3.12 Site 11. Hales Green Common, Hales

Photos

Key Facts:

- **Size of the Site:** 31.47ha
- Habitats present: **Modified Grassland, Other Neutral Grassland, Bramble Scrub, Mixed Scrub, Ponds, Artificial unvegetated; unsealed surface, Developed Land; Sealed Surface, Other Woodland; Broadleaved, Individual Trees, Species Rich Native Hedgerow with Trees, Species Rich Native Hedgerow With Trees – Associated with Bank or Ditch, Species Rich Native Hedgerow – Associated with Bank or Ditch, and Line of Trees.**
- Tree Preservation Orders, Conservation Areas, County Wildlife Sites (CWS), Roadside Nature Reserves, Priority Habitats, Statutory Designated Sites present on site? **Priority Habitats of Lowland Meadow, Good Quality Semi-Improved Grassland (next to Site). Area of Particular Importance for Biodiversity. Strategic Area. Area south of Green Road is a County Wildlife Site.**
- Recommended habitat measures in LNRS: **None.**

Baseline Habitat Description and BNG Calculation

3.12.1 The Site comprised a large common, most of which is part of the County Wildlife Site (south of Green Road). There were two parking areas, tracks to houses surrounding the

common and the common is regularly grazed each year by cattle during the summer months (as communicated during the third meeting with the Community Asset Manager).

3.12.2 The main habitat on Site was modified grassland in **poor condition**. Much of the grassland on the common had fewer than six vascular species per square metre on average and was left long with mown footpaths throughout. The sward had abundant Yorkshire fog and in places frequent perennial ryegrass. Other common grasses were present including cocksfoot, false oat grass *Arrhenatherum elatius* and red fescue.

3.12.3 Across much of the grassland, creeping thistle was abundant and indicative of high nutrient soils and regular ground disturbance[16], likely associated with the grazing cattle densities on the common. Other wildflowers noted included frequent creeping buttercup, red clover *Trifolium pratense*, white clover and creeping cinquefoil. Occasional wildflowers included daisy, dandelion, yarrow, selfheal and chickweed *Stellaria media*. Rarely present within the sward were ragwort, ribwort plantain, hairy sedge *Carex hirta*, bristly oxtongue *Helminthotheca echioides*, white dead nettle *Lamium album*, red dead nettle Lamium *purpureum*, curled dock *Rumex crispus* and dovesfoot cranesbill.

3.12.4 Whilst the botanical diversity of the much of the modified grassland was low, several waxcap fungi species were noted as being occasionally present including snowy waxcap *Cuphophyllus virgineus,* blackening waxcap *Hygrocybe conica* and one other unidentified species of waxcap (possibly parrot waxcap *Gliophorus psittacinus*). These waxcap fungi are indicators of old grassland and are ecologically valuable.

3.12.5 Several notable areas of grassland had higher botanical diversity. An area of other neutral grassland in **moderate condition** with wetter conditions was present along the eastern boundary of the common with three further areas along the southern edge of the common. These other neutral grassland pockets were all in topographical low points suggesting that these grasslands were formerly ponds. These areas area had abundant soft rush *Juncus effusus* which along with brooklime *Veronica beccabunga,* water mint *Mentha aquatica,* willowherb *Epilobium sp.* and silverweed *Potentilla anserina* indicated wetter soil conditions and a greater botanical diversity.

3.12.6 The eastern segment of grassland along the southern boundary also had slightly higher botanical diversity and was found to be modified grassland in **good condition**. This area had between 6-8 vascular plant species per square metre including less common wildflowers such as common fleabane *Pulicaria dysenterica* and water dropwort *Oenanthe sp* as well as crested dog's tail grass *Cynosurus cristatus*.

3.12.7 Several areas within the modified grassland were overtaken by abundant to dominant stinging nettle. These areas were associated with rabbit *Oryctolagus cuniculus* warrens and in one case in the north-east of the Site, an active badger *Meles meles* sett.

[16] Norfolk Wildlife Trust. Wildflower Grasslands – An Introduction. Available at: https://www.norfolkwildlifetrust.org.uk/sites/default/files/2024-02/Norfolk%20Wildlife%20Trust%20-%20About%20Wildflower%20Grasslands%20in%20Norfolk%20-%20150523.pdf

3.12.8 Patches of mixed scrub, predominantly in **moderate condition** were recorded throughout the Site. Scrub was generally dominated by hawthorn with infrequent other species such as field maple, elder, blackthorn and dog rose.

