

# **COSTOCK NATURE RESERVE MANAGEMENT PLAN**

PREPARED BY COSTOCK NATURE RESERVE MANAGEMENT GROUP ON BEHALF OF COSTOCK  
PARISH COUNCIL

JANUARY 2017

## 1.0 Introduction

- 1.1 As part of Rushcliffe Borough Council Planning Outline Approval (01/01103/OUT), the associated S106 agreement and subsequent Reserved Matters a Management Plan was Conditioned in order to ensure the management and maintenance of land to the rear of the residential dwellings in the long-term (hereby named Costock Nature Reserve). During the planning application process the presence of a statutory constraint in the form of great crested newts (*Triturus cristatus*) (GCN) was noted with development works subsequently taking place under a European Protected Species (EPS) derogation Licence from DEFRA. Grass snake (*Natrix natrix*) are also known to be present on site and any management plan will therefore have to ensure works undertaken comply with the relevant legislation surrounding these species.
- 1.2 The Nature Reserve is clearly attractive to and supportive of the Great Crested Newt as it contains a large (approximately 1,000 sq. m.) pond which occasionally dries up in years with low rainfall (this will be referred to as the 'Main GCN Pond' in this document). Aquatic surveys of this pond have been carried out twice in the last nine years. In March 2011 the survey detected 146 toads, 8 smooth newts and 15 great crested newts. In April 2013 the survey covered less than 50% of this pond but still counted 28 toads, 22 smooth newts and 20 great crested newts with large areas of frogspawn at both northern and southern ends of the pond. However, despite the continued success of this pond it is in danger of eventually succumbing to the invasion of fallen or self-set trees and the encroachment of suckers from the aspen grove in its south western corner and from brambles and other scrub.
- 1.3 A second pond (Mitigation GCN Pond) which was created by the developers of the Bars Hill estate in mitigation for a pond lost during the building of the estate, is, and always has been completely useless. It has never supported frogs, toads or newts in their aquatic stages. We plan to re-assess the pond in spring 2017 and either modify, reline and repair the pond, or create an additional waterbody within an area of the reserve considered not to provide any suitable places of rest or shelter for GCN. Whatever works are ultimately decided, they shall be undertaken in compliance with all relevant legislation (if necessary under the supervision of a Registered Ecologist and an associated GCN Low Impact Class Licence (GCN LICL)).
- 1.4 The total area of the reserve is 2 acres entailing pond, grassland, occasional trees, grassland and scrub. It has farmland to the south and west, housing to the north and derelict farmland to the east which currently is relatively newt friendly.
- 1.5 The site was offered to the Parish Council by the developers in 2007 who, unfortunately, did not complete their obligations in terms handing over the reserve in a condition which would make it relatively easy to maintain. Apart from flail cutting the developing brambles and scrub a couple of times they did nothing. After nine years of neglect we anticipate that it will take several years to bring the reserve to a condition where we can reduce our commitments to regular maintenance and gradual improvements.
- 1.6 Following discussions between Costock Parish Council it was confirmed on 20<sup>th</sup> January 2015 by the Principal Area Planning Officer for Rushcliffe Borough Council that:

*'As agreed at our meeting, and in order to bring this matter to a satisfactory conclusion, I confirm that the Council would be content that the mitigation measures and maintenance regime set out in your letter of 25 November 2013 would be sufficient to satisfy the outstanding planning conditions and S106 obligations and that there would be no*

*expectation of further action or submission of documentation subject to these works being carried out. However, if you wish to amend your proposed schedule of works I would be happy consider a variation'*

- 1.7 This management plan has therefore been prepared based upon the 25<sup>th</sup> November 2013 submission providing additional details regarding to the measures proposed. However, it must be noted that the proposed schedule of works remains, in principle, the same as previously approved and it is therefore not considered that any variation is required.
- 1.8 This document has been prepared following a site visit undertaken in December 2016 and with additional ecological input where necessary by an experienced ecologist and holder of a Natural England Class II Licence who is also a Registered Consultant under Natural England's GCN LICL scheme.

