Tunbridge Wells & Rusthall Commons

Habitat Management Review - Interim report

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1. Introduction

The Tunbridge Wells and Rusthall Commons as a whole present an excellent mosaic of valuable habitats in the heart of an urban area. Current management is doing an effective job of maintaining this variety of habitats and where possible restoring sections to their more open original state while balancing the needs of amenity with those of the local biodiversity.

This report focuses on the grassland, heathland and woodland habitats, their current management and recommendations for further development where possible and practical. Given limitations on budget, resources and the inability to graze the general recommendations are to: continue current management techniques; focus additional effort on the most important areas (highlighted on the attached site notes in Appendix A); and add or amend practices for greater habitat enhancement.

2. Grassland

The commons host areas of acid and neutral grassland with varying conditions of diversity and structure. Acid grassland is typically associated with nutrient-poor and thin, free draining soils and species richness can vary. Unless fertility increases or scrub encroaches minimal management is usually required. However, many of the acid grassland sites are showing signs or both increased fertility and encroachment and so intervention through management techniques will be required to prevent succession to woodland and scrub.

- On all grassland sites cutting should be carried out annually (late summer, after seeds have set) and all arisings removed as soon as possible (ideally within a week to avoid nutrient enrichment). For structural diversity rotationally leave unmown patches or strips randomly and around the edges of the site (an illustrative example of this technique will be provided in the full report). On acid grassland areas with thin soil heavy machinery can have a damaging effect and so more sensitive management will be required (especially where there are anthills present).
- On sites where fertility needs reducing (grass dominated sites) a spring cut can be carried out in addition to the late summer cut. All arisings must be removed as soon as possible.
- There shouldn't be much need to sow seeds as most of the grassland areas show signs that there is an existing seed bank.
- Maintain patches of bare ground where possible (and existing) as these are valuable to invertebrates, especially on south facing slopes. This is particular important in TW Site 2 where the sand pit is as this is a very important site for the specialist mining bee, *Panurgus banksianus* (Ian Beavis, pers. comm. 2016).
- Manage scrub encroachment where bramble and bracken are becoming dominant in grassland areas. It does not need to be completely eradicated as it has some value and makes up part of the mosaic, particular in edge habitat. Also control dominant species such as creeping thistle. The bracken may be best managed by spraying with Asulox. Bracken will diminish with annual cutting. Creeping thistle and tree saplings are best pulled or dug out using specialist tools, such as Lazy Dogs.
- Any opportunity to expand areas of acid grassland by cutting into the secondary woodland should be explored.

3. Heathland

Lowland heathland is a UK priority habitat and is historically a key habitat of the commons. However, maintaining the heathland on the site is a challenging task. Traditional methods of management such as grazing are not viable and alternative methods require high levels of manpower and resources. It is recommended that efforts be focused on maintaining the small number of key heathland/heathy grassland areas. The most important site is the one remaining area of relict heath just north of Victoria Grove (TW 3). This will likely require greater resources (such as volunteer hours) than are currently applied.

- Management by cutting should ideally mimic grazing as closely as possible – so rather than uniform cutting across the site, there should be rotational cutting at differing levels to create a mosaic of structure and heather age. This is best carried out with brushcutters and hand tools to allow for greater control and varying cutting heights. No more than 25% of the heather should be cut at one time and cutting should be done as late as possible (autumn/winter) to allow seed to set. Arisings must eventually be removed, but cuttings may be used to help spread seed to other areas. In the relic heathland area the dominant brambles and bracken should be cleared by hand to avoid cutting the heather.
- Scrub must be controlled on heathland sites with bracken accounting for not more than 5% of the site. Spraying of bracken may be necessary and cutting or pulling of other dominant species such as birch and bramble. Again hand tools will be needed to avoid negative impact on heather and other heathland flora.
- Maintain patches of bare ground
- Monitor the key heathland sites annually, recording % cover and age categories
- Consider the option of grazing a couple of the key sites – temporary fencing in contained areas (grants may be available to help with this)

4. Wood pasture

The areas of wood pasture ideally should be managed similarly to the grassland area with annual and rotational cut and clear.

- Cutting should be carried out annually (late summer, after seeds have set) and all arisings removed as soon as possible to avoid nutrient enrichment. For structural diversity rotationally leave unmown patches or strips around the edges of the site. Illustrative examples of this cutting technique will be provided in the full report.
- On sites where fertility needs reducing (grass dominated sites) a spring cut (and cuttings removed) can be carried out in addition to the late summer cut.
- There shouldn't be much need to sow seeds as most of the grassland areas show signs that there is an existing seed bank. The shade provided by the dense tree canopy in some areas will restrict floristic diversity so it may be favourable to carry out some selective thinning of standards and carry out pollarding (under guidance from a veteran tree expert).
- Any standing or fallen deadwood should be retained (unless it presents a safety issue).

