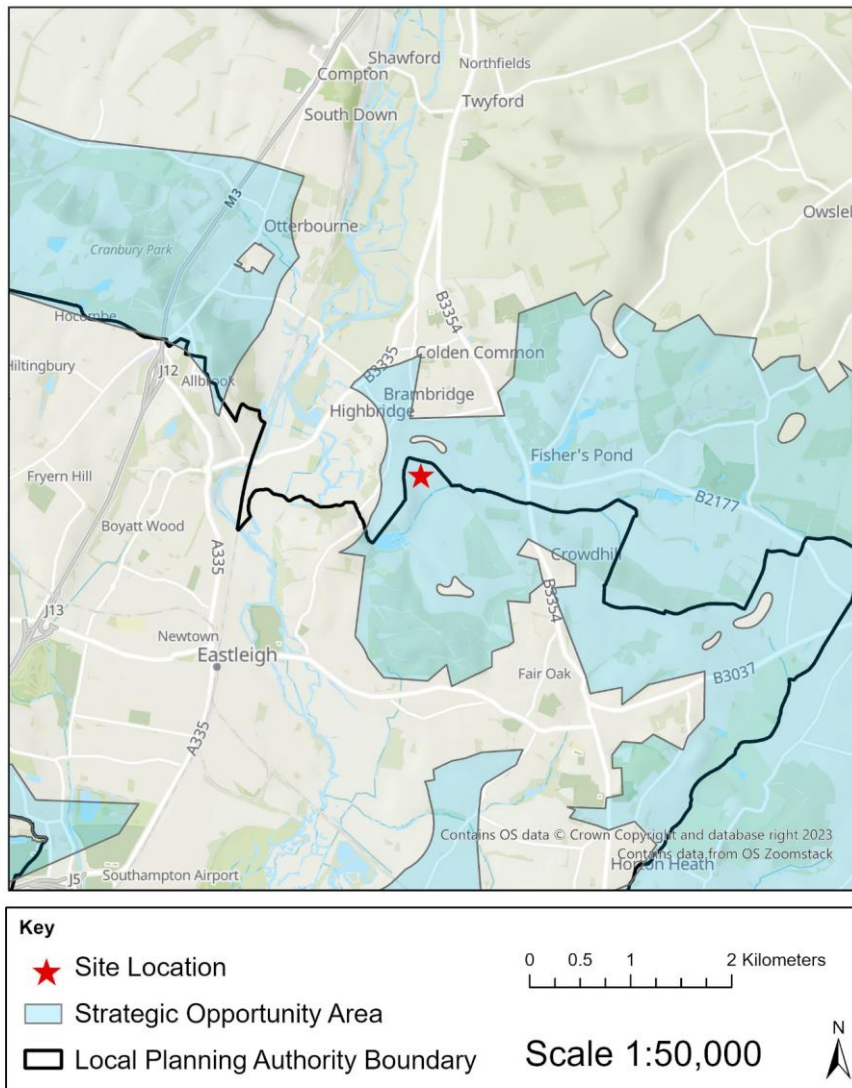


Figure 1. Location of the proposed site Stoke Park Farm (Rowley Green Meadow) and great crested newt Strategic Opportunity Area

Figure 2: Redacted - Sensitive wildlife locations

3 Habitat creation and restoration

3.1 Overview

The main objective of the work is to create or enhance high quality breeding and terrestrial habitat primarily for great crested newt but also for other freshwater and terrestrial plants and animals. A habitat mosaic is proposed (see Figure 3) including:

- Seven clean water ponds of breeding potential for great crested newt (total 0.32 ha).
- 0.12 ha trees planted across four small copses.
- 0.7 ha natural scrub regeneration (no mowing) to extend good great crested newt terrestrial habitat.
- 6.86 ha grassland to provide good foraging for great crested newt – possible opportunity to create species-rich grassland on part depending on results of soil tests and landowner access to mowing contractors.
- Hedge planting (350m length) to enhance cover and connectivity with other ponds for great crested newt and enhance wildlife habitats generally.
- Two hibernacula near new ponds to rapidly provide hibernation sites for great crested newt.