## 2.0 Management Objectives

- 2.1 To prepare and maintain a wildlife-friendly environment for the enjoyment of Costock residents with particular emphasis on maintaining and enhancing the Favourable Conservation Status of the great crested newt population known to be present.
- 2.2 The following section provides the prescriptions and management objectives for the existing habitats on site with habitat creation restricted to making-good habitats that were either not created as part of the original development works or those not considered fit-for-purpose. A summary of habitats to be retained/created is below.

Table 1: Summary of Habitats to be Retained and Created

<b>Habitats to be retained and enhanced</b>	<b>Habitats to be created</b>
Broad-leaved Trees Native hedgerow Main GCN Pond Improve Biodiversity: e.g. Bulb planting Scrub Grassland Hibernaculum	Native Hedgerow Mitigation GCN Pond

- 2.3 The over-arching conservation objective for the site is based upon the requirement to maintain and enhance the nature conservation value of the site whilst striking an appropriate balance to enable it to also become an environment suitable for enjoyment by Costock residents. Where appropriate, specific objectives are provided following the prescriptions and are designed to ensure that habitats reach and maintain their maximum nature conservation value whilst ensuring compliance with the relevant wildlife legislation. Each objective should ideally be testable through monitoring.

## 3.0 Retained Habitat

### Broad-leaved Trees

#### Rationale

- 3.1 Mature trees can provide significant wildlife value for deadwood invertebrates as well as other fauna such as birds and bats whilst providing connectivity with scrub, grassland or hedgerows.

#### Timing/management

- Tree protection of retained trees prior to commencement of works
- Avoid bird nesting season if possible (or undertake works under appropriate supervision)
- Thin the aspen *Populus tremula* grove at south west corner of the ~~Main~~ pond and fell and remove all trees to south of ~~Major~~ pond to prevent/reduce over-shading of the waterbody.
- Create pathway between aspen grove and hedge to the south of reserve for access to south end of pond.
- Remove fallen trees from ~~Major~~ GCN pond and all saplings and suckers if possible. Stack on top of brambles on east side of pond to provide GCN-suitable habitat.
- Leave or tidy fallen trunks of willow at north end of pond and consider felling any other trunk of same willow in danger of falling into pond.
- Remove all trees in ~~main~~ grassland area of reserve prior to first cut and fell most of the ash *Fraxinus excelsior* trees in a group at south west of reserve. Build wood piles with the detritus. Leave 4 or 5 of the best specimens untouched. Remove all saplings
- Leave trees on eastern boundary (next to fence) and trees on or close to hibernaculum (subject to house-holders choice, if known).
- Fell non broad-leaved trees.
- Note. Once reserve has regained significant free space judicial planting of desirable broad-leaved trees, possibly fruit trees, is anticipated on grassland or alongside

### Native Hedgerow

#### Rationale

- 3.2 Management of the existing hedgerows will promote a dense bushy structure with increased berry production with any strengthening of the existing hedgerows taking place to provide a minimum of five native woody species per 30m length where possible.

#### Timing/management

- Cut 50% of each length on a rotational basis between November and February avoiding frost periods.
- Cut no less than 2m high.

- If necessary, any existing hedges can be gapped-up with planting between the end of October and end of March in species groups of three within existing gaps (suggested species detailed in the 'hedgerow creation' section below).
- Laying hedge once new plantings have established between November and the end of February to maintain a dense structure.
- Retain a 1m margin at base and cut every three years to promote dense cover.

## Main GCN Pond

### Rationale

- 3.3 The existing main pond in the reserve is around 1,000 sq. m. in size with a depth of over 3m at its deepest part when completely full. It has thrived on neglect for the past ten years but needs to be protected from encroaching scrub and tree suckers and to be cleared of fallen trees and general litter if it is to continue to provide GCN-suitable aquatic habitat in the long-term. It has dried up completely from time-to-time (most-recently in November 2017) which has prevented any colonisation by fish.
- 3.4 Existing margins should be planted with macrophytes to provide an egg laying substrate. Water depth will be monitored for the next few years to establish the viability of planting and managing aquatic plants. Shading should be minimal and avoided on the south bank.
- 3.5 If deemed necessary, localised de-siltation/deepening of the pond may take place at an appropriate time of year (avoiding any periods when the waterbody may be used by GCN in their aquatic phase i.e. over-winter or during periods when the waterbody is not holding any water). Any works would be undertaken under ecological guidance/supervision as required with any spoil placed upon appropriate areas of site not considered to provide suitable places of rest or shelter for GCN.
- 3.6 Litter should be removed from the site as part of the general management and maintenance of the habitats.