5. Woodland

The woodland in the commons is predominantly secondary mixed broadleaf and would not be a priority habitat compared with the others. The most valuable habitats are the woodland edges, rides and glades. South-facing woodland rides running east-west across the site present the greatest opportunity to increase biodiversity.

- Rides – main tracks and paths should be zonally managed to provide graduating tiers of vegetation from the ground up to the woodland. These should be cut and coppiced on rotational basis with rotationally scalloped sections, focussing on south facing rides in particular. East-west rides should take priority over north-south as these provide the greatest value for wildlife. An illustrative example of zonal management and scalloping will be provided in the full report.
- Glade – maintain open spaces and glades throughout the woodlands with rotational cut and clear
- Thinning/Coppicing – any opportunities to carry out coppicing or thin dense areas of woodland should be explored as these can enhance the biodiversity value of the woods. More detailed recommendations will be made in the full report.
- Deadwood – standing and fallen deadwood and a key element of the woodland habitat mosaic and should be encouraged
- Cherry laurel – any cherry laurel or rhododendron should be removed (pulled, cut and treated with pesticide). Rusthall Common seems to have a greater presence of laurel.

6. Edge Habitats

Most of the habitat sites reviewed adjoin other habitats and the interface between them, the edge habitats, are just as valuable (often more so) for biodiversity. Management of these areas should therefore be incorporated into the habitat management to promote structural diversity.

- Promote a graduating structure from grassland or heathland to woodland/scrub by taking edges out of the annual mowing regime and cutting sections less frequently
- Scallop cut edges on a rotational basis, particularly south facing
- Rotational coppicing of trees and scrub

Illustrative examples of structural enhancement will be provided in the full report, along with recommendations for which edge habitats to prioritise across the site.

7. Invasive Non Native Species

Cherry laurel is present in many of the woodland areas, especially Rusthall Common. Cherry laurel will spread and outcompete all other ground and sub canopy woodland species if not controlled. Small plants should be pulled and removed whilst larger specimens be cut and treated with herbicide. Regrowth should also be sprayed. Arisings should be removed, stacked or burned.

Himalayan balsam was located on Tunbridge Wells Common –this can easily be hand pulled by volunteers (and repeated annually as required). Despite having some value to bees, the plant is non-native and will spread if not controlled.

Mapping and monitoring of INNS should be carried out annually.

8. Coralroot bittercress

Coralroot bittercress *Cardamine bulbifera* is known to have been present in Tunbridge Wells Common. The plant was not identified during this survey but as it is late in the season that does not mean that it is not present. The plant should be surveyed for during the spring (flowers May/June) and mapped ideally with GPS co-ordinates. It should then be monitored annually or at least every 2-3 years. Coralroot bittercress likes damp woodland and, other than monitoring, management is effectively to maintain favourable conditions – low light levels and damp ground.

9. Monitoring

Key habitat areas can be monitored annually or every 2 years to assess the impact of management. It may be impractical to monitor all areas so key sites should be identified and monitored, including sites undergoing dominant species control.

A quick and simple survey method for the grassland areas is Rapid Assessment – guidance is attached to this report in Appendix D.

A recommended method of monitoring site conditions is to carry out fixed point photography. Key sightline points can be mapped out (including direction of photo) and photos taken annually at the optimum time of year for that habitat. This will provide a good visual account and reference of habitat conditions.

With management of any site it is useful to carry out regular surveys to build a picture of the local biodiversity. There are species of butterflies and reptiles, for example, which would be good indicators of favourable conditions.

If resources are restricted for monitoring and surveying, this is something that volunteers or students, i.e. from Hadlow College, could be involved with.

10. Additional Recommendations

- *Volunteers*

Budgets and resources are often restricted for site management and the availability of a group of practical volunteers can be invaluable. It would be worth considering increasing the number of volunteers and frequency of volunteer tasks if supervision is feasible.

- *Funding*

There are a number of funding opportunities available to help with site management that may be worth considering such as:-

- Woodland Grant Scheme (Forestry Commission)
- Heritage Lottery Fund
- SITA Trust (Landfill Communities Trust)
- Tesco Bags of Help

Kent High Weald Partnership can provide advice on funding opportunities should this be an option for the Commons.

- *Reptile refugia*

Many of the habitats on the Commons are suitable for reptiles and to provide additional resources for these species the creation of well-sited refugia/hibernacula could be considered.

Next Steps

The Freehold Tenants may now wish to commission a full report detailing habitat management recommendations for the common. This would include illustrative examples of the management techniques outlined in this interim report, compartment specific prescriptions for management, and a detailed 5-year work program. Details would also be provided as to how the delivery of the plan may be resourced, including funding options, and recommendations around volunteer recruitment and management.

