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### Tuckmill Meadows SSSI

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### Site Information

**2025 – 2030**

**Site Name:** Tuckmill Meadow

**Area**: 5.51 ha

## County: Oxfordshire

**Wildlife & Management summary:** Tuckmill Meadow SSSI is of interest for its remnants of calcareous fen and complex of neutral and calcareous grassland.

The fen covers approximately 1.3Ha, 22% of the SSSI. The majority of which is supports swamp and other vegetation dominated by tall emergent species. All areas of fen are coarse and dominated by a small number of competitive species; a mixture of meadowsweet *Filipendula ulmaria,* great willowherb *Epilobum hirsutum,* branched bur-reed *Sparganium erectum,* lesser water-parsnip *berula erecta* and greater pond sedge *carex riparia*. This is likely due to a lack of grazing and disturbance. The fen merges into neutral, unimproved grassland dominated by Yorkshire fog *Holcus lanatus,* false oat *Arrhenatherum elatus,* rough meadow-grass *Poa trivialis* and creeping buttercup *Ranaculus repens*. The side valley contains a range of grassland, which broadly falls into base-rich marshy, dry calcareous and dry neutral types. The limestone grassland has species such as salad burnet *Sanquisorba minor* cowslips *Primulaveris* and upright brome *Bromus erectus*.

The neutral grassland has become rank with low species diversity and the species present are indicative of increased soil nutrient conditions.

The calcareous grassland on the western side of the valley is still species rich in a small area despite the lack of grazing management. Volunteers have undertaken scythe mowing and scrub clearance in targeted areas but there are some large patches of bramble in the middle of the site as well as smaller patches of nettles. Most of the grassland on site is coarse and species poor, dominated by False Oat-grass (*Arrhenatherum elatius)*.

A derelict woodland known as Ratcoombe copse is situated on a slope above the fen and contains aspen, hazel, sycamore and ash with signs of many dead elm standards.

The running water of Ratcombe stream which feeds into Tuckmill brook supports pond weeds *Potamogeton* spp., fools watercress *Apium nodiflorum* and is edged by reed sweet-grass and Southern Marsh Orchid *Dactylorhiza Praetermissa*.

In 2024 four species of conservation concern were identified; Field Scabious *Knautia arvensis,* Hoary Plantain *Plantago media,* Ragged-Robin *Silene flos-cuculi* and Marsh Valerian *Valeriana dioica.* The site has a diverse fauna and a wide range of aquatic insects. Confirmed breeding birds include spotted flycatcher, chiff-chaff, moorhen, sedge warbler, reed warbler and reed bunting with regular visits from grey heron and kingfisher. A species list is attached at the end of this document.

The condition of this SSSI is unfavourable declining. Management of the fen areas is necessary to prevent further encroachment of scrub, to maintain shorter areas of fen vegetation for notable plant species, and to decrease nutrient levels via the cutting and removal of vegetation.

**General information**

**Landowner:** The Vale of White Horse District Council.

**Status:** SSSI (Unfavourable, declining), Local Nature Reserve.

**Grid Ref:** OS Map Sheet 174; SU 240 900

**Public Access:**  The reserve is 4 miles northeast of Swindon. Take the A420 south to Watchfield; take Faringdon road through Watchfield, past the military college; approaching Shrivenham, as road bends sharp left turn right into Pennyhooks lane. 100m past Shrivenham Park Golf Club turn right into the car park.

**Works Access:** 4x4 and tractor access as above but limited by uneven and waterlogged conditions during the winter.

**Local Authority:** Vale of White Horse.

**Natural Area:**  Midvale Ridge

**1.Description**

* 1. **Summary Description**

**Flora:**

Several contiguous areas of marshy grassland occur along the stream down to the brook. Rushes and sedges are abundant, especially hard and jointed rush *Juncus inflexus* and *J. articulatus.* Neutral grassland occurs along the edge of the streamline on the east of the reserve and in the dryer areas along the river valley. The dominant grasses are false oat grass *Arrhenatherum elatus*, yorkshire fog *Holcus lanatus* and cocks foot *Dactylis glomerata*. Tufted hair-grass *Deschampsia cespitosa* and hard rush *Juncus inflexus* are also frequent, as are creeping thistle *Cirsium arvensis* and creeping buttercup *Ranunculus repens*.

A second type of neutral/calcareous grassland grades between calcareous grassland and the neutral grassland described above. The soil is calcareous (pH 6.5) but the dominant species are more typical of neutral grassland, e.g. false oat grass *Arrhenatherum elatus*, crested dogs tail *Cynosurus cristatus* and birds foot trefoil *Lotus corniculatus*. Calcareous species are however also represented and include salad burnet *Sanquisorba minor*, field scabious *knautia arvensis* and greater knapweed *Centurea scabiosa*.

From the car park to the middle of the southern meadow is an area of improved grassland. This area is dominated with perennial rye grass *Lolium perenne*, cocks-foot *Dactylis glomerata* and meadow foxtail *Alopecurus pratensis*.

Several small areas of tall herb occur, especially where the cattle rest under the shade of the hedges. Hogweed *Heracleum sphondylium*, nettle *Urtica* *dioica* and cow parsley *Anthriscus sylvestris* are abundant in these areas. Discrete areas of basic flush have developed in patches along the sides of the valley. Many bryophytes occur and hard rush is abundant. Associated herbs include meadow sweet *Filipendula ulmaria* and creeping Jenny *Lysimachia nummularia*.