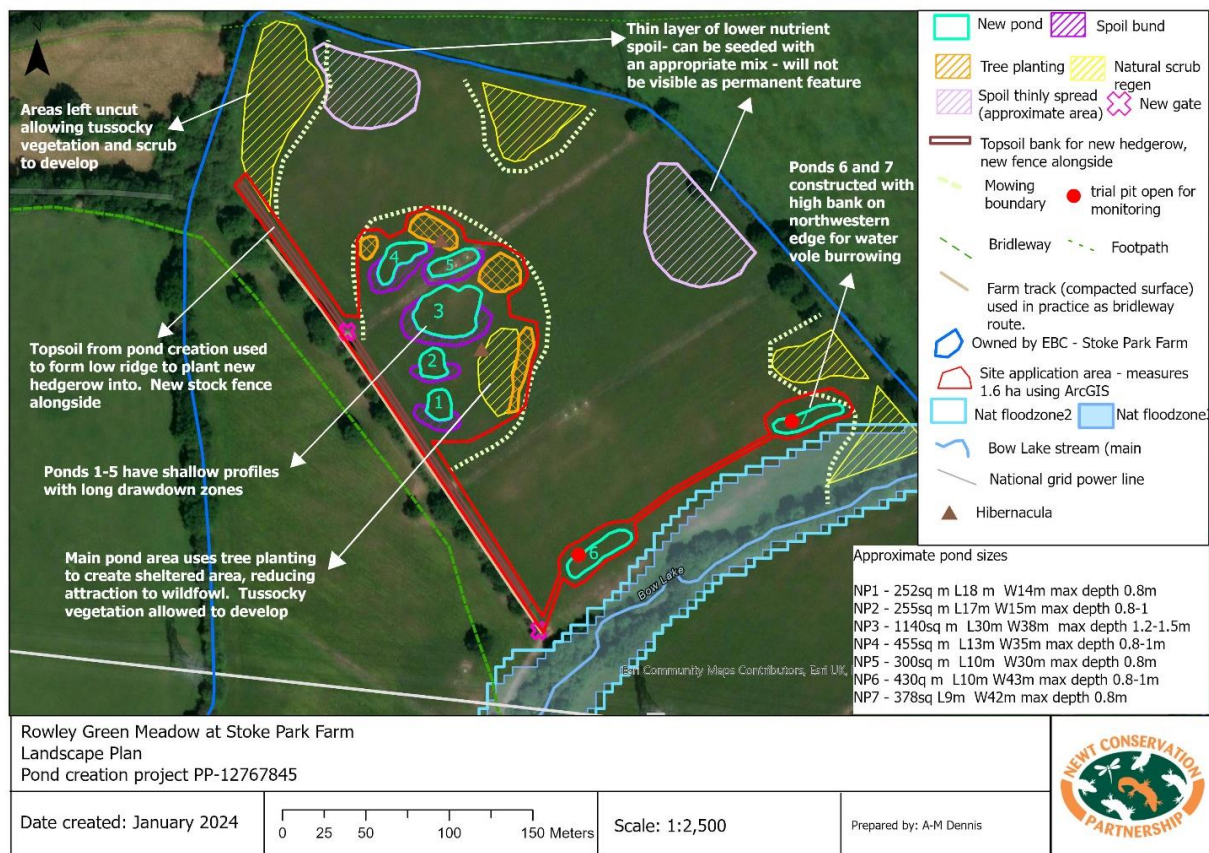


Figure 3. Overview map of planned habitat creation work at the site

3.2 Aquatic habitat: ponds

Seven new ponds designed for great crested newt breeding will be created at the site. The ponds will range in surface area from c. 250 to c. 1140 m² and in depth between 0.8 and 1.5 m at maximum bank top. The ponds will have extensive shallow water areas and drawdown zones. Each pond is designed individually to provide a range of conditions for great crested newt and other freshwater wildlife according to best practice principles. The two ponds nearest to Bow Lake have been designed with a long steep bank on one side to offer burrowing opportunities to Water vole, which are known along the stream.

Table 2 provides outline dimensions for the proposed ponds. Note that actual dimensions and depths may require small adjustments on site and possibly further modified once they have filled with water and their hydrology has been monitored. This management plan will be reviewed and updated once the initial work has been completed to reflect this.

The footprint of the excavations may be slightly larger than the dimensions provided below so that the ponds have extensive shallows and a wide drawdown zone, as per best practice for pond creation for wildlife.

All spoil excavated as part of the pond creation will be retained on site. Clay will be used to build up lower end of ponds on slopes. The remaining clay will be used for the creation of hibernacula or other ecological features (e.g. butterfly or beetle banks) or will be thinly spread on poor quality grassland. All topsoil will be stripped from pond areas prior to excavation and disposed away from the ponds' surface water catchment. Much of it will be used to create a low bank as a base for the new hedge.