Tunbridge Wells Common (*key areas)

Site	Grid Ref	Habitat Type	Description	Notable Sp	Management Notes
TW 1	TQ5769 3916	Neutral Grassland	Neutral grassland just north of the cricket pitch. Not a huge diversity of flora but there are a nice mix of grasses and a few wildflowers including clover, sorrel, bird's foot trefoil and hawkweed. It has a south facing aspect and on a sunny day there were abundant invertebrates on the site.	Yorkshire fog grass was dominant. Cats ear and mouse ear (good nectar source for rare bees from TW 2)	Cut annually after seeds set (late summer) leaving patches unmown to provide structural diversity (rotationally and randomly to mimic grazing). Can do an additional cut in Spring to reduce fertility if desired. Arisings must be removed asap (ideally within a week). Maintain patches of bare ground.
TW 2*	TQ5783 3913	Acid Grassland	Lowland dry acid grassland (semi-improved in sections). This area has patches of good floristic diversity and fine grasses (particular where the ground is more hollowed and the soil is thin). Bare ground patches and sand good for invertebrates. This area has good potential to be enhanced. Large anthills present. Lots of invertebrates present. Fairly self-sustaining with footfall, thin soil and rabbit grazing. Patches of bramble and encroachment in southern section.	Heath bedstraw abundant Bird's foot *Ornithopus* Cat's ear and mouse-ear Bramble sp – possibly Dewberry *Panurgus banksianus* (sand pit) and *P. calcuratus*	Cut and clear late summer (anthills are a challenge and strimming may be best around these) Cut on rotation to create structural diversity (always remove arisings). Maintain patches of bare ground. Manage the encroaching bramble (keeping some and any unusual sp as it is good for invertebrates)
TW 3*	TQ5795 3913	Lowland Heathland	Dry acid grassland/lowland heathland Managed heathland section with mature heather abundant but being considerably encroached upon by bramble, willowherb and birch and oak seedlings. Only original heather (continuous presence) and as such is a key area for ongoing	Heather Bramble, birch, willowherb and oak seedlings frequent Specialist lowland heathland bees	Ideal goal to maintain and heathland but scrub control is a considerable challenge. Rotational cut and clear (mimic grazing), ideally brushcutter, hand tools and manual pulling around the heather. Only 25% of the heather should be cut at one time. Clear bramble and bracken by hand. Treatment of

			management.		bracken with herbicide may be required. This could be a fenced off section for grazing which would be the best form of management if viable. Mow the grassland near the grove (shaded section).
TW 4	TQ5796 3908	Lowland Heathland	Lowland heathland patch with mature heather that is outcompeted by scrub. This is a small patch that can be managed and maintained as a transitional edge habitat which contributes to the structural diversity of the area. But further encroachment into the grassland should be prevented.	Heather, birch, gorse, bramble, bracken, willowherb.	Divide the patch into compartments and cut/coppice on rotation to maintain a mosaic of structure.
TW 5*	TQ5793 3903	Lowland Heathland/ Acid grassland	Newly cleared lowland heathland with young heather and gorse, and patches of bare ground but also young bracken, bramble and birch saplings appearing.	Heather, gorse, bird's foot trefoil, dwarf thistle	Work towards a varied structure as the vegetation develops including keeping patches of bare ground. Mimic grazing and brushcut 3-4 inches above ground to protect young heather. Rotational cutting. Spray bracken if it becomes too abundant (no more than 5% bracken cover desirable).
TW 6	TQ5812 3900	Wood pasture	Wood pasture, semi-improved dry acid grassland. Areas of this grassland are floristically poor with dominant grasses but there are patches of improved acidic grassland diversity showing potential for enhancement.	Heath bedstraw, trailing st johns wort, creeping buttercup (sign of soil fertility), green alkanet along paths, gorse, veteran apple tree	Cut and clear at the end of summer in rotational sections to encourage greater structural diversity. Possible cut the more floristically poor sections in Spring (and clear) as well as a late summer cut. Maintain the transitional habitats (woodland edges with gradual grass, scrub, trees transition). Maintain presence of fallen and standing deadwood. Selective thinning to increase light access. Pollarding following professional advice.