Strands of reed sweet grass *Glyceria maxima* and reed canary grass *Phalaris arundnacea* dominate the large sections of the derelict stream meander and along the edges of ratcoombe copse creating single species dominant swamp.

The tall fen vegetation is dominated by meadow sweet *Filipendula ulmaria*, meadow foxtail *Alopecurus pratensis*, water mint *Mentha aquatica* and lesser water parsnip *Berula erecta* with occasional southern marsh orchid *Dactylorhiza praetissima.*

Ratcoombe copse is a small woodland on the reserve, the southwestern ridge of this wood is on calcareous soil. Sycamore *Acer pseudoplatanus* and ash *Fraxinus excelsior* form a mature canopy in part of the copse, elm *Ulmus procera,* aspen *Populus tremula* and popular *Populus sp*. are abundant in the shrub layer. The field layer which is not botanicaly diverse contains red current *Ribes rubrum* and tufted hair grass *Deschampsia cespitosa*.

The rest of the copse is on alluvial soil and is wetter with willow carr and goat willow *Salix* dominating with a few mature trees of ash *Fraximus excelsior*, sycamore *Acer pseudoplatanus* and aspen *Populus tremula*. The shrub layer is mixed, with blackthorn *Prunus spinosa,* elder *Sambucus nigra* and guelder rose *Viburnum opulus*. In the wet area the ground flora contains marsh marigold *Caltha palustris*, hairy willowherb *Epilobum hirsutum* and meadowsweet *Filipendula ulmaria*.

Ratcombe stream which flows through the middle of the site is fairly clear and fast flowing. The bankside vegetation is verdant with strands of bur reed *Sparganium erectum* and iris *Iris pseudacorus*. In open stretches water forget-me-not *Veronica beccabunga* fools water cress *Apium modiforum* and water mint *Mentha aquatica* dominate with star-worts *Callitriche spp*. also occurring. There are historic records of Canadian pondweed *Elodea canadensis* occurring in the stream which should be removed if found.

Tuckmill Brook forms the North-Eastern boundary of the site and supports typical species of eutrophic watercourses such as Fool’s Watercress (*Helosciadium nodiflorum*) and Water Forget-me-not (*Myosotis scorpioides*). In recent years there have been numerous occasions of sewage overflow into Tuckmill Brook during storm events.

**Fauna:** The fen supports a diverse invertebrate fauna with many species characteristic of such habitats. Hoverflies recorded include *Orthonera nobilis, tropidia scita, Parhelophilus frutetorm* and three species of *Neoascia* (one of which is considered to be nationally uncommon). The fen is notable for the large numbers of *Chrysogaster hirtella* whose larvae feed in aquatic situations at the base of fen plants. Other insects of note associated with the fen include the uncommon soldier fly *Oxycera nigricornis*, the 19-spot ladybird *Anisostica 19-punctata*, two species of reed beetle *Donacia sp,* the snake fly *Rhaphidia xanthostigma* and the dingy footman moth *Eilema griseola*. The spider fauna is also notable including the rare *Theridiosoma gemmosum*, which inhabits tall vegetation in damp areas and the regionally uncommon *Baryphyma pratense*, a species that inhabits grass near streams.

The invertebrate fauna recorded for the grassland habitats are less diverse but include the regionally uncommon hoverfly *Trichopsomvia* *flavitarsis* and the marbled white butterfly *Melanargia galathea*.

The Tuckmill brook has a diverse fauna with flatworms, snails, leeches and a wide range of aquatic insects. The recording of Water Vole in the brook as well as the oxbow is of particular importance. Signs of otters have also been recorded along the brook. Many of the recorded species are typical of the headwaters of base-rich streams and several, including the Banded Demoiselle damselfly *calopteryx splendens* and the snail *sphaerium corneum*, are usually associated with unpolluted waters. The fish bull-head *Cottus gobia* and stone loach *Neomacheilus barbatulus* have been recorded.

A good diversity of bird species has been recorded from the site. Confirmed breeding species include chiff-chaff, moorhen, reed warbler and reed bunting. Regular visitors include grey heron and kingfisher.

There is a long established badger sett on the margin of the site.

**Hydrology:** The fen has developed on poorly drained alluvial soils, which are rich in organic matter. The interest of the site is dependant on high ground water levels supplemented by base-rich water from springs arising at the junction of alluvium and lower Corallian beds in the side valley and winter flooding. The stream that flows down the side valley is a maximum of 1m wide with banks approximately 1m above water level. It is fed by a number of springs that can be seen emanating from the ground above the stream, which drains down towards Tuckmill brook. The stream flows down the side valley and becomes less visible as it enters the fen area where it is overgrown by tall vegetation.

Tuckmill brook is 1.5m –2m wide with banks some 2m above river level, swiftly flowing with some marginal vegetation. The channel was straightened and deepened in the late 1970s. A section of the diverted meander is found within the tall fen and approximately a third of this was dug out in autumn 1999 by the Environment Agency for BBOWT to provide an open water habitat. This had previously been undertaken in the mid 1990s. A clay bund with plastic piling has been installed to prevent the meander from discharging into the river and thus maintaining water levels.

A stone causeway is present to the south of the bridge over the brook. Its function is not clear but it constraints any passage of water down the old river channels and may also function to provide a footpath when the river levels were high.

**Soils:** poorly drained alluvial soils, sands and silts of the lower Corallian, and limestone of the Coral Rag, which has weathered to produce a brown rendzina.