### Timing/management

- Plug planting with marginal/aquatic macrophytes where necessary, to take place in spring which will require a summer season of establishment before providing suitability for GCN.
- The south bank will be maintained clear of tall vegetation which will also be managed around the remainder of the pond so that 1/3 is cleared to 500mm on rotation. In practice clearance will occur most frequently on the north and north-west banks and less frequently elsewhere due to accessibility issues.
- If it is decided to establish aquatic macrophytes these will be managed in the autumn when most wildlife is neither breeding nor hibernating and cleared vegetation will be left at the bank side for a 2 week creep-back period.
- Any litter is to be removed from the waterbody immediately where possible, however, any detritus considered to potentially provide egg-laying substrate shall only be removed between September and March.

- 3.7 The below species are recommended for planting at pond margins and within the water are detailed in the 'pond creation' section below.

### Improve Biodiversity across the Reserve (e.g. Bulb Planting)

#### Rationale

- 3.8 To improve biodiversity across all parts of the reserve at the same time as creating a more diverse and attractive visual effect for visitors where appropriate.
- 3.9 Providing early sources of nectar for invertebrates to be planted in association with trees, semi-improved grassland and retained hedgerows where there is potential for over-wintering invertebrates.
- 3.10 Species will include early flowering specimens with underground food store such as a corm, like the meadow saffron *Colchicum autumnale*; a bulb, like fritillary *Fritillaria meleagris*, grape hyacinths *Muscari sp.*; or tuber, like winter aconite *Eranthis hyemalis*.

#### Timing/management

- Planting bluebell, grape hyacinths and fritillaries in soil under a layer of mulch to 3 times the depth of own height in shade of trees.
  - Planting crocus in large groups in more open areas at grassland margins also to a depth 3 times own height
  - Plant crocus, grape hyacinths, bluebells and fritillaries September/October.
  - Plant snowdrops *Galanthus sp.* and winter aconite after late frosts in March/April as green plants in mulch.
  - Weed, divide and move plants in June when leaves have yellowed and remove any diseased specimens.
- 3.11 The below species are recommended for planting where appropriate.

Species for shade	Species for grassland margin
<i>Muscari sp. – Grape Hyacinths</i>	<i>Colchicum autumnale – Meadow Saffron</i>
<i>Fritillaria meleagris – Fritillary</i>	
<i>Hyacinthoides non-scripta – Bluebell</i>	
<i>Eranthis hyemalis – Winter Aconite</i>	
<i>Galanthus sp. – Snowdrop</i>	

### Scrub

#### Rationale

- 3.12 Scrub provides an essential component in the overall construction of the reserve and gives extra protection from predators and provides semi-protected corridors for amphibians to move around the area and between ponds. However, scrub currently dominates some areas of site (including around the east and north west of the Main GCN Pond) and is encroaching into the grassland

area. This habitat type should be managed to ensure that it continues to provide biodiversity benefits (particularly for nesting birds), whilst also ensuring that it does not result in the future loss of other habitat types on site (particularly grassland). If appropriate, clearance will take place under ecological supervision to ensure no risk of breach of legislation with regards to GCN and reptiles.