Table 2. Proposed dimensions of new ponds

Pond No.	OS Grid reference	Surface area (m ²)	Max depth (m)
SPFA-NP-1	SU 47765 20898	252	0.8
SPFA-NP-2	SU 47759 20929	255	1
SPFA-NP-3	SU 47765 20957	1140	1.5
SPFA-NP-4	SU 47741 20982	455	1
SPFA-NP-5	SU 47774 20988	300	0.8
SPFA-NP-6	SU 47847 20805	430	1
SPFA-NP-7	SU 47974 20886	378	0.8

3.3 Terrestrial habitat

Overall, 7.68 ha of terrestrial habitat will be created to provide good foraging habitat for great crested and generally enhance the biodiversity of the site:

- **Fencing** (350m): NCP will arrange for a professional contractor to erect post and wire stock fencing to Hampshire Countryside Service design standards [designstandards-fencing.pdf \(hants.gov.uk\)](https://designstandards-fencing.pdf(hants.gov.uk)) along the farm track to the west of the field boundary, which is used as a bridleway. There will be gates to allow machinery access, with padlocks and signage to be supplied and erected by EBC. EBC will supply and fit signs to the gates to inform the public that there is no access and to provide interpretation for the general public using the bridleway.
- **Hedge** (350m): The 350 m hedge will be comprised of native species, with no one species making up more than 70% of the total. Species may include Hawthorn *Crataegus monogyna*, Blackthorn *Prunus spinosa*, Field rose *Rosa arvensis*, Hazel *Corylus avellana* and Field maple *Acer campestre*, depending on availability at time of ordering. The tree and hedge order will be agreed and approved by the EBC Ecology and Trees Manager. It will be planted by a professional contractor into prepared ground as a staggered double row 40 cm apart with a minimum of 6 plants per metre. The plants will be 2-year-old transplants at least 450- 600 mm high and suitable protection to be agreed and discussed with EBC. There are two existing trees (Pedunculate Oak *Quercus robur*) on the proposed hedge line which will be retained as standards. At least two additional standard trees will be planted along the hedgerow. These will be Pedunculate Oak *Quercus robur* at least 2 m tall and will be fitted with a stake and rubber tie, tree guards may also be required. The hedge and standards will be planted by a professional contractor after the ponds have been constructed. This will be in the period 1 November to 31st March, to give the plants the best chance to establish. A thick bark mulch layer will be laid to quickly provide a moist stable environment for amphibians as well as reduce competition for newly planted tree stock. Newt Conservation Partnership will arrange for replacement of failed hedge plants (where more than 10% have failed or gaps will be apparent) and standards for one year after initial planting, after which responsibility will revert to EBC. There is no sign of rabbit grazing pressure in the site, but roe deer are present. In time, the new hedge will provide excellent habitat for a wide range of invertebrates, birds, mammals and amphibians, as well as providing a useful link between existing wooded habitats and new scrub areas.
- **Woodland** (0.12 ha): Tree planting of suitable native species are planned across 4 small copses marked in hatched orange on Figure 3. Tree species will be agreed and approved by the EBC Ecology and Trees Manager before ordering and appointing a contractor. Species may include Willow *Salix* species and Aspen *Populus tremula* as well as Hawthorn, Blackthorn, Field maple and Crab apple *Malus sylvestris*. NCP will consult Hampshire Forest Partnership about the potential for sourcing Black poplar *Populus nigra* subsp. *betulifolia*. Planting will be carried out by a contractor in suitable conditions between 1st November and 31st March, and a thick bark mulch layer will be laid to quickly provide a moist stable environment for amphibians as well as reduce competition for newly planted tree stock. The new copses will in time provide excellent habitat for a wide range of invertebrates, birds, mammals and amphibians.
- **Scrub** (0.7 ha) The yellow hatched areas on the plan in Figure 3 will be kept unmown to allow development of tussocky vegetation and scrub species. The areas will be marked with posts to ensure contractors can identify correct zones. The undisturbed areas will become valuable habitat for invertebrates, amphibians, reptiles, birds and small mammals and provide transition between woodland, grassland, and existing and new hedges.