**Public Access:** the main access is from the car parkat the southern end of the reserve but there is alsoa public footpath running along the eastern boundary giving access to the reserve at Tuckmill brook from the golf course.

**Interpretation:** Previous signage is currently down following installation of a new perimeter fence. New welcome signs are included within this management plan.

* 1. **Past and current management**

A charter of A.D. 931 refers to the brook as “mylenbroc” or “brook of the mill” suggesting that a mill probably used for corn grinding was in existence at the time. The mill became a “tucking” or fulling mill in the late 12th century. Tucking is a part of the woollen cloth making process whereby woven cloth is beaten in a mixture of fuller’s earth and water to strengthen and soften it. It is possible that the brook may have been straightened at this time to control the flow of water to the mill. During the Middle Ages, land around the mill was farmed under the open field system but there is no reference to the mill itself until 1761 when the site is marked as a mill on the roque map of Berkshire.

In 1658 fields in the Tuckmill meadow area were enclosed, the meadow then belonged to Mrs Jane Stratton who was required to plant a quickset between her property and adjoining land known as Bremhill (the present day golf course). Part of this hedge may still survive today on the eastern boundary of the reserve. Ownership of the land then passed to the Blagrove family and in an enclosure agreement of 1748 there is mention of land in the area, which is to be improved by the laying down and sowing of St. Ffoyne (sainfoin). Aerial photographs show that part of this reserve was once under a ridge and furrow regime. It is unlikely that the meadow has been ploughed since the early 19th century. The tithe map of 1844 shows the meadow as part of radcombe field owned by John Blagrove, which was used by tenant farmer Richard Ricards as pasture. Ratcoombe copse is also on the tithe map as long close Wood and is referred to as a coppice.

Until five years before BBOWT took over the site horses and cattle grazed it. During these five years the meadow was neglected and coarse grasses dominated. In 1982 the Vale of White Horse District Council fenced and planted native species along the hedgeline in order to renew the hedge. The small carpark was also constructed.

From the 1st November 1982 BBOWT gained the 35-year lease for the area.

The grazing was let out to a local grazier and in the late 90’s only the southern end of the site was grazed. The grazier decided to give up the grazing and from 2001 the Trust Highland cows started grazing the site from 2001. In 2005 grazing by the highland cattle stopped and a grant was obtain from TOE to re-fence Tuckmill Meadows, from 2008 it again was grazed by BBOWT Dexter cows starting the graze in mid to late May in the fen area and move the cows to the limestone grassland bank in August. A bird hide was erected on the site that was burnt down in 2001 and has not been replaced.

In 2017 the lease with BBOWT came to an end and the site was largely neglected for four years before the establishment of the Friends of Tuckmill in October 2021. This volunteer group are undertaking what work they can including scything, pulling willowherb and clearing scrub from the grassland and fen.

1. **Confirmation of Important Features**

## Primary features

A screenshot of a computer

AI-generated content may be incorrect.

**Cpt 1 Neutral Grassland:** Mostly rank, species poor grassland which will provide and important forage resource to facilitate grazing on the wider reserve. This compartment has been subdivided to highlight that Cpt 1a is fenced off, providing a secure space for livestock and includes a stock pen with handling system.

A timber bridge crossing Ratcombe stream between Cpt 1 and 2 which is in need of repair or replacement. Vehicle access for Cpt 2 and Ratcombe Copse is through Cpt 1a where there is a ford across the stream.

**Cpt 2 Limestone grassland:** One of the reasons for Tuckmill Meadows SSSI designation is the limestone grassland, which along with chalk grassland is one of the UK’s most important wildlife habitats supporting a wide range of specialised plants and animals including many rare species. Large areas of grassland have been lost due to changes in agriculture and development in the past, however more recently the greatest threat to the habitat is gradual loss due to lack of management. What remains is dominated by False Oat-grass *Arrhenatherum elatius,* with areas of Upright Brome *Bromopsis erecta* classified as MG1a. Only approximately 0.01Ha of this compartment is considered calcareous grassland in terms of the species supported; Cowslip, Hoary Plantain, Salad Burnet and Common Restharrow. By removing biomass through grazing and cutting we may be able to increase this coverage, potentially bringing seed of appropriate species in from a suitable donor site, following Natural England consent.

There is a tufa-forming spring along the middle of this compartment where there is a small stand of species-rich soligenous fen vegetation classified as the NVC plant community ‘M22 Juncus subnodulosus-Cirsium palustre fen meadow’. Although dominated by Hard Rush *Juncus inflexus*, Marsh Valerian *Valeriana dioica* and small sedge species Carnation Sedge *Carex panicea* and Common Sedge *Carex nigra* were found. This is the best bit of fen habitat and is the aspiration for Cpt 3.

**Cpt 3 Fen Meadow:** This is also an important feature recognised by the SSSI designation. Fen is a nationally declining habitat and the number of sites in Oxfordshire has been severely reduced by drainage and agricultural improvement. The area is mainly classified as MG1 with areas of OV26.

**Cpt 4 Swamp:** This is an area of importance within the site due to its size, however it is not regionally important. The classification for this area includes small areas of S5 *Glyceria maxima* swamp (reed sweet grass) and is especially characteristic of nutrient rich, eutrophic water margins.

**Cpt 5 Badger Sett:** A large, active badger sett is on site close to Ratcome Copse. It is important that we minimise disturbance to the population here, accommodate movement across the site and exclude grazing stock.