#### Timing/management

- Avoid bird nesting season if possible (or undertake works under appropriate supervision)
- The scrub on the east of the Main GCN Pond will be left at present although it may need controlling in the future.
- Scrub to the north west of the Main GCN Pond should be cut at least annually and possibly eliminated to allow safe passage to the main grassland area and the mitigation pond.
- Around the perimeter of the grassland scrub (mainly bramble) and around the Mitigation GCN Pond scrub should be cut back to increase the area of grassland habitat and reduce the risk of future encroachment. Where possible, the scrub edge shall be scalloped to increase habitat mosaic.
- This also applies to the south border where the brambles should be cut back almost to the hedge. The scrub currently encroaching the hibernaculum should also be reduced and managed whilst the small self-set hawthorn beginning to establish within the grassland area should be removed entirely.
- Where appropriate deadwood material will be retained in discrete brush piles in isolated areas of the site
- Following the initial clearance the scrub will be monitored on a biennial basis and removed as necessary to prevent encroachment

## Grassland

### Rationale

- 3.13 The existing grassland has been severely degraded over the past ten years of neglect with considerable encroachment from brambles and self-set hawthorn, ash, alder and other trees. Access to the area has been almost entirely cut off by the growth of brambles between the pedestrian entrance and the main body of the site.
- 3.14 We aim to produce a flower-rich biodiverse grassland which will be both attractive to the eye and supportive of a diverse wildlife population. To this end, the plan is to cut it to a minimum height of 150 mm (in order to ensure no risk of legislation breach with regards to GCN and reptiles) once or twice in the first year with the arisings either removed and stored in a designated composting area to help keep the grassland area nutrient poor. After the first year, half of the area will be cut every alternate year (removing the arisings and stacking them in compost heaps for grass snakes etc.). Such cutting would ensure that areas of dense tussocky grassland are present in addition to shorter areas that can be utilised by a range of invertebrates.

- 3.15 We also plan to cut a more permanent circular pathway for visitors on a more regular basis to restrict the spread of scrub from the periphery of the reserve back onto the grassland. The regime for this pathway could be up to 4 cuts per year.
- 3.16 We intend over time to create a more floristically-diverse sward by sampling topsoil/subsoil and measuring pH and nutrient levels and using the findings to inform a proposed seeding regime (if deemed necessary). The seed mix selected will be that most appropriate for the pH. If additional seeding is considered necessary/appropriate then this shall ideally be done by 'over-seeding' the existing grassland, however, if this is deemed unlikely to succeed 'stripping-out' soil nutrients/topsoil may be necessary to reduce nutrients and enable a diverse sward to be established (in the event this latter course of action is required ecological advice shall be sought and works shall take place in full compliance with the relevant wildlife legislation).
- 3.17 If necessary, seeding during spring or autumn will take place with a seed source appropriate to the soil pH and reflecting grassland species-rich grassland types found locally, such as Emorsgate EM2 (detailed below), a neutral species-rich grassland mix.

#### Timing/management

- Four cuts in the first year to reduce the dominance of undesirable species to a height of no **lower** than 150 mm
- Review of grassland condition in year 2 and any areas of pernicious weeds (i.e. docks *Rumex spp.*, thistles *Cirsium spp.* or ragwort *Senecio spp.*), controlled by the application of target herbicide.
- Year 2 onward an annual cut to a height of no lower than 150mm, between mid-July and September, followed by up to two autumn cuts undertaken up until the end of November to a height of no lower than 150mm. Cutting to take place on a rotational basis with 50% of the grassland cut every year.
- Some areas in close proximity to the ponds are to be cut every other year in order to allow the establishment of areas of rank grassland.
- Arisings raked off after 48 hours and deposited in a designated composting.
- If necessary, sowing at a rate of 40kg/ha, 4g/m<sup>2</sup>.
- No topsoil or fertiliser to be used to discourage more robust plant species and maintain low-nutrient grassland.

