

Sutton Poyntz Fen Field Management Plan 2020 – 2026

Prepared by the Sutton Poyntz Biodiversity Group.
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Contents

1	INTRODUCTION	2
2	SITE OVERVIEW	2
2.1	Location, ownership and access	2
2.2	Historical management	3
2.3	Current management	3
2.4	Future Proposals.....	3
2.5	Designations	4
2.5.1	Statutory Designations	4
2.5.2	Non-statutory Designations.....	4
2.6	Main habitats	4
2.7	Notable current and historic records.....	5
2.8	Aspect and topography	5
2.9	Connectivity and surrounding land use	6
3	MANAGEMENT AIM	6
4	MANAGEMENT PLAN	7
4.1	Primary	7
4.2	Secondary	7
5	TABULATED ANNUAL MANAGMENT WORK PLAN	8
6	ONE-OFF CAPITAL WORKS	8
7	CONDITION ASSESSMENT METHODOLOGY	8
7.1	Timing.....	9
7.2	Visual Assessment	9
7.3	Quadrats.....	9
8	ASSESSMENT CRITERIA	9
9	REFERENCES & BIBILOGRAPHY	11
10	GLOSSARY.....	11

1 INTRODUCTION

The Sutton Poyntz Fen Field (hereafter referred to as 'the fen field') forms part of unit 13 of the White Horse Hill Site of Special Scientific Interest (SSSI) and is also within the Dorset Area of Outstanding Natural Beauty (AONB). The majority of the SSSI comprises of chalk downland but geological activity has created a major fault-line in the sedimentary layers which gives rise to a series of springs combining to form the river Jordan.

The fen field is owned by Wessex Water and has been managed for the last 10 years on their behalf by the Sutton Poyntz Biodiversity Group. The purpose of formalising this management plan is to agree with Wessex Water and Natural England a set of objectives for the fen field. The period for this management plan has been set at six years, as opposed to the normal five years to allow time for the second five yearly condition assessment of the fen field to be conducted; and so allow the results of this assessment to inform the next management plan.

2 SITE OVERVIEW

2.1 Location, ownership and access

The fen field is approximately half a hectare in area and is situated to the north of the Wessex Water's Water Treatment Works at SY 706 840 (Figure 1).

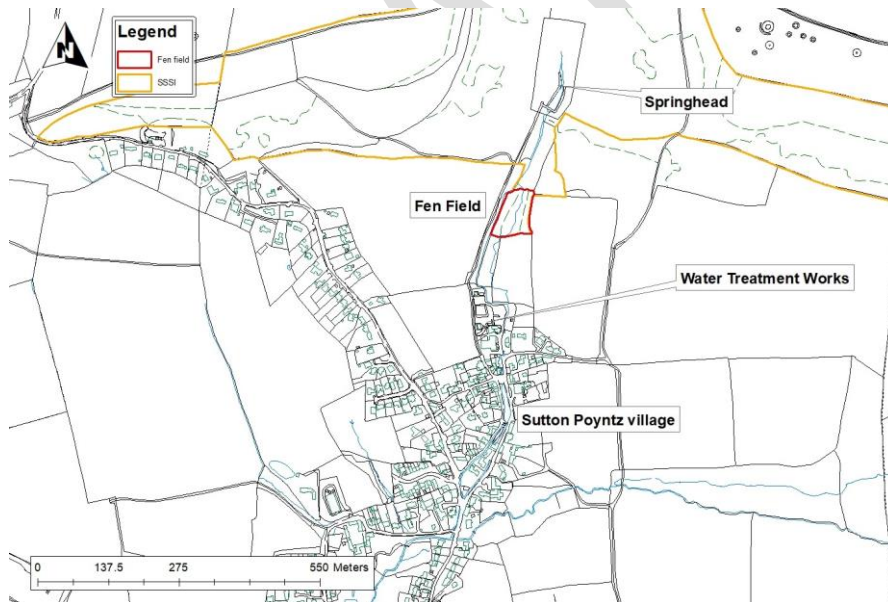


Figure 1: Location of Sutton Poyntz Fen Field

Wessex Water extract water from the spring that arises on the escarpment to provide a large proportion of the water supply to Weymouth. The fen field was procured by Wessex Water when the local farm was

broken up for sale some 20 years ago in order to provide some protection and control over this locally important water supply.