**Cpt 6 Ratcombe Copse:** This relatively small woodland block contains a mixed age stand of Ash, Aspen and Sycamore on the higher, drier bank, shifting towards more Willow in lower area where it borders the swamp. It has a reasonable understorey of Hazel and Elder and significant deadwood, both standing and on the ground providing excellent habitat for invertebrates and bats.

**Car Park:** The reserve has a reasonably well surfaced car park to facilitate working vehicle access. It is currently closed to the public due to fly-tipping concerns but this may change in the future.

**Hedgerows:**  Species rich hedgerows are a Biodiversity Action Plan Priority Habitat. Hedgerow loss is a well documented & publicised conservation concern. Although the hedges at Tuckmill Meadows may not meet the specific definition for species richness as set out in the BAP guidelines, these boundary features still represent important areas of semi-natural habitat which are a source of food and provide shelter for many bird species. The significant proportion of Ash within the hedge is at risk of Ash Dieback and will likely need restoration through ‘gapping up’.

1. **Management Objectives**
   1. **Limestone grassland.**

Calcareous grassland with scattered scrub at Tuckmill Meadows are predominantly in Compartment 2 and are managed through:

* Grazing
* Controlling scrub
* Control of thistles

**Graze Calcareous Grassland**

Grazing of limestone grassland is an important management tool to ensure that quantities of grasses are reduced and that diverse herbs can dominate the sward. In addition to reducing the dominance of grass the stock will remove any low or small regenerating tree seedlings and scrub. Grazing at Tuckmill Meadows can only take place if there is access to water, either via the swamp area or if a bowser and trough is provided for a constant water supply on the reserve.

In order to maintain a sward height of 2cm - 10cm between May and July, 3 Dexter cattle will be used to graze compartment 2. Dexter cattle will be used as their grazing is less selective and not as uniform as sheep grazing, they can also tackle coarser grasses and woody species which can benefit the diversity in a species-rich sward. They will also, because of their size, break up large blocks of scrub by trampling paths into them. The weight of these animals can help to break up the litter layer and produce small patches of bare soil which encourage fine herbs to germinate. The risk associated with using cattle is that they can cause heavy poaching which can lead to problems with invasive species such as creeping thistle and ragwort, but this can be minimised by having smaller breeds like Dexters at low stocking densities and closely monitored.

The species rich fen area around the spring in the middle of this compartment should be closely monitored. It may be necessary to reduce the grazing area in order to encourage the cattle into the fen. Cutting with scythes or machinery could supplement cattle grazing.

Grazing will be managed through a No-Fence GPS system, allowing targeted grazing. This level of control will mean that the risk of over-grazing and poaching can be reduced through regular site checks and adjustment of grazing area. Livestock on site will be checked daily to ensure that they remain healthy, have access to clean water and that the perimeter fence line is stock proof.

Timing

The limestone grassland in compartment 2 will be grazed for between August and March by 3 dexter cows. Spring grazing into April can also be used periodically to control scrub re-growth and/or False Oat-grass and Upright Brome. Due to the extent of False Oat-grass at the start of this management period grazing should focus here into April or be supplemented by a cut and collect for the first couple of years.

Stocking density can be reviewed annually and adjusted if needed, with Natural England consent.

Cutting

Areas of rank grassland could be supplemented with targeted scything throughout Spring and Summer to reduce the coarse structure where necessary.

Badger Sett

A large badger sett with numerous burrows lies at the Northern end of Cpt 2. Grazing is to be excluded from this space to avoid the risk of lameness in the Cattle. Statutory TB checks will form part of the annual work plan and in the case of any positive results the management of this site will need to be carefully reconsidered.

**Control Scrub**

Significant patches of bramble and Blackthorn are dominating areas of compartment 2. Over the next five years the aim is to remove that scrub in the open limestone grassland as a lack of active management will lead to serial shift towards secondary woodland. Rotational cutting and clearing of scrub creates a more diverse mosaic of habitats which favours a whole range of faunal groups including butterflies, birds and reptiles. Successional scrub should only be located around the edges of the open grassland in order to promote the diverse flora associated with chalk grassland. Approximately 3m from the fence should be allowed to develop into scrub and be cut on rotation to minimise shade and encroachment further into the grassland.

Timing

All cutting of large scrub must be done between 1st Sept and 28th February, outside the bird-nesting season; unless there is no danger of disturbing birds nesting, for example isolated individual saplings in grassland, or to low dogwood re-growth. Cutting re-growth in July is the most effective way of to knock back the growth of plants, as this is the time when the plant has most of its energy in its foliage.

Techniques

Techniques for removing scrub include flailing, using chainsaw and clearing by hand. Managing scrub through controlled burning is not acceptable.

Cut scrub down to ground level without disturbing the roots and leaving no protruding stems. Care must be taken to avoid uprooting adjacent grassland plants.

Where re-growth is to be controlled it may be achieved through other methods such as livestock grazing or cutting by brushcutters/clearing saw.

Disposal of cut material

Cut material has historically been disposed of by stacking it under the bordering hedgerows, this has created some well used habitat for mammals and potentially reptiles but is also suffocating any fresh growth. As the hedgerow trees begin to fail the hedge is at risk of disappearing so it is important to consider other options. Instead, cut material can be stacked into piles in Ratcombe copse, adjacent to the badger sett or in other agreed and marked areas. Or it could be chipped or burned on site. Bonfire sites must be far enough away from trees to avoid causing damage and at least 10m from the crown of any tree. Burning sites and piles of wood must not be on patches of ground where they could damage species rich grassland, anthills or other ecological features. Any burning will be on a metal sheet raised off the ground in order to reduce damage to the soil. Ash will be bagged and removed from the site.