#### EM2 – General Purpose Meadow Mixture

<b>Herbs (20% of total)</b>	
<b>Scientific name</b>	<b>Common name</b>
<i>Achillea millefolium</i>	Yarrow
<i>Centaurea nigra</i>	Common Knapweed
<i>Daucus carota</i>	Wild Carrot
<i>Galium verum</i>	Lady's Bedstraw
<i>Knautia arvensis</i>	Field Scabious
<i>Leucanthemum vulgare</i>	Oxeye Daisy

<b>Herbs (20% of total)</b>	
<b>Scientific name</b>	<b>Common name</b>
<i>Lotus corniculatus</i>	Common Bird's-foot Trefoil
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Primula veris</i>	Cowslip
<i>Prunella vulgaris</i>	Selfheal
<i>Ranunculus acris</i>	Meadow Buttercup
<i>Rhinanthus minor</i>	Yellow Rattle
<i>Rumex acetosa</i>	Common Sorrel
<i>Trifolium pratense</i>	Wild Red Clover
<b>Grasses (80% of total)</b>	
<b>Scientific name</b>	<b>Common name</b>
<i>Agrostis capillaris</i>	Common Bent
<i>Cynosurus cristatus</i>	Crested Dog's-tail
<i>Festuca rubra</i>	Slender-creeping Red-fescue
<i>Phleum bertolonii</i>	Smaller Cat's-tail

## Hibernaculum

### Rationale

- 3.18 A hibernaculum runs along the north side of the reserve. It is proposed that a project involving children from Costock School could be initiated to create a hedge along the southern side of the Hibernaculum. This enhancement was one of the conditions which the developers failed to fulfil. Details of how it would be carried out are described below under the 'hedgerow creation' section below whilst the details regarding any management of existing/encroaching scrub is covered by the 'scrub' section above.

## 4.0 Habitats to be Created

### Native Hedgerows

#### Rationale

- 4.1 To create a continuous dense linear native scrub feature in association with the GCN hibernaculum which forms the northern boundary of the site adjacent the residential dwellings. Providing corridors of movement around the development parcel and to stepping stone habitats through the development and to the surrounding landscape. Providing management to maintain a dense barrier and increase berry production.
- 4.2 Planting composition will be based on the species-mix provided below and ensure that at least 5 species are present within a given 30m section consisting of native species of local provenance. This will provide new habitat of principal importance under NERC Act 2006.

#### Timings/management

- Planting between end of October and end of March in staggered double rows.
- Year 5 onward cut 50% of each length on a rotational basis between January and February avoiding frost periods.
- Cut no less than 2m high.
- Retain a 1m margin at base and cut every three years to promote dense cover.

<b>Species to comprise 70-75% of hedgerow</b>	<b>Species to comprise remaining 25-30% of hedgerow</b>
<i>Crataegus monogyna</i> – Hawthorn	<i>Acer campestre</i> – Field Maple
<i>Crataegus laevigata</i> – Midland Hawthorn	<i>Corylus avellana</i> – Hazel
<i>Prunus spinosa</i> – Blackthorn	<i>Ilex aquifolium</i> – Holly
	<i>Rhamnus cathartica</i> – Purging Buckthorn

### Mitigation GCN Pond

#### Rationale

- 4.3 The existing pond is non-functional as aquatic habitat for all but the most desperate amphibians. In order to re-establish this waterbody the existing perished butyl liner needs to be removed and the land drain previously found below the liner needs to be examined and dealt with so that it does not interfere with the function of the pond. If appropriate the pond will be re shaped and re-lined with a bentonite liner or puddled clay as appropriate. After a period for assessment of its viability it will be enhanced as described in the following sections.
- 4.4 However, if it proves impossible to rescue the existing failed pond then a new pond will be created adjacent to it (in an area not considered to currently provide any suitable places of rest or shelter for GCN) and the failed pond will be partially filled (to remove any health and safety risks) and left to develop as a marshy area. In either case the replacement pond will be designed as described below.