There is no public access within the fen field. A conscious decision has been taken by Natural England and Wessex Water to not allow public access as it has suffered in the past from trespass and anti-social behaviour. It is hoped that limited guided walks for the local community can be contemplated in the future if a suitable path is established.

The land immediately to the west of the fen field is a woodland also owned by Wessex Water. There is a permissive path through this woodland which is managed by Wessex Water. A Public Right of Way runs slightly further to the west along the edge of this adjacent woodland, and a second Public Right of Way runs through the field to the east of the fen field.

2.2 Historical management

An old dam constructed in 1860 to create a large lake forms the southern boundary of the field. Although the dam was breached many years ago, at the western side of the fen field the topography still retains a large depression covering approximately 50% of the area of the fen field. The river Jordan runs north to south through the centre of the fen field.

The earliest known use of the fen field was as a water source for the Poyntz Family Estate provided by the dam in the 1800's. It is not known when it reverted to rough grazing, but 10 years ago the stream breached its man-made channel within the Top Wood to the north of the fen field during a period of high rainfall. This resulted in the main flow coming down through the centre of the meadow instead of following the man-made channel to the west.

2.3 Current management

For the last 10 years the fen field has been managed by Sutton Poyntz Biodiversity Group with the agreement of Wessex Water and Natural England. Since being bought by Wessex Water the fen field has been mainly used for rough grazing although the diversion of the stream around 2010 made it too wet for grazing.

Since the Sutton Poyntz Biodiversity Group has taken over management a great deal of bramble clearance has been undertaken. The lower section of the field became entirely covered by deep bramble some years ago which was cut back severely by hand and mechanised cutters and then, by encouraging the stream to keep the ground wet, has been largely eradicated.

2.4 Future Proposals

Following recommendations in the National Environment Programme River Jordan Investigation Report (May 2018), Wessex Water is proposing that the river be realigned within Top Wood, immediately north of the fen field. The investigation determined that the section of the river which is contained within a historical mill leat within the woodland is a modified geomorphology. It is proposed that this section will be realigned to the natural floodplain channel to improve connectivity between the river and the wet woodland and improve the ecological quality within the river as whole.

The project, due to begin implementation in summer 2023, will involve the restoration of approximately 100m section of channel in the upper part of the woodland immediately below the springhead. It is not expected that the flows through the fen field will be significantly affected by this realignment in the long term, though there may be some short term changes whilst the works are being done.

Please note that this management plan is not asking Natural England for its approval for this realignment project, that will be requested through the normal channels. It is simply that should this proposed project go ahead, it may have a temporary impact on the fen during the period of this management plan, and therefore should be noted.

2.5 Designations

2.5.1 Statutory Designations

The fen field forms part of unit 13 of the White Horse Hill SSSI. This small 3 ha unit contains a wide variety of habitat types. Overall the compartment is designated as lowland calcareous grassland and has been classified as unfavourable – recovering when it was recently inspected on 4th November 2019.

The SSSI designation provides legal protection under the Wildlife and Countryside Act 1981 (as amended). Written consent under Section 28(E) of the Act must be obtained from Natural England prior to implementing any management listed on the list of 'operations likely to damage the special interest'. This includes, but is not limited to, activities such as burning, the introduction of or changes in stock feeding practice, cutting of trees and shrubs, changes in intensity of grazing regime and the release of any wild plant or seed. Where works require consent, they must be undertaken in accordance with the specifications provided in the application and must comply with all conditions of the Section 28 consent.