**Control Weeds**

There are significant populations of nettles and thistles on site which left unmanaged will spread. The aim is to reduce the nettles and thistles to an appropriate level using a combination of scythes, mechanical and chemical control.

Scythe or mechanical control

1. Creeping Thistle

The most usual means of spread is via creeping roots which can colonise an area rapidly. The plant can spread up to 6m/year, but more usually 1-2m, via the roots (and fragments), sending up new plants from lateral buds along their length. Infestations can be worn down by early repeat cutting of each successive growth of the stem, starting when the stem is only a few inches high and repeated as often as the plant re-appears and continued for at least 3 years. Timing of topping is critical. As a minimum, topping should take place in June, before the opening of the flower buds and when they are still green (flowers July/August). However, topping seldom eradicates the weed.

It is not worth topping in autumn as by this stage the plants will have sent its energy reserves back into the root system ready, to regenerate from underground buds (which are protected from frost) in the spring.

Pulling of creeping thistle is the most effective way of control when the resources are available. Pulling can be done by hand or with mechanical assistance from May-July.

1. Nettles

Repeated cutting of nettles, in open areas will reduce their competitive vigor and permit the grassland sward to compete. The primary areas needing control are along the top of the limestone grassland next to the permissive footpath. These patches of thistles and nettles have been soil sampled and have come back with higher nutrients than the rest of the grassland. Mechanical topping in April/May during the early emergence and re-topping where necessary prior to flowering/seeding can dramatically reduce coverage.

In order to reduce the abundance of these species spring topping and removal of the cut material should continue. The frequency of on-going cuts through the season is dependent upon the weather, clearly a dry season would impede their growth compared to a wet season.

Chemical control

Creeping Thistle and nettles

Application of a suitable herbicide, for example Thistlex or Pastor (these contain clopyralid which kills thistle, fluroxpyr which kills dock and triclopyr which kills nettle) is potentially a more efficient method of achieving long-term control over problem weed species. Infected areas will be treated by spot spraying when the plants are growing vigorously but not yet flowered, in accordance with the manufacturers’ recommendations (given on the product label and data sheets), and using only trained operators. This method should be utilised as a last resort.

* 1. **Fen Meadow and swamp**

The Fen Meadow and swamp are predominantly in Compartment 3 and 4 and are managed through:

* Grazing of fen Meadow and swamp
* Maintain open water in Oxbow

**Graze and cut Fen Meadow and swamp**

The aim of controlled grazing of the fen meadow and swamp by livestock is to:

* Maintain open fen/swamp communities by reducing plant biomass
* Contribute to the diverse wetland surface in terms of structure and species composition by reducing dominance of competitive species.
* Keep the effects of nutrient enrichment in check by removing vegetation biomass, preventing the dominance of nutrient demanding species
* Suppress scrub encroachment by cropping seedlings or by taking off the re-growth from cut stumps
* Tall woody vegetation such as the meadowsweet and willowherb can be cut with scythes or machinery as they will be less palatable for cattle, particularly by the end of the summer.

Grazing can be an extremely valuable tool for maintaining and restoring conservation interest but grazing with the wrong type or number of livestock at the wrong time, or for too long, can have negative impacts on the target habitat. Careful monitoring and adjustment of grazing regimes is therefore essential to avoid damage to fen flora and fauna or the health of grazing livestock.

In order to reduce dominance of competitive species it may be necessary to adjust timings and stocking density. Because the species we are looking to promote are long-lived perennials they can withstand some spring and summer grazing in order to stop their competition from growing unchecked every year. Spring and summer grazing using geofences can target areas of taller or coarser vegetation as required.

Timing

The Northern fen and swamp (Cpt. 4) will be grazed in the summer and autumn (May to Oct) by three Dexter cattle. This will be of most benefit to the fen and swamp area as it will open out the sward by removing spring and summer growth and open up patches of bare ground which will help finer grasses and herbs to establish and increase in abundance. As a general guide, stock should be removed when approximately 10% of bare soil is visible across the surface area of a representative sample of the vegetation of the grazed area.

In the soligenous tall-herb fen (Cpt 3) there is a significant population of Southern-Marsh Orchid *Dactylorhiza praetissima* so summer grazing will generally be avoided. Cpt 3 will be grazed from August to March by three Dexter Cattle. In some periods, all year grazing could be of benefit to reduce the thatch and height of the vegetation, especially during a restoration phase and with low numbers. Taller vegetation could be reduced by limited spring and summer grazing in targeted areas.

At all times ensure stock have access to dry ground and remove them from wet areas during prolonged or extreme wet weather. Livestock will also be excluded from the deep pond and boardwalks through the Geofence system which will allow for very targeted grazing when required.

**Maintain open water in Oxbow and Swamp**

It is advised to maintain the open water on the oxbow and prevent the build-up of silt and excessive cover of vegetation. Over the years the oxbow has lost the majority of open water with the resulting loss of diversity on the reserve. To prevent this loss of open water the oxbow will need rotational management of vegetation clearance work and to maintain integrity of the dam.

Other areas of open water can be created by hand digging small, shallow ponds in the swamp on a long rotation.

Due to the presence of protected species, primarily otter and water vole, management needs to be carried out sympathetically following best practice guidance. Management works should be carried out between September-October, on a long rotation of every 8 years.

The following prescriptions should be followed when carrying out open water management on the oxbow.