TW 7	TQ5754 3914	Wood pasture	Wood pasture, semi-improved acid grassland Limited in floristic diversity – grasses, bracken, bramble, willowherb present. A section nearest the road has been recently cleared of vegetation and it was discovered that the rock is close to the surface.	Bracken, bramble, willowherb, birch	As above but possibly spray bracken if is becomes dominant. Section nearest the road (and by path junction) – scrape off topsoil (use to create bund roadside) – encourage acid grassland, thinning of trees may be required.
TW 8	TQ5759 3878	Woodland	Path/Woodland ride (part of the old racetrack). Quite 2 dimensional with coarse grass, bracken and bramble, lots of yew and holly. Potential for more structural and floral diversity. Glade at the path crossroads.	Hawthorn, rowan, yew, bracken, bramble, coarse grasses.	Woodland edge and ride management – 3 to 4 tier ride edges. Coppicing and cut some of the holly. All cut on rotation with scallops. Rotational cut and clear of glade.
TW 9*	TQ5759 3878	Acid Grassland	Semi-circular area of south facing acid grassland – northern section has greater floristic diversity including bare patches of ground and heather. Excellent invertebrate and reptile habitat potential. Birch around the edge will encroach (as well as bracken).	Rowan, beech and oak standards (frequent rowan saplings), heather, gorse, bracken, tormentil, labyrinth spiders	Maintain as acid grassland and encourage greater structural diversity. Rotational cutting (and clear), maintaining bare patches where possible. Manage edge habitats and control bracken and birch. Could enlarge the site, clearing more trees around the edge. Possible grazing site.
TW 10	TQ5753 3876	Acid Grassland	Acid grassland reasonably sheltered with south facing aspect. Assemblage of mostly grasses, bracken, bramble and birch. Some willowherb in the southern section.	Good assemblage of grasses (including some finer species such as fescues).	Rotational cut and clear and create more structural diversity at the edges as it transitions into woodland. Manage bracken and bramble.
TW 11	TQ5759 3870	Neutral Grassland	Lower lying neutral grassland close to the pond displaying a good array of flora and habitat value for invertebrates and amphibians.	Thistle, willowherb, bracken, bird's foot trefoil, sorrel, clovers, vetches	Cut and clear annually (leaving some longer sections) and provide some deadwood habitat.
TW 12*	TQ5746 3860	Woodland	Secondary broadleaf woodland and reported site of **coralroot bittercress** though none was seen during the survey (possibly due to lateness in season). However, the area shows good woodland flora diversity (inc bluebell). The path/woodland ride here	Yew, bluebell, honeysuckle, cherry laurel, mosses, gorse, hawkweeds, odonata,	Carry out survey every Spring to locate and record coralroot bittercress but maintain the area as is (damp and shady). Cut and poison cherry laurel. 3 tier ride management (excluding coralroot bittercress area)

			shows great potential for biodiversity especially the south facing side and path junctions (which act as glades). Excellent floristic diversity at TQ5777 3867 on south facing edge.		Maintain woodland rides and enhance open areas with rotational cut/coppice and scallops (especially south facing)
TW 13	TQ5785 3873	Acid/neutral Grassland	Semi-improved grassland on west side of car park. Not currently displaying a great deal of diversity but has potential. Lots of invertebrates present. Cherry laurel present in the woodland edge.	Mostly coarse grass with occasional finer grass, sorrel, and ranunculus. Small amount of stitchwort. Bracken.	Rotational cut and clear leaving longer patches towards the woodland and scrub (potentially do a spring cut as well to reduce the fertility). Control bracken if it starts spreading.
TW 14	TQ5813 3912	Acid/neutral Grassland	Semi-improved grassland on corners between roads at Fir Tree Rd/Major Yorks Rd junction. South facing sides showing good assemblage of grasses and flowers (though one corner has recently been cut).	Knapweeds, tormentil, hawkweeds, thistles, selfheal, birds foot trefoil.	Cut and clear end of summer. Monitor creeping thistle as it may become too dominant. Maintain transitional structure towards woodland edge.
TW 15*	TQ5813 3912	Acid/heathy Grassland	Acid grassland (recently cleared and sown with own heather seed) with standards and newly planted trees, south facing slope, scrubby edges. Bracken and bramble and birch showing signs of encroachment.	Heather, mosses, gorse, vetches, foxglove (x1) meadow brown butterflies, blackcap	Rotational and piecemeal cut and clear, managing scrub and bracken (treating if necessary). Manage woodland edge structure with rotational cutting and coppicing. Monitor the heather. Possible grazing site.
TW 16	TQ5799 3923	Neutral Grassland	Neutral grassland, fairly 2 dimensional in structure and limited floristic diversity. However it is a sheltered south facing spot and meadow browns were present. Woodland flora present around the edges and also Himalayan balsam (which looked withered in patches – from spraying?).	Docks, coarse grasses, bramble, Himalayan balsam, brassica sp, enchanters nightshade	Control Himalayan balsam, cut and clear on rotation the grassland (possibly early spring cut to reduce fertility). Manage edges and scrub on rotational piecemeal basis.
TW 17	TQ5791 3933	Acid/neutral Grassland	Neutral grassland by Mount Edgecumbe Rocks. Sheltered and south facing with more diversity to the centre of the site. Old	Knapweed, ranunculus, coarse grasses, sorrel, clover, thistles, bracken.	Enhance structure and diversity with rotational cutting and clearing (and woodland edge management on east