3.12.9 Other woodland; broadleaved in **poor condition** was present in small copses mainly in the centre of the common. Woodland areas were dominated by an overstorey of sycamore, an understorey of hawthorn and elder and a sparse field layer dominated by stinging nettle, frequent ivy and ground ivy *Glechoma hederacea* and occasional herb Robert and chickweed.

3.12.10 The boundaries of the common were delineated by species-rich native hedgerows, some with standard trees and some without. The majority of the hedgerows were assessed to be in **moderate condition** due to gappiness which has likely resulted from a lack of regular hedgerow pruning. Many hedgerows were in the process of turning into lines of trees with much of the bushiness at ground level which is important for small mammals being lost.

3.12.11 Two ponds in **moderate condition** were present on the eastern boundary in the centre of the common. These were observed to have signs of trampling around them suggesting that they are used by grazing cattle. Both ponds lacked significant amounts of macrophytes/aquatic plants within the water.

3.12.12 Other habitats on Site included individual trees, lines of trees and a small amount of developed land and artificial unvegetated; unsealed surface.

3.12.13 In total, the habitats on Site represent **106.21 Habitat Units and 14.71 Hedgerow Units** as shown in Tables 16 and 17 below.

Table 16. Baseline BNG Calculation of Habitats

Habitat	Area (hectares)	Ecological Distinctiveness	Condition	Habitat Units (HU)
Modified grassland	4.52	Low	Good	27.12
Modified grassland	3.4029	Low	Good	20.42
Modified grassland	0.0447	Low	Moderate	0.18
Modified grassland	20.7001	Low	Poor	41.40
Other neutral grassland	0.3997	Medium	Moderate	3.20
Bramble scrub	0.1108	Medium	N/A	0.44
Mixed scrub	0.1484	Medium	Good	1.78
Mixed scrub	0.763	Medium	Moderate	6.10
Mixed scrub	0.3053	Medium	Poor	1.22

Habitat	Area (hectares)	Ecological Distinctiveness	Condition	Habitat Units (HU)
Ponds (non-priority habitat)	0.1615	Medium	Moderate	1.29
Artificial unvegetated; unsealed surface	0.6298	Very Low	N/A	0.00
Developed land; sealed surface	0.0296	Very low	N/A	0.00
Other woodland; broadleaved	0.2515	Medium	Poor	1.01
Rural tree	0.0977	Medium	Moderate	0.78
Rural tree	0.1059	Medium	Good	1.27
Total	**31.47 (excluding trees)**			**106.21**

Table 17. Baseline BNG Calculation of Hedgerow Units

Habitat	Length (kilometres)	Ecological Distinctiveness	Condition	Hedgerow Units (HeU)
Line of trees	0.16	Low	Moderate	0.64
Line of trees	0.061	Low	Moderate	0.24
Line of trees	0.111	Low	Poor	0.22
Line of trees	0.159	Low	Poor	0.32
Species-rich native hedgerow – associated with bank or ditch	0.084	High	Moderate	1.01
Species-rich native hedgerow with trees – associated with bank or ditch	0.113	Very high	Good	2.71
Species-rich native hedgerow with trees	0.152	High	Good	2.74
Species-rich native hedgerow with trees	0.569	High	Moderate	6.83
Total	**1.41**			**14.71**

3.12.14 A map of the baseline habitats is provided in Figures 11 and 12, Appendix 1.

Proposed Biodiversity Enhancements

- Exclude cattle/reduce grazing intensity in two areas of modified grassland in the south of the common until late August/early September and implement a hay cut regime to improve the floral diversity of the grassland and the abundance of wildflowers for pollinators and seeds for birds and mammals;
- Create three new ponds in the south of the Site within the low grazing intensity grassland areas;
- Reduce creeping thistle abundance across the whole common; and
- Enhance the species-rich native hedgerow with trees on the western boundary by infilling gaps with new whip planting and prune hedgerow into a flat topped 'A' shape once every three years to thicken hedgerow at the base and halt its succession into a line of trees.