* Never clear all the vegetation or silt at once.
* Cut two 25 metre sections of the oxbow every other year on an 8 year rotation – new cut sections should not be cut next to the previous years section to create a staggered vegetation profile.
* Place vegetation cuttings at least 2 metre from the bank edge so water vole burrows are not smothered, and banks are not ‘fertilised’ by cuttings, smothering rarer wetland plants.
* Bankside vegetation should be approximately 15cm high in early autumn (Sept/Oct) to allow some vegetation cover to re-develop before winter. This will maintain cover and food for a variety of species including water voles.
* Allow bank collapse and poaching in some areas maximum of 10% of oxbow length.

Permissions

The rotational management of ditches is viewed by the EA as routine maintenance and therefore official permission is not required. Tuckmill Meadows oxbow is not classified as main river. However, always advise the local EA officer and Natural England officer to make them aware that the works will be taking place.

The oxbow lake also has a dam that was constructed with plastic pilings, this structure holds the water in the oxbow, if this structure was to be removed the water in summer would be lost and the resulting loss of species including the water vole. It is therefore important to check the integrity of the dam on a regular basis (twice a year) and fix any leaks that may occur.

**Ratcombe Stream**

The margins of Ratcombe stream are quite species rich in places where the water flow is slower. Creation of leaky dams along the upper stretch has aided this and could be continued further down the stream where it becomes deeper and flows faster. Leaky dams help to hold the water back, aiding in sediment deposition and the slow development of a more favourable bank profile.

* 1. **Woodland**

The woodland and wet woodland at Tuckmill Meadows is managed by:

* Minimal intervention
* Tree safety

Allowing the woodlands to develop naturally with minimal human management input can have benefits. Over time a diverse structure will develop as trees die, creating gaps for new vegetation to grow. This role is likely to be filled by the Ash which will over time succumb to Ash Dieback. Trees will not be removed and so some will grow to very large mature trees whilst other will die or lose limbs providing plentiful dead wood. Often minimal intervention is the only viable option for small pockets of woodland, and the block at Tuckmill Meadows is simply not large enough to sustain the slow rotation required by coppicing.

Tree safety on site is the responsibility of Vale of the White Horse District Council, any concerns regarding the condition of trees in relation to safety should be reported to the council and cleared if they pose a risk to visitor safety.

* 1. **Hedgerow**

The boundary hedgerow is managed for:

* Tree safety

There is a tall gappy hedge on three sides of the reserve with Tuckmill brook making the fourth border. There is a significant number of mature Ash in these hedgerows which are adjacent to Pennyhooks lane, permissive footpaths and the neighbouring golf course.

Tree safety on site is the responsibility of Vale of the White Horse District Council, any concerns regarding the condition of trees in relation to safety should be reported to the council.

Any trees or limbs which fail and fall into the site should be cleared and stacked, chipped or burnt in designated areas. Should tree failure result in gaps in the hedge these should be restocked with a variety of whips of UK provenance mixed hedge species.

* 1. **Visitor enjoyment**

**Create/Maintain Access Points**

Access points should be checked and maintained. For example:

* gates are adjusted if they drop
* overhanging vegetation is cleared back to a ~1.2m wide footpath.
* any unsafe trees removed
* draining or filling wet areas that may develop around gates
* replacing damaged or rotten stiles, gates etc

Any relevant signage at access points should also be installed and maintained as appropriate, particularly with regards to grazing animals.

There are two access points for the public, one in the north east corner which can be accessed from the public footpath running along the golf course and the main entrance from the byway in the southern east corner. The latter is also where the car park is located.

Additional infrastructure including the bridge between Cpt 1 & 2 and any boardwalks will be inspected weekly and repaired as necessary. Any infrastructure deemed hazardous will be closed or removed until repairs can be completed.

**Maintain Car Park**

Tuckmill Meadows has a car park in order to facilitate the visiting of the reserve. The car park surface will be maintained by keeping down vegetative and growth will be kept down across the parking area, and along all access points in and out of it. Stones or other surfacing materials will be laid on the ground where necessary to keep the car park in usable condition. There has been little improvement/repairs to the car park for at least 15 years as it has proved to keep in good condition over these years. There is a need to litter pick in the car park.

**Provide Signage**

Welcome interpretation boards erected at the two site entrances provide a map as well as information on the reserve. Signs warning of the livestock on site will also be erected and will include a QR code allowing visitors to see the location of the cattle via their NoFence collars. All rights of way and permissive paths will be appropriately signed. All permissive routes will be signed with the standard ‘permissive footpath/permissive bridleway’ white arrows. Any waymarking posts will be erected to stand 1.2 meters out of the ground to ensure visibility.

Staff undertaking Wardening checks will make casual waymarking improvements as required. Any major improvements or changes of permissive path routes will be completed on a more organised formal basis by Land Management staff.

* 1. **Planned Capital Works**

**Interpretation Panels**

Two new interpretation panels are being designed to be erected at the two pedestrian entrances on site. These will include a map of the site as well as site-specific information.

**Boardwalks**

The existing boardwalk on site is in poor condition and in need of replacing. One 5m bridge has already been removed for safety reasons and needs to be replaced.

An additional boardwalk is being considered to restore the route of the original permissive footpath, following the eastern boundary hedgerow adjacent to the golf course. This will mean that cattle can be excluded from the footpath year-round and it will divert pedestrian traffic away from the more sensitive areas of the SSSI.