The fen field is included within Dorset Area of Outstanding Natural Beauty and within the Sutton Poyntz Conservation Area.

2.5.2 Non-statutory Designations

The fen field is part of a Drinking Water Safeguard Zone (Surface Water). These are catchment areas that influence the water quality for their respective Drinking Water Protected Area (Surface Water), which are at risk of failing the drinking water protection objectives.

These non-statutory Safeguard Zones are where action to address water contamination will be targeted, so that extra treatment by water companies can be avoided. Safeguard Zones are one of the main tools for delivering the drinking water protection objectives of the Water Framework Directive.

2.6 Main habitats

The fen field comprises a combination of wet meadow, scrub and fen habitats (Figure 2). The fen vegetation follows the line of the river Jordan, with the wet meadow habitats flanking the fen on the western and eastern sides of the field. The higher strip of land to the east is becoming increasingly wet from increased run off from the chalk escarpment with vegetation now increasingly dominated by wet meadow species such as rushes and yellow iris (*Iris pseudacorus*).

The lower section of the fen field became entirely covered by deep bramble but through extensive management this has been significantly reduced and the vegetation has been replaced by a rich mixture of aquatic vegetation including common reed (*Phragmites australis*), yellow iris, marsh marigold (*Caltha palustris*) and alternate leaved golden saxifrage (*Chrysosplenium alternifolium*). There are some small patches of scrub throughout the fen field, which are predominately hawthorn (*Crataegus monogyna*) and blackthorn (*Prunus spinosa*).

There are small areas of ash and wet woodland habitat in the north of the fen field. These are contiguous with those found in Top Wood immediately to the north. Descriptions of these habitats, and details of their management prescriptions can be found in the Sutton Poyntz Top Wood Management Plan.

The hedges forming the southern and western boundaries have had extensive replanting in recent years funded by grants from the PTES and the AONB ridgeway project. The other sections of hedge are a combination of existing hedge vegetation and dead hedging.