Specification of Management Actions

3.12.15 Reduced grazing intensity grasslands in the south of the common:

- Subject to the terms of the common law rights for graziers, implement either cattle exclusion or a reduction in cattle grazing in the two areas of grassland in the south of the common annotated in Figure 12, Appendix 2 as 'enhanced grassland'. This may be achieved by temporary fencing or GPS collars for the cattle that limits their movements.
- These southern parcels of grassland have a higher botanical diversity. By reducing grazing intensity and implementing a hay cutting regime, this would likely promote greater botanical diversity with an improved abundance of wildflowers for pollinators and seeds for birds and small mammals. Reduced cattle presence would also help to alleviate nutrient input in these areas and make a small improvement in the nutrient status of the soils for the benefit of wildflowers.
- The grass in these areas will be cut twice per year – once in late February/early March and again in August. The long grass will be cut with a tractor mounted mower to 50mm height twice a year and kept short over the winter with regular mowing as required. All cuttings will be removed from the Site to avoid re-enrichment of the soil and encourage greater abundance and diversity of native wildflowers.
- Should some limited grazing be required, this could be facilitated from September to December inclusive with light grazing on any grass regrowth in January and February. If grazing is controlled in this manner, the first grass cut described above would not be required, only the second main hay cut in summer would be needed.
- No fertiliser, herbicide or commercial grass mix will be applied at any time.

3.12.16 New Ponds:

- Three new ponds (minimum 20m diameter) will be created in the locations shown in Figure 12, Appendix 2. These three locations have been chosen over the locations of old ponds (currently other neutral grassland) because the old pond locations contain good botanical diversity that should be retained.
- The type of pond that can be created will depend on the underlying soil conditions. If clay is present, the pond may be able to hold water year-round. If no clay is present then the ponds will likely be seasonal which is also extremely valuable for wildlife.
- An excavator will be required and should access the proposed pond areas using suitable ground protection to avoid damaging the other neutral grassland.
- The depth of excavation for the ponds will depend on the soil profile. If a layer of clay is encountered, excavation can cease and the clay can form the bottom of the pond.
- Create plenty of shallow water (less than 10cm deep) around the edges of the ponds as this is important for many pond species and mammal and amphibian access to the pond. Pond slopes should be less than 1:5. A variety of pond depths and perimeter 'shelves' should be created to maximise opportunities for amphibian use and aquatic plants.
- Remove excavated topsoil from the Site and do not spread around the edge of the pond as topsoil is rich in nutrients and likely to encourage the development of rank vegetation.
- Further guidance on pond creation with suitable example images should be referred to Sayer, C et al., 2023[17].
- Following pond creation, leave the ponds to be naturally colonised by aquatic and semi-aquatic plants, there is no need to apply seed or plug plants. Annual monitoring of water levels will be required to ensure that the pond is at least seasonally wet. If the pond doesn't hold water (particularly in spring), re-excavation will be required as necessary. Annual monitoring should also check for the establishment of any invasive species which may colonise the pond, for example *Crassula helmsii*, and remedial action taken as necessary to remove the invasive species.
- The exclusion of cattle from the surrounding grasslands (as described above) will help to ensure that the new ponds are not affected by significant nutrient inputs which can harm the water quality of the ponds. It will also reduce trampling around

[17] Sayer, C.D., Biggs, J.,Greaves, H.M., & Williams, P. (2023) Guide to the restoration, creation and management of ponds. University College London, London, UK. Available at: https://norfolkponds.org/wp-content/uploads/2023/10/guide_to_restoration_creation_management_ponds.pdf

the new ponds by cattle so that marginal aquatic vegetation can develop around the ponds. Should limited grazing be implemented on the surrounding grasslands, the ponds will require temporary fencing for the first five years to kick-start their development.

3.12.17 Creeping thistle:

- Creeping thistle should be reduced in abundance across the entirety of the common (except for the two southern parcels aforementioned which will be managed independently from the rest of the common). Creeping thistle is difficult to control and likes dry disturbed soil. Creeping thistle should be cut before the flower bud has started to turn purple using a tractor mounted mower. This will likely to need repeating annually to reduce the energy reserves of the root stock and result in an overall reduction in abundance across the common.
- Trial plots of grassland within the common may be fenced off from cattle and strimmed before the thistle buds turn purple. This may be useful to observe the effect of reduced grazing on thistle abundance to establish whether grazing intensity is causing thistle proliferation.