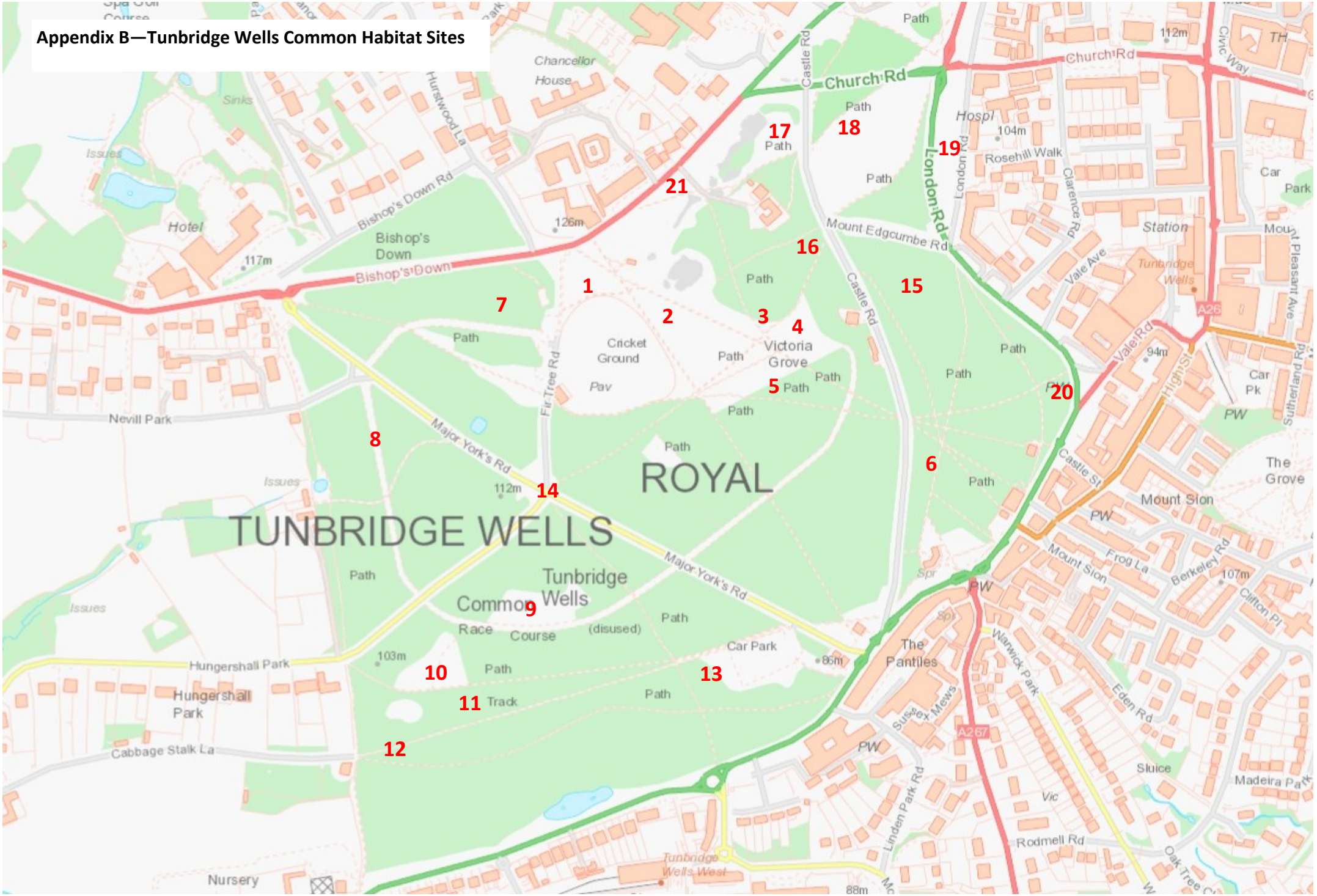
			hawthorn tree and oak standards which would make for a good shelter island with longer vegetation below them. Good assemblage of invertebrates present.	More finer grasses towards the centre	boundary). Possible spring cut sections for fertility reduction.
TW 18	TQ5800 3939	Neutral Grassland	South facing semi-improved neutral grassland bank along the northern boundary of the cricket pitch. Not a great deal of diversity but has got potential for enhancement.	Cock's foot and other coarse grasses, sorrel, clovers, thistles, ranunculus, and occasional finer grasses such as fescue	Rotational cut and clear late summer and possible spring cut to reduce fertility. Possibly add yellow rattle. Woodland edge management along eastern boundary.
TW 19	TQ5814 3943	Neutral Grassland	Semi-improved neutral grassland between London Road and Inner London Road. Grass kept short except around base of trees (extending out) for amenity. Yellow rattle sown in the longer patches of grass. Longer patches quite shaded by the trees but the whole site shows good floristic diversity potential. One limp ragwort – looked like it had been poisoned.	Knapweeds, stitchwort, daisies, hawkbit, mouse-ear, yarrow, sorrel, eyebright, doves foot cranesbill, yellow rattle	Rotational cut and clear. If possible extend longer areas but otherwise maintain.
TW 20	TQ5829 3908	Neutral Grassland	East facing semi-improved grassland bank opposite Vale Road. Limited diversity but what there is is good. Woodland edge.	Ragwort, ranunculus, coarse grasses, sorrel, clovers, thistles, bramble	Cut and clear with transitional structure to woods.
TW 21	TQ5783 3932	Acid/neutral Grassland	Semi-improved grassland on southern side of Mt Ephraim (road). Area previously had raised ants nests but was flattened during a previous cut. Fertility is a bit high but has potential for enhancement.	Cat's ear, yellow meadow ant	Rotational cut and clear, remove small trees that will increase shade and scrub over time.