- 4.5 It must be noted at this point, that whatever works are undertaken they shall be undertaken under supervision of a GCN Licence holder and will ensure all appropriate wildlife legislation is complied with (it should however also be re-iterated that the current 'Mitigation GCN Pond' is not considered to provide suitable aquatic habitat for this species and is therefore not a 'GCN Pond').
- 4.6 The replacement pond will be created for GCN and will also provide benefits for other wildlife. To provide maximum benefit for GCN the surface area should be between 100 and 300m<sup>2</sup>. Steps should be taken to ensure no fish nor other invasive floral or faunal species are introduced to the ponds and waterfowl are not encouraged (use of interpretation boards). During monitoring surveys and on-going management works the presence of the afore will be searched for and should any be found then appropriate action taken to remove from the waterbodies with consideration given to how this can be prevented in future.
- 4.7 Margins should be gently sloping and planted with macrophytes to provide an egg laying substrate. To ensure open areas are maintained sections of the water column should be between 1.5 and 2m deep in appropriate areas which will also ensure the waterbodies do not dry out more than 1 in 3 years. Shading should be minimal and avoided on the south bank.
- 4.8 Litter should be removed from the site as part of the general management and maintenance of the habitats.
- 4.9 This will provide new habitat of principal importance under NERC Act 2006.

#### Timing/management

- Repair/digging of the new pond with sinuous edges, graded, shallow margins and 2m deep in places with a surface area of 100 - 300m<sup>2</sup>
  - Plug planting with marginal/aquatic macrophytes which will require a summer season of establishment before providing suitability for GCN.
  - The south bank will be maintained clear of tall vegetation which will also be managed around the remainder of the pond so that 1/3 is cleared to 500mm on rotation.
  - Once established the waterbody should be managed to provide 50% open water (rotational clearance every 2 years).
  - Management of aquatic habitats will be in autumn when most wildlife is neither breeding nor hibernating and cleared vegetation will be left at the bank side for a 2 week creep-back period.
  - Any litter is to be removed from the waterbody immediately where possible, however, any detritus considered to potentially provide egg-laying substrate shall only be removed between September and March.
- 4.10 The below species are recommended for planting at pond margins and within the water.

<b>Marginal/Emergent Species</b>	<b>Aquatics</b>
<i>Angelica sylvestris</i> – Wild angelica	<i>Callitriche stagnalis</i> – Common water starwort
<i>Caltha palustris</i> – Marsh marigold	<i>Myriophyllum spicatum</i> – Spiked water milfoil
<i>Iris pseudacorus</i> – Yellow Iris	<i>Potamogeton natans</i> – Broad-leaved pondweed
<i>Juncus articulatus</i> – Jointed rush	

<b>Marginal/Emergent Species</b>	<b>Aquatics</b>
<i>Juncus effusus</i> – Soft-rush	
<i>Juncus inflexus</i> – Hard rush	
<i>Lychnis flos-cuculi</i> – Ragged robin	
<i>Lycopus europaeus</i> – Gipsywort	
<i>Lythrum salicaria</i> – Purple loosestrife	
<i>Myosotis scorpioides</i> – Water forget-me-not	
<i>Veronica beccabunga</i> – Brooklime	

## 5.0 Five Year work programme

Habitat/Feature	Proposed Works	Anticipated Date of Works												Notes
		J	F	M	A	M	J	J	A	S	O	N	D	
<i>Management Prescriptions – Habitats to be retained and enhanced</i>														
Broad-leaved trees	Thin mature trees													To reduce over-shading of pond and to allow greater access around site
	Remove saplings													To reduce encroachment of grassland
Existing Hedgerows	Mechanical cut													Year 2 cut of up to 50% of hedgerow canopy on a rotational basis
	Gapping-up where necessary													In species groups of 3
	Laying where necessary													Laying at 45° angle and secure with stake and hetherings in traditional way
Main GCN Pond	Plug-planting of vegetation where necessary													
	Management of open water													Every 2 years to maintain 50% open water
	Management of bankside vegetation													1/3 cleared on rotation to 500mm and maintaining south bank free of shade casting tall plants
	Check site including waterbodies for litter to be removed once observed													To be undertaken as and when appropriate
Bulb Planting	Plant crocus, grape hyacinths, bluebells & fritillaries													Crocus in less shaded grass margins Others under tree cover or hedgerow bases
	Plant snowdrops & winter aconite green avoiding late frost													Under shade of trees or hedgerow bases
	Weed, divide and removed diseased specimens													As necessary once established
Scrub	Year one clearance of areas of scrub around the site													Avoiding bird nesting season where possible and under ecological supervision if where required. Avoiding periods of frost