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- **Hibernacula:** two large hibernacula will be constructed near the ponds in scrub and copse areas. Whilst there is limited research on the benefits of hibernacula for amphibians, particularly on sites with existing high-quality habitat, they may be useful to amphibians occupying the site in the early years of the project whilst the scrub, copses and new hedge are developing. They will also provide a deadwood resource for invertebrates. They will be constructed following the guidelines in the Amphibian Habitat Management Handbook [Habitat Management Handbooks | Amphibian and Reptile Conservation \(arc-trust.org\)](https://www.arc-trust.org/publications/habitat-management-handbooks-amphibian-and-reptile-conservation). Logs and/or inert material will need to be brought from off site.
- **Grassland** (6.86 ha): Grassland (formerly intensively grazed and currently cut biannually) will be retained on site and managed to improve biodiversity. Soil nutrient levels will be tested when conditions are dry enough. The aim will be to create the grassland type which is most suitable for the site according to its soil type and locality. Note that a species-rich grassland may take years to become established and require more intensive intervention in the initial years. Achieving good structure is a main requirement for great crested newt habitat. Principles of The Lowland Grassland Management Handbook will be followed.²
- **Other ecological features:** Butterfly or beetle banks may be created with excess spoil from the pond creation and located in areas to minimise constraints for the long-term management of the site. Proposals will be agreed with the EBC Ecology and Trees Manager.

² The Lowland Grassland Management Handbook Second Edition (1999) English Nature / The Wildlife Trusts (Eds A Crofts and R G Jefferson)

4 Management plan (post-restoration/creation)

Ongoing management of the site post-restoration should be informed by Newt Conservation Partnership monitoring visits and ultimately aim to maintain good breeding and terrestrial habitat for great crested newt. The site restoration has been designed to minimise the need for management intervention.

The need for management actions should be assessed both at the pond and site levels to create a wide diversity of conditions in ponds, and a mosaic of terrestrial habitats to maximise wider biodiversity benefits.

A site check will be carried out within six months of creation/restoration. Monitoring visits will take place annually at least in the first five years after creation and then every 3 to 5 years and will inform any review of the proposed management measures in Table 2. Newt Conservation Partnership will continue to advise the landowner throughout the 25-year management period as needed.

The management measures in the short and longer term for each of the habitats created or restored are provided in Table 2, including funding sources and responsibilities. In summary:

- **Ponds:** If good water quality is maintained, the pond should require very little management in the first 5 to 10 years after creation, particularly if grazed by deer. After that time, and depending on grazing levels, some removal of marginal tree/scrub shade may be required along the southern edges of ponds to maintain open sunny conditions. Northern edges should be left to develop with minimum intervention. De-silting/vegetation removal in the pond may not be required for 10+ years depending on the pond's nutrient status. De-silting/vegetation management operations should be pre-agreed with Newt Conservation Partnership and carried out in autumn or winter, outside of the amphibian breeding season.
- **Fencing:** Minimal maintenance should be required in the first few years – advice will be sought from contractor on expected life of posts. The fence is not expected to attract vandalism but should this happen it will be reviewed by NCP and EBC.
- **New hedges:** This will be managed according to principles outlined in The Tree Council Hedgerow Learning Guide 3: Hedge Planting and Growing (The Tree Council 2022) [Hedgerow-Learning-Guide-3-Hedge-planting-and-growing.pdf \(hedgelink.org.uk\)](https://www.hedgelink.org.uk/Hedgerow-Learning-Guide-3-Hedge-planting-and-growing.pdf). The Management Plan agreed between EBC and NCP will specify management actions however these will be reviewed and updated with mutual consent.
- **Woodland:** Tree guards will need to be removed as the trees mature. If the trees do not become established within 5 years, e.g. because of grazing pressure by deer, the quality of the habitat for great crested newt and the deer pressure should be assessed before other management measures are taken (e.g. further planting of trees/scrub). Once established no thinning should be required and deadwood should be left in place whenever possible.
- **Scrub:** This area should be left to regenerate naturally in the long term. If scrub/trees do not become established within 5 years, e.g. because of grazing pressure by deer, the quality of the habitat for great crested newt should be assessed before other management measures are taken (e.g. planting trees/scrub). In the longer term,

scalping of edge and/or rotational cutting may be desirable to create a varied age structure.