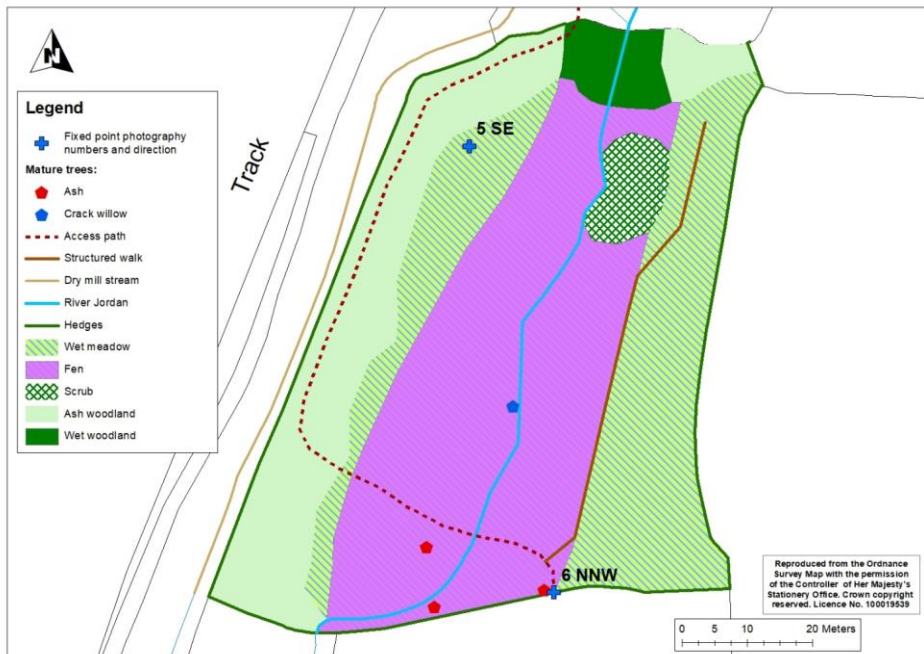


Figure 2: Fen field habitats

2.7 Notable current and historic records

Regular wildlife surveys have been carried out by the Sutton Poyntz Biodiversity Group over the last 10 years as part of wider surveys of the area. The fen field with its associated clumps of willow and blackthorn has a wide range of breeding birds including song thrush, blackcap, whitethroat, chiffchaff, Cetti's warbler and more recently reed warbler. Winter visitors include snipe and water rail. The fen field consistently has by far the greatest number of bird species records in the local area with at least 10 species recorded at any time of year.

The hedgerows and associated dead hedges constructed along the stock fencing provide habitat for a range of small mammal species, and small mammal surveys are carried out twice a year. In the late summer the number and variety of dragonfly is particularly notable.

The group has recently signed up to the Extended River Fly Initiative to monitor freshwater invertebrates in the stream on a monthly basis which will have the additional benefit of monitoring water quality.

2.8 Aspect and topography

The fen field is on the lower southern flank of the downland, sheltered from the north, east and west by the topography of the valley and surrounding trees.

As mentioned earlier the majority of an old dam from the 1800's still exists on the southern boundary of the fen field, and there is a large depression extending northwards from this dam. The river Jordan runs through the depression, north to south, through the centre of the fen field. On either side of the wetter, central area are drier areas to the east and west. However, these areas are still affected by small springs and the associated run off and still provide wet habitats.

2.9 Connectivity and surrounding land use

The fen field is connected directly with the wet woodland to the north and to the meadow immediately to the south by the River Jordan.

There are also strong connections further afield, through the hedgerows that crisscross the farmland that is extensive throughout the area. The ridge to the north of the fen field and its designation as a SSSI also ensures it is managed for the benefit of biodiversity and so will provide wider connections along the length of the ridge.

The arable and downland to the west is currently tenant farmed by a local farmer principally for grazing sheep with silage taken as a crop from the lower fields. The downland and associated gorse scrub is grazed by sheep. The downland supports a sizeable range of species of butterflies with a good population of Lulworth skippers. The gorse supports a small population of linnets although this is smaller than 10 years ago when the gorse was more extensive.

The downland to the East is also grazed. This has had a large proportion of the scrub removed which has increased the run-off into the wood.

3 MANAGEMENT AIM

The overall long-term aim for the fen field is to apply sensitive management practices to enhance the biodiversity and improve the SSSI status.

Specific objectives are to:

1. Improve the biodiversity of the fen field by encouraging a diverse range of wet and dry meadow and aquatic fen species,
2. Ensure sufficient water levels and flow through the fen field,
3. Maintain the hedgerow boundaries, enhancing the habitat where appropriate,
4. Enhance access provision to the fen field

The Favourable Condition Tables for the SSSI unit do not include criteria that relate to the fen and wet grassland. It was therefore agreed with Natural England that these objectives will be informed by habitat condition assessments, see Section 7 below. These are based largely on the Wessex Water standard habitat condition assessment criteria and will be carried out every five years. However, since the fen field is relatively small and has a range conditions from permanently wet areas to drier areas on the higher ground, the condition assessment criteria have been simplified and adapted to ensure the assessment is useful and appropriate.

The specific attributes and targets are detailed in Section 8.

4 MANAGEMENT PLAN

Please refer to the Tabulated Annual Management Work Plan at Section 5 when reading the primary and secondary management activities, below.