These boardwalks will be installed by hand during dry summer months so as to avoid damaging the ground which sits wet year-round. Hardwood posts will be knocked into the ground using a drivall. This will form a base for a softwood boardwalk. The walking surface will be sited approximately 500mm above ground and will be approximately 1.2m wide. This mirrors the boardwalk which already exists on site.

The locations of the three boardwalks are mapped below:

A screenshot of a computer

AI-generated content may be incorrect.

* 1. **Potential Future Projects**

Throughout the timescale of this management plan there may be opportunities to take on additional projects on site. These potential projects are not confirmed and would require additional work to undertake a feasibility study and acquire Natural England consent.

**Calcareous Grassland Improvement**

If we are able to reduce the dominance of False Oat-grass across Cpt 2 we could explore introducing seed from a suitable donor site, Aston Rowant for example. This could increase rate of restoration across the limestone grassland.

**Reprofiling Ratcombe Stream**

Approximately the northern half of Ratcombe Stream flows in a deep channel, likely excavated at some point in order to aid drainage upstream. Freshwater Habitats Trust has expressed interest in supporting a project to raise the bed of the stream in order to restore a more natural system. This would also aid water availability to the grazing cattle.

**Introduction of Marsh Lousewort**

If the cattle grazing and cutting is ineffective in managing the spread of reeds in the species rich fen areas then we could consider introducing Marsh Lousewort through the Oxfordshire Fens Project. There are no historic records of Marsh Lousewort on site so this should only be considered if other management techniques prove unsuccessful.

**Reinstating the Tuckmill Meander**

A larger scale project to consider for the future would be the reinstatement of the natural course of the Tuckmill Brook. Restoring the old channel could have some very positive impacts on wildlife in the area however the scale of work could also be quite detrimental. This project would need to be considered carefully as there are records of water vole and grass snake using the oxbow lake formed by the old meander, as well as otters in Tuckmill Brook. There have also been concerns recently regarding the water quality of Tuckmill Brook which would need to be assessed before discussing with Natural England and the Environment Agency.

* 1. **Legal Responsibilities and Obligations**

To meet all legal responsibilities and other obligations. In order that the site and it's users are safe, the landholding is secure in the long term and where appropriate, neighbours are consulted about activities on the reserve.

**Maintain Site Infrastructure/Administration**

**Maintaining stock pen**

Tuckmill Meadows will be grazed with cattle. The state of the timbers and gates, and the overall effectiveness of the design, will be reviewed annually and any modifications or repairs completed as necessary.

**Maintain Site Boundaries**

The site is grazed by cattle and the fencing must be sufficient to contain the animals safely.

Fence lines will be inspected throughout the year and following weather events which may have resulted in fallen trees. Boundaries which border roads, footpaths or private properties will be checked by the Vale/SODC Tree Team for dangerous trees. Roadside/byway hedges will be maintained in such a way that the growth does not interfere with passing vehicles or pedestrians. They should also not impede the view for road users. Hedgerow management should only be carried out in autumn or winter so as not to disturb breeding birds.

**Meet all Health and Safety Responsibilities**

**Review site risk assessment**

A site risk assessment (SRA) is required to ensure compliance with statutory and organisational health and safety procedures. In the UK all organisations which employ staff on sites, or provide public access to sites, must complete a detailed risk assessment or audit of the site. All potential dangers or threats on the site must be identified. All the implications for the health and safety of visitors are considered, and then controls, if necessary, are established and applied. Access to any site may be restricted by the presence of hazards. In extreme circumstances, there may be an obligation to close parts of sites, or even entire sites. Of course, in most instances, it will be possible to take remedial action to remove or isolate the risk and ensure visitor safety.

SRAs will be reviewed at least on an annual basis and also whenever a new hazard is known to be present. A date for review should be set and adhered to - these can be staggered to avoid the need to review lots of sites at the same time but should not be allowed to run on beyond the year for any individual site. An earlier visit and review will be prompted if a likely cause of new hazards is known to have occurred - exceptional winds or flooding, for example.

Assessments are freely available for anyone who requests them. In addition, they should be sent out to visiting groups or contractors before activities and used by anyone planning a project on the site.

SRAs are the responsibility of the Countryside Manager at the Earth Trust but the task of reviewing can be delegated to any person with competence to carry out a risk assessment.

1. **APPENDIX**

**4.1 Management Plan**

See attached.

**4.2 Compartment Map**

See attached.

**4.3 Freshwater Habitats Site Report including Species List**

<https://freshwaterhabitats.b-cdn.net/app/uploads/2024/03/Tuckmill-Meadows-SSSI-botanical-and-vegetation-survey-report.pdf>

**4.4 Operations Requiring Natural England Consent**

See attached.