- **Hibernacula:** Once created the hibernacula will not require any management actions. Any further hibernacula or habitat piles created as a result of site management should follow best practice guidelines.
- **Grassland areas:** Management aims should be to create a species-rich grassland with some habitat heterogeneity, i.e. allowing development of tussocks and transitional habitat, particularly along the hedges. While traditional meadow management (cut and collect in late summer, followed by low intensity aftermath grazing in the autumn and early winter) would be ideal, grazing is unlikely to be possible in the short or medium term. In the absence of grazing, the grassland should be cut twice a year (in summer and autumn) for the first four years with arisings collected and piled in a suitable area of the site (not in the pond's catchment) if not taken for hay or silage. Management will be reviewed regularly. Soil nutrient tests will establish the potential for species-rich grassland creation and management may be adjusted accordingly.

Table 2 below sets out clear responsibilities for management actions. For significant measures over and above what is expected to be covered by the management payment to the landowner, Newt Conservation Partnership will provide additional funds to carry out the work either directly or by the landowner.

Table 2 Management measures

Measure/objective	Rationale/comments	Timing/frequency	Funding sources	Responsibility
Ponds				
Deepening of ponds to increase water levels	The new ponds need to be permanent or semi-permanent for great crested newt (GCN) to breed successfully	Subject to monitoring	Newt Conservation Partnership (NCP) (direct funding over and above management payment to landowner)	Newt Conservation Partnership (NCP)
Repairs to bunds or modifications of the pond profiles to maintain maximal functionality for GCN breeding	Pond profile may need adjusting once the ponds' hydrology settles post creation	Subject to monitoring	NCP (direct funding over and above management payment to landowner)	NCP
Plant introduction for GCN egg-laying to maximise breeding success	GCN require vegetation to lay their eggs. If the ponds do not colonise with suitable plants within 1-3 years after creation, native plant introduction may be considered The landowner should not introduce any plants or animals to the ponds without prior consent	Subject to monitoring	NCP (direct funding over and above management payment to landowner)	NCP
Removal of invasive species or fish to maintain good breeding conditions for GCN	Fish, and invasive plants and animals may impact GCN breeding success If signs of fish or invasive species are observed, advice should be sought from Newt Conservation Partnership. Potentially, action will need to be taken for their removal at the earliest opportunity	Subject to monitoring	Management payment to landowner	Compensation Provider (landowner)
Shade management to maintain open/sunny conditions – primarily for	GCN require sunny conditions on at least part of the pond to maximise breeding success	Subject to monitoring	Management payment to landowner	Compensation Provider (landowner)

Measure/objective	Rationale/comments	Timing/ frequency	Funding sources	Responsibility
southern margins of ponds Maximum of 60% overall shading of pond perimeter measured May-September	Each pond to be assessed individually to maintain diversity of habitat at the site level	Unlikely to be required until 5-10 years after creation Autumn/winter activity		
Silt/sediment management to maintain water levels and extensive plant stands optimum for GCN breeding	Accumulation of silt/sediment may reduce optimum breeding conditions for GCN if the ponds become too shallow or sediments are unsuitable for aquatic plant establishment Each pond to be assessed individually to maintain diversity of habitat at the site level	Subject to monitoring Unlikely to be required for 10+ years after creation or more than twice during the 25 year period Autumn/ winter activity	Management payment to landowner	Compensation Provider (landowner)
Vegetation management to maintain optimum breeding condition for GCN Aim to maintain at least 20% open water	If wetland or aquatic vegetation stands become too dense this may reduce GCN breeding success Each pond to be assessed individually to maintain diversity of habitat at the site level	Subject to monitoring Unlikely to be required for 5+ years after creation Sept-November activity	Management payment to landowner	Compensation Provider (landowner)
Maintain good water quality by completely avoiding pesticide/fertiliser use on the site	Use of pesticides and fertilisers in or around ponds will threaten the water quality and consequently the breeding potential of the ponds	Ongoing	No cost	Compensation Provider (landowner)