4.1 Primary

1. Create and maintain an access path (**Error! Reference source not found.**) using construction techniques appropriate to the terrain and the level of access required. This could be carried out in phases with priority in the wetter areas. The need for an access path is essential to minimise damage to the terrain, connect the fen field to the wet wood to the north, as well providing safer access for surveys and management work, particularly in the wetter areas.
2. Ensure that the central area remains sufficiently wet by adjusting (as necessary) the informal, temporary dams that slow the water through the fen field.
3. Ensure bramble does not take hold through the central section in line with the River Jordan through annual clearance and management of water levels.
4. To manage the fen area and reed bed according to RSPB guidance [1], by cutting (area/%) of the reed bed (by hand or machine?) (how often?) to achieve either: a targeted mosaic structure of ?, or a cover of the fen area by x% of reedbed.
5. Continue to lay sections of the hedge along all of the boundaries, and where laying is not feasible maintain dead hedging, to restrict access into the fen field. The entire site boundary will be managed over the period of the management plan.
6. Annually cut by hand or mechanised cutter the higher ground to the east to control the growth of course grass and bramble to encourage a better mix of vegetation. Arisings collected to form a habitat pile on the edge of the area.
7. Utilise fixed point photography to build up a visual record of the changes to vegetation and structure of the fen field over time. Positions for the fixed point photography are shown on **Error! Reference source not found.** The fixed point photography will form part of the management plan review.

4.2 Secondary

1. Manage the scrub within the fen field to prevent it encroaching into the field. This to be done each winter
2. Continue monthly bird surveys, twice yearly small mammal surveys and monthly aquatic invertebrate surveys during summer.

Adaptive management principles will be followed so, for example, if the fixed-point photographs identify a management requirement or that current management is resulting in unintended consequences, management will be amended. Amendments will be agreed in writing to Wessex Water. Wessex Water will agree these amendments with Natural England.

Commented [JR1]: These are the areas where it would be good to have your input as to how often you are, or plan to, cut the reedbed and fen vegetation. We are always looking for these activities to be measurable, so how much, how often, etc.

Commented [JR2]: It would be good to tie down if this a 100% cut, are arisings left in situ or habitat piles created, or is it ad hoc simply to control scrub/bramble/rough veg?

The management outcomes will be reviewed summer/autumn 2025 and used to inform the 2026-2031 five-year plan.

5 TABULATED ANNUAL MANAGEMENT WORK PLAN

Prescription	2020				2021				2022				2023				2024				2025			
	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter
Primary																								
1. Maintain access path			*	*			*	*			*	*			*	*			*	*			*	*
2. Condition assessment		*																			*			
3. Clear channels to maintain water levels			*	*			*	*			*	*			*	*			*	*			*	*
4. Bramble clearance			*	*			*	*			*	*			*	*			*	*			*	*
5. Cutting of reed bed and fen vegetation			*	*			*	*			*	*			*	*			*	*			*	*
6. Hedge laying and dead hedging along boundaries			*	*			*	*			*	*			*	*			*	*			*	*
7. Cut vegetation on higher ground to east annually			*				*				*				*				*				*	
8. Fixed point photography		*					*				*				*				*				*	
Secondary																								
9. Scrub management			*	*			*	*			*	*			*	*			*	*			*	*
10. Monthly bird surveys	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11. Small mammal surveys	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12. Stream invert surveys	*	*			*	*			*	*			*	*			*	*			*	*		

6 ONE-OFF CAPITAL WORKS

An informal path through the fen field has been formed by the Sutton Poyntz Biodiversity Group (**Error! Reference source not found.**). Where this path crosses the fen and the river a boardwalk has been constructed to enable safe crossing of this wet area and prevent damage to the habitat. However, the condition of the boardwalk is deteriorating, and it is hoped that if funding can be secured early during the period covered by this management plan, that a replacement boardwalk can be constructed.

7 CONDITION ASSESSMENT METHODOLOGY

The aim of the habitat condition assessment is to gain a good overview of the condition of the whole fen field using a simple assessment process. The initial condition assessment surveys will allow a baseline against which future surveys can be compared, will assist in identifying any further management requirements for

this management period and will allow a judgement to be made of whether the management aims (Section 3) are being met.

The management of the small areas of ash and wet woodland habitat in the north of the fen field are detailed in the Sutton Poyntz Top Wood Management Plan.