**Tuckmill Meadows SSSI Management Plan 2025-2030**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Management tasks** | | | | | **Month/s to be carried out** | | | | | | | | | | | |
| **Cpts** | **Location** | **Task** | **Year** | **Detail** | **January** | **February** | **March** | **April** | **May** | **June** | **July** | **August** | **September** | **October** | **November** | **December** |
| All | Whole site | Graze | 1 | Graze the whole site (excluding unsafe areas) to reduce thatch. |  |  |  |  |  |  |  |  |  |  |  |  |
| 1,2,3 | Ratcombe stream | Cut scrub | 1-5 | Clear scrub from Pennyhooks stream to allow more light to reach the stream. |  |  |  |  |  |  |  |  |  |  |  |  |
| 1,2,3 | Ratcombe stream | Create leaky dams | 1-5 | Continue to slow the flow of Ratcombe stream to retain water on site. |  |  |  |  |  |  |  |  |  |  |  |  |
| 2 | Calcareous Grassland | Graze | 2-5 | Graze compartment 2 between Aug-Apr to reduce False Oat-grass and reach a sward height of approx. 2-10cm in May. |  |  |  |  |  |  |  |  |  |  |  |  |
| 2 | Calcareous Grassland | Mow | 1-3 | Cut and collect if possible to reduce dominance of False Oat-grass. |  |  |  |  |  |  |  |  |  |  |  |  |
| 2 | Calcareous Grassland | Cut scrub & brambles | 1-5 | Clear scrub from calcareous grassland. |  |  |  |  |  |  |  |  |  |  |  |  |
| 2 | Calcareous Grassland | Control Weeds | 1-5 | Pull Creeping Thistle and cut nettles in Calcareous grassland. |  |  |  |  |  |  |  |  |  |  |  |  |
| 2 | Calcareous Grassland | Scythe orchid patches / spring. | 1-5 | Supplement grazing with targeted scything if required. |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 | Fen | Graze | 2-5 | Graze compartment 3 between Aug-Mar, removing stock if more than 10% of area is bare soil. |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 | Fen | Scythe | 1-5 | Target areas of tall, woody vegetation including willowherb, meadowsweet and reeds within fen area. |  |  |  |  |  |  |  |  |  |  |  |  |
| 4 | Swamp | Graze | 2-5 | Graze compartment 4 May-Oct, removing stock if more than 10% of area is bare soil. |  |  |  |  |  |  |  |  |  |  |  |  |
| 4 | Oxbow | Scallop the marginal vegetation of the oxbow. | 1-5 | Cut 25m of bankside vegetation in Spring. |  |  |  |  |  |  |  |  |  |  |  |  |
| 4 | Oxbow | Inspect and repair dam. | 1-5 | Inspect dam and repair if necessary to hold water in Oxbow. |  |  |  |  |  |  |  |  |  |  |  |  |
| 4 | Swamp | Create open water ponds. | 1-5 | Dig ponds at least 1m diameter and 1 spades depth to create open water and slow reversion to reedbed. |  |  |  |  |  |  |  |  |  |  |  |  |
| All | Boardwalks | Maintain safe surface for pedestrian access. | 1-5 | Weekly inspections of boardwalks and repairs as necessary. |  |  |  |  |  |  |  |  |  |  |  |  |
| All | Whole site | Regular litter picks | 1-5 | Staff and volunteer wardens to carry out. |  |  |  |  |  |  |  |  |  |  |  |  |
| All | Whole site | Maintain fences | 1-5 | Maintain and replace as necessary livestock proof fence lines. | As necessary | | | | | | | | | | | |
| All | Whole site | Clean and maintain two interpretation panels. | 1-5 | Clean surface and update information as required. | As necessary | | | | | | | | | | | |
| All | Whole site | Maintain and keep open (where possible) access points and permissive footpaths. | 1-5 | E.g. gates are adjusted if they drop, overhanging vegetation is cleared back etc. | As necessary | | | | | | | | | | | |
| All | Whole site | Maintain and replace visitor furniture | 1-5 | Replacing damaged or rotten visitor furniture, e.g. benches. | As necessary | | | | | | | | | | | |
| *All cpts.* | *Whole site* | *Tree Safety Assesment* | *SODC* | *SODC carrying out safety surveys. Especially after storm conditions.* | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Monitoring tasks** | | | | | | | | **Month/s to be carried out** | | | | | | | | | | | | | | | | | | | | | | |
| **Cpt.** | **Location** | **Task** | **Year** | | **Detail** | | | **January** | | **February** | | **March** | | **April** | | **May** | | **June** | | **July** | | **August** | | **September** | **October** | | **November** | | **December** | |
| All | Whole site | Establish butterfly transect | 1 | | Design and submit butterfly transect to UKBMS | | |  | |  | |  | |  | |  | |  | |  | |  | |  |  | |  | |  | |
| All | Whole site | Butterfly transect | 2-5 | | UKBMS butterfly survey | | |  | |  | |  | |  | |  | |  | |  | |  | |  |  | |  | |  | |
| All | Whole site | Vegetation survey | 2-5 | | Quadrat survey undertaken by SODC team. | | |  | |  | |  | |  | |  | |  | |  | |  | |  |  | |  | |  | |
| **Admin tasks** | | | | | | | **Month/s to be carried out** | | | | | | | | | | | | | | | | | | | | | | | | |
| **Cpt.** | **Location** | **Task** | | **Year** | | **Detail** | **January** | | **February** | | **March** | | **April** | | **May** | | **June** | | **July** | | **August** | | **September** | | | **October** | | **November** | | **December** | |
| All | Whole site | Revise Management Plan | | 5 | | Review and revise management plan for next five years. | Next revision 2030 | | | | | | | | | | | | | | | | | | | | | | | | |
| All | Whole site | Revise site risk assessment | | 1-5 | | Provide SODC with a copy following review. |  | |  | |  | |  | |  | |  | |  | |  | |  | | |  | |  | |  | |
| All | Whole site | Maintain the volunteer warden network and reporting system | | 1-5 | | Volunteer recruited and trained by Volunteer Officer and Warden at Earth Trust. Reporting via online survey |  | |  | |  | |  | |  | |  | |  | |  | |  | | |  | |  | |  | |
| All | Whole site | Negotiate annual grazing licence with grazier | | 1-5 | | Liaise with SODC |  | |  | |  | |  | |  | |  | |  | |  | |  | | |  | |  | |  | |