Habitat/Feature	Proposed Works	Anticipated Date of Works												Notes	
		J	F	M	A	M	J	J	A	S	O	N	D		
	Biennial clearance/spot treatment where necessary to minimise any risk of encroachment into the grassland														Avoiding bird nesting season where possible and under ecological supervision if where required. Avoiding periods of frost
Grassland	Year one cut to <u>no lower than 150mm</u>														Four cuts in the first year (early spring then mid-July and two more until end November). Remove arisings
	Annual cutting of 50% of the grassland to <u>no lower than 150mm</u>														Year 2 onward 1 cut mid-July and one more until end November. Remove arisings
	Soil testing and bed preparation prior to seeding														If appropriate
	Sowing appropriate species-rich mix														Sowing rate of 40kg/ha (if appropriate)
	Annual review of condition and spot treat ruderals where necessary														
<b>Management Prescriptions – Habitats to be created</b>															
New Hedgerows	Planting in staggered double rows														Ensuring 5 species present per 30m section
	Mechanical cut														Year 5 onwards – annual cut of up to 50% of hedgerow canopy on a rotational basis
Mitigation GCN Pond	Plug-planting of vegetation where necessary														
	Management of open water														Every 2 years to maintain 50% open water
	Management of bankside vegetation														1/3 cleared on rotation to 500mm and maintaining south bank free of shade casting tall plants
	Check site including waterbodies for litter to be removed once observed														To be undertaken as and when appropriate
General															

## 6.0 Ongoing Management and Monitoring

- 6.1 Management Group – A group, with most of its members being Parish Councillors, has been formed to manage the development of the Nature Reserve. This group will monitor progress on the project and report back to the Parish Council regularly. It will also maintain records of the level of the newt population with population size-class aquatic assessments undertaken by a suitably-licensed ecologist on a biennial or triennial basis and assess whether any fluctuations are due to the condition of the reserve, good or bad weather conditions or any other cause which could be rectified. The level of the water in the two ponds will be closely monitored as untimely desiccation is the most likely event to cause a collapse of the present healthy newt population.
- 6.2 Major work on the immediate tasks to improve the newt friendly environment will be carried out by a contractor under appropriate ecological supervision where necessary. This involves major scrub clearance, grass cutting and tree removal.
- 6.3 Friends of Costock Nature Reserve – We intend to do as much maintenance work as possible with the help of a group of interested members of the community on an intermittent basis at the appropriate time of year. We will be advised by a resident ecologist and will develop a set of guidelines based on those outlined in this plan to guide us in the future.
- 6.4 School Projects – We also have plans to develop projects based in the local primary school to promote interest in wildlife among the pupils as well as taking advantage of their enthusiasm to assist with future projects.
- 6.5 Costock Residents – As well as the specific groups discussed above residents of Costock will also be informed of the Nature Reserve through the Costock Village website, the Costock newsletter and Interpretation Boards around the site. This information will be kept up-to-date (including the maintenance of the interpretation boards as necessary) and ensure all members of the village are aware of the Reserve and its purpose. It must be noted that this does result in a potential risk of impacts resulting from an associated increase in visitor pressure, however, it is considered that the mown paths will reduce the likelihood of encroachment into more sensitive areas and appropriate signage will also be in place requesting that the area is not used for exercising dogs. As part of the future for the park it is also hoped that the area can be made wheelchair-accessible.
- 6.6 To ensure that the habitats created within the site reach and maintain their maximum value to nature conservation, all habitats should be monitored from year 2 every two years to check establishment. Monitoring is most effective in the optimum growing season in June-September period and for grassland should be undertaken by an experienced botanist within this period and not during winter months.
- 6.7 Results of this monitoring should be used to inform annual changes to the management plan, and at the end of the five-year work programme. The prescriptions provided here are for overall guidance and should not be set in stone. Prescriptions should be altered if required. The management plan should be reviewed at the end of the initial five year period and, rolled over or amended as necessary.