The habitat condition assessment consists of two parts, an overall visual assessment of the fen field and a more detailed survey of ten randomly selected quadrats; both parts should be conducted during the same visit where possible. Fixed point photography, taken at least annually in the first week of July, will be used to support the habitat condition assessment and provide a visual overview of the changes in the fen field over time. The positions for the fixed point photography are shown in **Error! Reference source not found.**.

7.1 Timing

The condition assessment should be conducted any time between May and October inclusive; with the optimal time being June - August inclusive. The habitat condition assessment data is to be provided to Wessex Water within two months of completion of the survey.

7.2 Visual Assessment

The visual assessment consists of a structured walk following the access route along the western side of the field and a transect route up the western side of the field (shown on **Error! Reference source not found.**). This will enable a visual assessment of the condition of both the fen and the wet meadow. Along the entire length of the structured walk the surveyor will make an assessment of the attributes detailed in the table below. It may also be necessary to inspect other features of the fen field, e.g. the boundary hedgerows, that may not be readily visible from the route of the structured walk.

7.3 Quadrats

Survey ten randomly selected quadrats, each 1 m x 1 m, and record the location of each quadrat using an eight figure grid reference. Although random, the quadrats should encompass the fen and wet meadow habitats. Record all species present in each quadrat and search each quadrat for the presence of the positive and negative indicator species as shown in the table below.

The indicator species given in the table below represent indicator species for both fen and wet grassland. As the Sutton Poyntz Fen Field is such a small and complex area, rather than trying to delineate between the two habitats and running two separate condition assessments we have combined the indicator species and targets for both habitats so that the list accommodates whichever habitat (or habitat mosaic) the quadrat lands in.

8 ASSESSMENT CRITERIA

Attribute	Target	Notes
Extent of habitat	100% retained	Mapped (visual assessment) during each assessment and compared to previous time.
Structure: bare ground	Between 5 & 25% total area	Combination of visual assessment completed during structured walk and quadrats.
Sward composition: Grass/herb ratio	>20% herb/sedge	Combination of visual assessment completed during structured walk and quadrats. Herbs to exclude creeping buttercup and white clover
Sward composition:	Criterion A: a total of 6 or	Quadrat Assessment