Rusthall Common (*key areas)

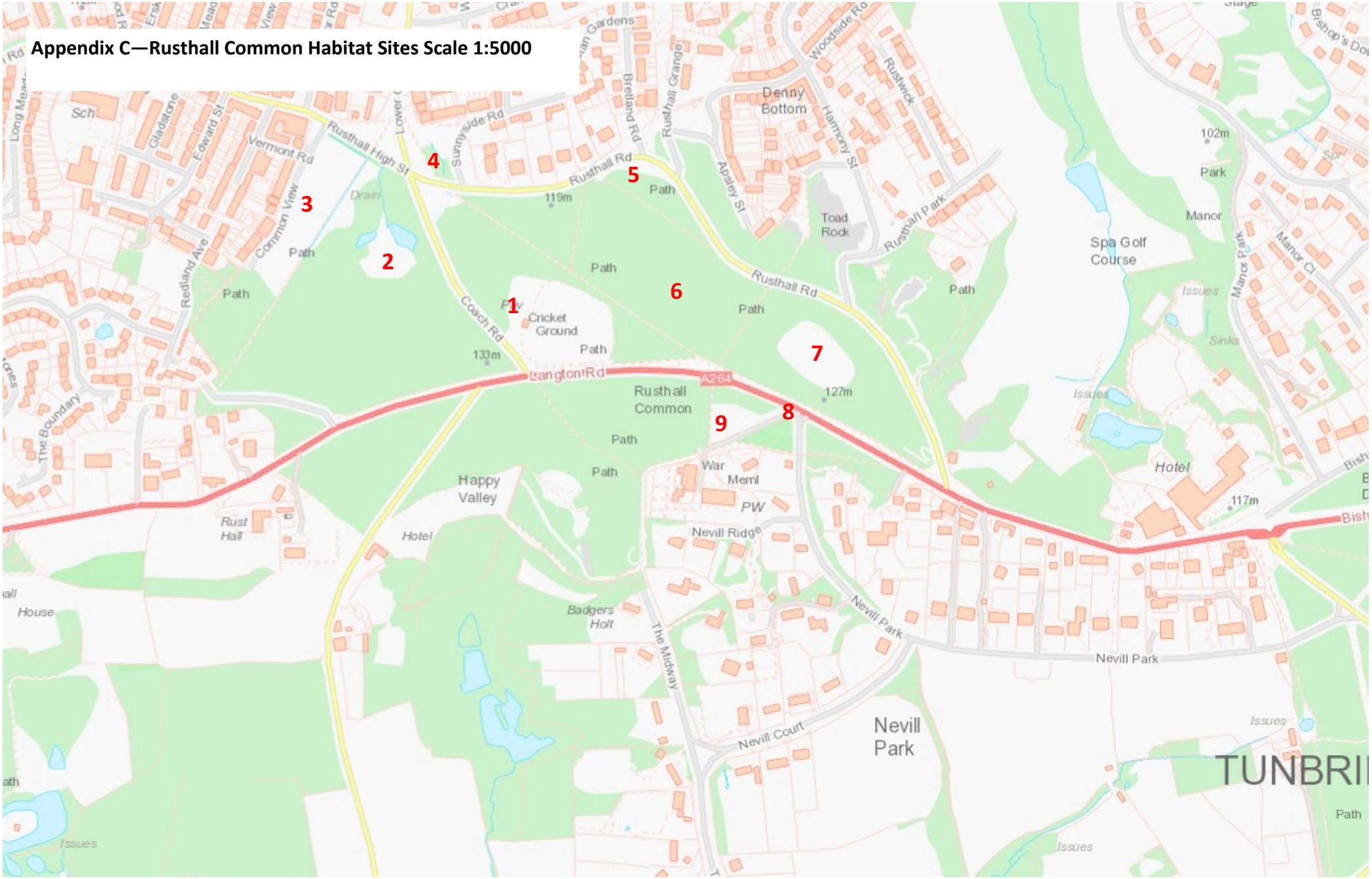
Site	Grid Ref	Habitat Type	Description	Notable Sp	Management Notes
R 1	TQ5642 3943	Neutral Grassland	Semi-improved neutral grassland behind the cricket hut (western boundary of cricket ground). Currently mown short like amenity grassland but potentially management is returning to the Commons. Areas of floristic diversity particularly toward the edges and in the scrubby section by the hut. Seeds are there but they are not given a chance by the close mowing regime. Dominant species are also present to be monitored if management changes.	Clovers, plantains, vetches, cinquefoil, geraniums, ranunculus, coarse grasses, ragwort	Rotational cut and clear, leaving areas of longer growth towards the edges – potentially good spring meadow. Potential site for new pond.
R 2	TQ5627 3954	Woodland/ Acid grassland	Woodland glade in old marl pit by ponds. Damp grassland (not free draining). Scrub encroachment and dominant species present (ie willowherb and horsetail) Yellow meadow ant hills	Fern, bracken, rosebay willowherb, bramble, horsetail, cock's foot grass	Rotational cut and clear, maintain structural mix, coppice edges on rotation (scallop south facing edges), and annual monitor (and management) of dominant species such as willowherb and horsetail.
R 3	TQ5620 3960	Neutral/Acid Grassland	Neutral/acid grassland mosaic by Common View (including amenity grassland & bonfire site). Good assemblage of grasses and patches of promising floristic diversity. Dominant species are present and there are patches of scrub in and around the site. The bonfire ground is displaying an interesting mix of wildflowers where the soil fertility has been reduced. Plenty of invertebrates present.	Thistles, daisies, plantains, nettle, meadow cranesbill, spurry, mayweed, fat hen, hogweed, crosswort, and a garden escapee - spirea	Rotational (piecemeal) cut and clear (scrape some patches?) Monitor flora Edge management – rotational cutting, maintain diversity of structure.
R 4	TQ5632 3961	Neutral grassland	Improved grassland patches at road junction (Coach/Sunnyside) and woodland edge (Sunny/Lower Green junction). Potential good mosaic of habitats with room for	Sorrel, selfheal, daisies, bramble, oak and ash seedlings.	Rotational cut and clear with extra enhancement options such as spring cuts, scrapes and maybe seed sowing.