Measure/objective	Rationale/comments	Timing/frequency	Funding sources	Responsibility
Hedges				
Newly planted hedge -short/medium term	Ideally follow one of two main management options: 1. Leave to grow untrimmed and lay within first 10 years. Laying will help to thicken the base and create a stock proof, thick hedge. 2. Trim the young hedge lightly each winter slightly higher and wider at each cut (for 3 to 4 years). Gradually allowing the hedge to increase in height and width will create a thick, dense hedge. Cutting should take place in January or February to ensure wildlife have access to any berries over winter. Any tree guards will need to be removed once the trees have grown too large for them. Monitor bramble and weed growth and cut where necessary to allow new plantings to establish. Top up mulch layer as necessary. New plantings may require water during dry weather. Allow for line of sight for bridleway users by keeping set areas of the hedge at lower level. Some replacement hedging may be required if there is significant tree loss (>10%).	Subject to monitoring Cutting in January or February Any spiral guards used will need removing after approx. 5 years	Management payment to landowner & NCP (for additional trees)	NCP for additional trees one year from initial planting Compensation Provider (landowner)
New hedges long term (once established)	Ideally trim on 2 to 3-year rotation, making incremental increases in height and width, maintaining low points as sightlines into the field for bridleway users. Or enter into non-intervention period where no trimming takes place. Once hedge is c. 4m high consider coppicing, laying or re-shaping with circular saw in sections to rejuvenate the hedge. Remove ties and stakes from standards when required	As required. Management should take place between October and January to avoid the bird breeding season and ideally January or February to give	Management payment to landowner	Compensation Provider (landowner)

Measure/objective	Rationale/comments	Timing/ frequency	Funding sources	Responsibility
		wildlife access to fruits.		
Fence and gates				
Maintain barrier to deter public access	Public and dog access to ponds increases disturbance and risk of introduction of invasive plants and fish Minor repairs may be necessary during 25 year agreement	As required – subject to monitoring	Management payment to landowner	Compensation Provider (landowner)
Copses				
Short term management of copses	Maintain tree guards (if used) to protect new trees from deer. New plantings may require water during dry weather. Top up mulch layer as necessary. Monitor bramble and weed growth and cut where necessary to allow new plantings to establish. Some replacement may be required if there is significant tree loss (>30% of trees).	Subject to monitoring	Management payment to landowner	Compensation Provider (landowner) for management.
Medium term establishment of copses	If the trees do not become established within 5 years, e.g. because of grazing pressure by deer, the quality of the habitat for great crested newt and the deer pressure should be assessed before other management measures are taken (e.g. further planting of trees/scrub)	Subject to monitoring	NCP (direct funding over and above management payment to landowner) will arrange for replacement of trees (where more than 30% have failed)	NCP for replacement trees
Medium term management of copses	Remove tree guards (if used) when they have spilt and before they start to disintegrate to avoid hampering tree growth and avoid plastic pollution	Guards (if used) will need to be removed after 5 to 10 years	Management payment to landowner	Compensation Provider (landowner)

Measure/objective	Rationale/comments	Timing/frequency	Funding sources	Responsibility
	Trees will be planted with relatively wide spacings; thinning is unlikely to be required. Any deadwood should be left in place or kept on site to provide additional wildlife habitat	Outside bird breeding season as required		
Scrub regeneration areas				
Short term management to encourage scrub regeneration and development	No regular mowing of scrub regeneration areas – boundaries between grassland and scrub marked with wooden posts	Subject to monitoring	No cost	Compensation Provider (landowner)
Long term management of scrub regeneration areas	Scalloping of edges or small scale rotational coppicing or glade creation may be required as scrub develops to maintain diversity Deer browsing may impact development	No action anticipated in first 10 years. To be advised following monitoring visits (activity to take place outside bird breeding season)	Management payment to landowner	Compensation Provider (landowner)
Grassland				
Short term activity to achieve more diverse grassland sward	Soil nutrient tests will establish the potential for species-rich grassland creation and management may be adjusted accordingly.	Subject to monitoring	NCP (direct funding over and above management payment to landowner)	NCP
Short term management to achieve more diverse grassland sward	Initially two cuts a year (summer and autumn) for first four years. Arisings should be removed to reduce nutrient levels, and can be piled on site in a suitable area (where leachate will not enter watercourses or ponds) if not taken as hay or silage	Cut and collect Summer (from mid-July) and Autumn each year for five years	Management payment to landowner	Compensation Provider (landowner)
Long term management once grassland is at desired standard	Once grassland is established, management should aim to create high quality habitat for wildlife by cutting and removing arisings.	Cutting once annually, late summer. After 15th	Management payment to landowner	Compensation Provider (landowner)

Measure/objective	Rationale/comments	Timing/ frequency	Funding sources	Responsibility
	Arisings should be removed to reduce nutrient levels, and can be piled on site in a suitable area (where leachate will not enter watercourses or ponds) if not taken as hay or silage. Annual cutting should be in late summer, in dry conditions to a height of no less than 150mm to avoid harm to GCN and other amphibians.	July (or as agreed in writing as a variation)		

5 References and useful information

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