<p>Favourable indicators</p>	<p>more positive indicator species present, of which a 3 or more are '*' species in the quadrats surveyed</p> <p>AND</p> <p>Criterion B: 4 positive indicator species present in at least 4 quadrats</p> <p>Should either of these criteria fail, the target will have been failed</p>	<p>Positive indicators species:</p> <ul style="list-style-type: none"> • fen or marsh bedstraw* (<i>Galium uliginosum</i> or <i>G. palustre</i>), • devil's-bit scabious (<i>Succisa pratensis</i>), • fleabane* (<i>Pulicaria dysenterica</i>), • greater bird's-foot trefoil* (<i>Lotus pedunculatus</i>), • common knapweed (<i>Centaurea nigra</i>), • lady's-smock* (<i>Cardamine pratensis</i>), • marsh marigold* (<i>Caltha palustris</i>), • meadowsweet* (<i>Filipendula ulmaria</i>), • orchids, • purple moor-grass* (<i>Molinia caerulea</i>), • ragged robin* (<i>Lychnis flos-cuculi</i>), • jointed rush* (<i>Juncus articulatus</i>), • sedges: small blue-green, • valerian, common or marsh (<i>Valeriana officinalis</i> or <i>V. dioica</i>), • marsh violet* (<i>Viola palustris</i>), • water-dropworts (<i>Oenanthe</i> sp.), • gypsywort* (<i>Lycopus europaeus</i>), • lesser spearwort* (<i>Ranunculus flammula</i>), • opposite-leaved golden saxifrage* (<i>Chrysosplenium oppositifolium</i>), • pendulous sedge (<i>Carex pendula</i>), • yellow flag* (<i>Iris pseudacorus</i>), • wild angelica (<i>Angelica sylvestris</i>), • water mint* (<i>Mentha aquatica</i>), • marsh willowherb* (<i>Epilobium palustre</i>), • marsh woundwort* (<i>Stachys palustris</i>), • purple loosestrife* (<i>Lythrum salicaria</i>), • spearworts*. <p>The species marked with an asterisk are those which particularly define the assemblage of fen and wet grassland being assessed: see the requirements for the presence of these in the target column.</p>
<p>Sward composition: Unfavourable indicators – agricultural weeds or high nutrients</p>	<p>No more than 4 present in the quadrats surveyed OR < 5% total</p>	<p>Combination of visual assessment completed during structured walk and quadrats.</p> <p>Negative indicators species:</p> <ul style="list-style-type: none"> • common nettle (<i>Urtica dioica</i>), • creeping/common thistle (<i>Cirsium arvense</i> or <i>C. vulgare</i>), • docks (<i>Rumex</i> sp.), • ragworts (<i>Jacobaea</i> sp.), • perennial rye grass (<i>Lolium perenne</i>), • Yorkshire fog (<i>Holcus lanatus</i>), • white clover (<i>Trifolium repens</i>), • false oat-grass (<i>Arrhenatherum elatius</i>), • cleavers (<i>Galium aparine</i>), • greater willowherb (<i>Epilobium hirsutum</i>), • reed canary-grass (<i>Phalaris arundinacea</i>), • reed sweet-grass (<i>Glyceria Maxima</i>), and • tufted hair grass (<i>Deschampsia cespitosa</i>).

Sward composition Unfavourable indicators – Tussock-forming rushes and rank grasses	<50%	Visual assessment completed during structured walk and comparison using fixed point photography. Negative indicators species: <ul style="list-style-type: none"> • Tussock-forming rushes, • Yorkshire fog (<i>Holcus lanatus</i>), • false oat-grass (<i>Arrhenatherum elatius</i>), • tall fescue (<i>Festuca arundinacea</i>), • red fescue (<i>Festuca rubra</i>), and • cock's-foot (<i>Dactylis glomerata</i>).
Sward composition Unfavourable indicators – Scrub / Woody spp.	<10%	Visual assessment completed during structured walk and comparison using fixed point photography. Unfavourable herbs (which are only unfavourable if exceed the threshold opposite) are those which indicate 'unsettled' conditions, such as: <ul style="list-style-type: none"> • bracken (<i>Pteridium aquilinum</i>), • bramble (<i>Rubus fruticosus</i>), • willow (<i>Salix</i> sp.), • stinging nettle, • creeping thistle (<i>Cirsium arvense</i>), and • common thistle (<i>C. vulgare</i>). For this location, also include anything else which you've noticed can come in as a 'thug' after a disturbance event, such as scrub clearance.
W&CA Sch 9 Invasive Non-natives and non-native shrubs	None present OR under management	Include 'undesirable' non-natives as well as those with legal invasive status, e.g. include buddleia
Threats	Identify any threats & set targets	Threats might include unauthorised public access which is causing damage (e.g. bonfires, litter), or disease e.g. ash dieback, deer browsing etc.

9 REFERENCES & BIBLIOGRAPHY

[1] Bringing Reedbeds to life. RSPB Guidance. Graham White, Matt Self and Sarah Blyth.

[https://ww2.rspb.org.uk/Images/bringing_reedbeds_to_life_tcm9-385799.pdf]

[2] National Vegetation Classification: Field guide to mires and heaths. T. Elkington, N. Dayton, D.L. Jackson and I.M. Strachan. 2001.

10 GLOSSARY

The following acronyms, abbreviations and codes are used in this report:

AONB	Area of Outstanding Natural Beauty
NVC	National Vegetation Classification
SSSI	Site of Special Scientific Interest