			improvement.		
R 5	TQ5656 3963	Woodland edge	North facing woodland edge by bus stop. Neutral grassland transitioning up to woodland with currently good structural diversity.	Ranunculus, plantains, clovers, hogweed, selfheal, fern, bramble and nettles	Maintain transitional structure and diversity with rotational cut and clear, keep on top of bracken if it spreads, and remove cherry laurel.
R 6a	TQ5662 3949	Acid Grassland	Semi-improved acid grassland in woodland glade by pond. Uneven and disturbed ground.	Coarse grasses, bracken, bramble, mosses, Rosebay willowherb	Maintain as woodland glade with structural diversity through rotational cut/coppice and clear.
R 6b*	TQ5657 3952	Acid/neutral Grassland	Neutral and acidic grassland on a hillock with valuable mosaic of scrub and grassland that is ideal for birds, invertebrates and reptiles.	Foxglove, medick, hawkweeds, clover, fine grasses, thistles, ragwort, bracken, bramble. Cherry and yew trees. Cherry laurel.	Rotational cut and clear, scallop south facing edges and slopes, control the bracken if it becomes dominant, and remove and treat cherry laurel. Maintain bare ground patches (on south facing slopes especially).
R 7	TQ5676 3940	Acid Grassland	"The Bumps" – semi-improved acid grassland (part amenity) with limited floristic/structural diversity but showing potential and hosting patches of greater diversity, especially the south side.	Mouse-ear hawkweed, plantain, hawkbit, heath bedstraw, tormentil, stitchwort, good grass assemblage,	Rotational cut and clear (leaving unmown sections each time) Edge management for structural diversity
R 8	TQ5674 3933	Neutral Grassland	Neutral grassland along the verges of the road into St Philips Church.	Yellow loosestrife (on northern verge only), ranunculus, hogweed, sorrel, rank grasses, thistle, cleavers, bramble, wood cranesbill, bracken, cow parsley, ivy, Lime, sycamore and ash trees.	Maintain. The southern verge is very shaded but could be opened up in areas to allow a bit more light to the ground but probably fine to leave as is.
R 9*	TQ5667 3929	Neutral Grassland	Lowland meadow with excellent floristic assemblage and valuable habitat for invertebrates (including specialist bees) and wildlife in general.	Knapweed, ranunculus, plantains, clover, common spotted orchid, moss, oak saplings	Maintain – rotational cut and clear Monitor flora and invertebrate species

Appendix B—Tunbridge Wells Common Habitat Sites



Appendix C—Rusthall Common Habitat Sites Scale 1:5000



save our magnificent meadows

Rapid Assessment For Grasslands

The diversity of grasslands is often based on the presence of flowering plants and grasses. Rapid Assessment was developed to be a quick survey method, and provides a snap-shot of the plants present on a site.

save our magnificent meadows

This leaflet explains the method. Rapid Assessment should be undertaken at regular intervals between 1-5 years. Grassland habitats differ depending on the type and origin. Annual monitoring could be undertaken on grasslands that are being restored from species-poor to species-rich. Two or three year monitoring could be used to assess plant response to management work, or as part of ongoing site assessments.