3.12.18 Species-rich native hedgerow with trees:

- The hedgerow on the western boundary of the common (southern end) should be enhanced for wildlife by infilling gaps with new native mixed whip planting and entering the entirety of the hedgerow into a three-yearly pruning regime. This will reinvigorate the hedgerow, increasing its ability to enclose cattle, prevent the hedgerows succession to a line of trees and enhance its value as a wildlife corridor for small mammals travelling at its base.
- Replant 60-90cm height bare root whips of at least four mixed native hedgerow species at 2m centers in the hedgerow on the western boundary. Plant in existing gaps and where any dead trees have been removed. Whips will be notch planted in double staggered rows with five plants per linear metre from November-March inclusive and not in frozen ground. Whips will be protected with a suitable biodegradable guard to protect from vole and deer damage, bamboo cane and tie. The area around the whips should be cleared of vegetation and mulched generously with woodchip to a depth of 50-100mm, taking care not to bury the stems of the newly planted whips.
- Whips will need to be watered generously and regularly in hot dry summer spells for the first two years post planting.
- Check whips annually and top up mulch/clear weeds to limit competing vegetation.
- At year three, remove canes, guards and ties if whips are established. Remove and replace any dead whips.
- Prune the hedgerow once every three years to maintain tight bushy growth. Maintain height and spread of hedgerow generally. Pruning should try to achieve a hedgerow

with an overall 'A' shape with a flat top. Prune from September-February inclusive to avoid the bird nesting season. Prune around larger standard trees within the hedgerow.

Five Year Biodiversity Enhancement Plan

3.12.19 Following the management specification and guidance above, the Table below provides the timing of management actions over five years.

Habitat	Management Action and Timing				
	2025/2026	**2027**	**2028**	**2029**	**2030**
Grasslands in south of the common	Install temporary cattle exclusion fencing/GPS collars prior to grazer return. First cut and collect in late February/ early March. Second cut in late August/early September. Remove arisings offsite. Alternatively, if limiting grazing: allow main grazing period from September-December, light grazing January – February. Second cut in late August/early September. Remove arisings offsite.	Check fencing remains in situ and robust. First cut and collect in late February/ early March. Second cut in late August/early September. Remove arisings offsite. Alternatively, if limiting grazing: allow main grazing period from September-December, light grazing January – February. Second cut in late August/early September. Remove arisings offsite.	Same as 2027.	Same as 2027.	Same as 2027.
Ponds	Excavate ponds. Protect with fencing if necessary.	Monitor pond for water levels and any invasive species. Check fencing if necessary.	Same as 2027.	Same as 2027.	Same as 2027.
Creeping thistle	Cut grasslands (except southern grasslands) before flower bud of creeping thistle turns purple.	Same as 2025/2026	Same as 2025/2026	Same as 2025/2026	Same as 2025/2026
Species rich native hedgerow with trees	Plant infill whips from November-March.	Water whips regularly in hot dry spells. Keep mulch topped up. Flail hedgerow to 'A' shape.	Water regularly in hot dry spells. Keep mulch topped up.	Remove canes/guards/ties in the winter. Replace any dead/dying individuals.	Flail hedgerow to 'A' shape.

Annual Monitoring Checklist

3.12.20 The checklist below is devised as a quick annual check to be carried out and completed by the responsible Community Asset Manager to ensure that the recommended enhancements measures above have taken place. The items in the checklist below have been replicated in a separate Annual Monitoring excel spreadsheet for ease of completion.

Annual Monitoring Checklist for Hales Green Common, Hales

Habitat	Management Action	Tick relevant column if completed				
		2025/2026	2027	2028	2029	2030
Southern grasslands	Cattle grazing suspended/reduced?					
	Grass either grazed until February or cut in late February/early March?					
	Second cut undertaken in August?					
Ponds	Three ponds excavated?					
	Ponds annually monitored for water levels and invasive species?					
Creeping thistle	Creeping thistle cut before flower bud turns purple?					
	Creeping thistle abundance reduced?					
Species rich native hedgerow with trees	Whips planted, mulched and protected?					
	Whips annually checked to water and top up mulch?					
	Entirety of hedgerow pruned to flat topped 'A' shape once every three years?					

Post-enhancement BNG Calculation

3.12.23 The proposed enhancements will generate a BNG uplift of Habitat Units of **11.41%** and an uplift in Hedgerow Units of **17.30%** over **15 years**.

3.12.24 The uplift in Habitat Units derives from the enhancement of modified grassland in good condition in the southern parcels to other neutral grassland in good condition and the

creation of three new ponds. The uplift in Hedgerow Units derives from the enhancement of a species-rich native hedgerow with trees on the western boundary from moderate to good condition by infilling gaps and flailing three-yearly to promote bushier tighter growth.