It is designed to assess the state of common indicator plants. They consist of positive indicator plants, those that we would like to find in a habitat, and negative indicator plants, those that we would want to control or see fewer of in grassland.

The survey is tailored for each site. For example, positive indicator plants in calcareous grassland plants include salad burnet, mouse-ear hawkweed and quaking-grass, whilst in neutral grassland they are betony, bird's-foot trefoil, oxeye daisy and crested dog's-tail. Negative indicator plants include nettles, thistles, docks and bracken.

Indicator plants are used to find out whether grasslands are considered to be in favourable or unfavourable condition. It is a useful measure to understand how management is affecting grasslands, and whether positive indicator plants are present and spreading across restored and recreated grasslands.

Rapid Assessment can be completed by an individual or as part of a small group ideally with a maximum of 3-4 people. If there are more people, perhaps split into several groups to complete the survey faster.

Survey Methodology

Equipment

- Map of the site showing the area to be monitored
- Rapid Assessment record form suitable for the site
- Clipboard
- Pencil / pen
- ID book and hand lens (if required)
- GPS (see details for some suitable mobile apps)
- To help with identification of plants please bring a couple of plant ID books.

Risk Assessment

Please read the risk assessment prior to the survey. Bring a copy if you feel that it may be useful. If doing the survey alone, make sure that you have set up a buddy system – someone that knows where you are and what time you are expected home.

Survey period and timing

Rapid Assessment monitoring should take place when the wildflowers and grasses are in bloom to help ease identification. This is usually between May and August with the optimum time June and July before the grasslands are cut or grazed by livestock. Only a small suite of around 25 indicator plants will be monitored, reducing down the amount of time that a survey will take, but more visits should be planned if they are needed to finish monitoring the entire grassland area.

Method

1. Go to the area marked on the map to be surveyed. Make sure that you have the right Rapid Assessment record form for this area with you provided by the project. This will depend on the type of grassland, for example calcareous grassland or neutral hay meadow, which has already been identified.

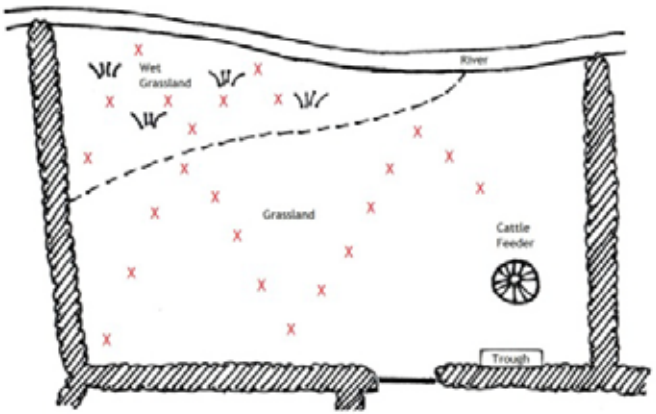
2. Start the survey in a logical manner either at one corner or at the entrance to the site. Before starting the survey think of the method in which you wish to survey the grassland. This could either be done by walking a 'W' through the grassland or in a grid pattern (see diagram).

3. At regular intervals along the walk, or at points along the grid, stop and fill in the record form. You could stop every 10, 20 or 30 paces depending on the size of the field. If a standard number of paces has been recommended for a particular field this will be included on the information provided with the map. A minimum of 10 stops, creating 10 recording points, should be undertaken in each grassland or area being monitored. This is completely adequate for the data analysis, but could be extended up to 20 stops to make sure that they are spread evenly across the field and the whole area is monitored.

4. At each recording point imagine that you are at the edge of a 1x1m square, called a quadrat. Fill in one row of the record form for each recording point, starting with the grid reference. For each species mark whether it is present or absent (this could be in the form of a Y for present and N for absent). Some of the columns may ask whether there are quantities of plant cover such as 'is a single species covering more than 50%'. In this case use the present symbol as a 'yes' and the absent symbol as a 'no' (see example survey form and explanation about how to estimate coverage). There is no need to write a coverage scale for each species, as the number of stops acts as a frequency across the field. After filling in the entire row for the recording point move onto the next recording point.

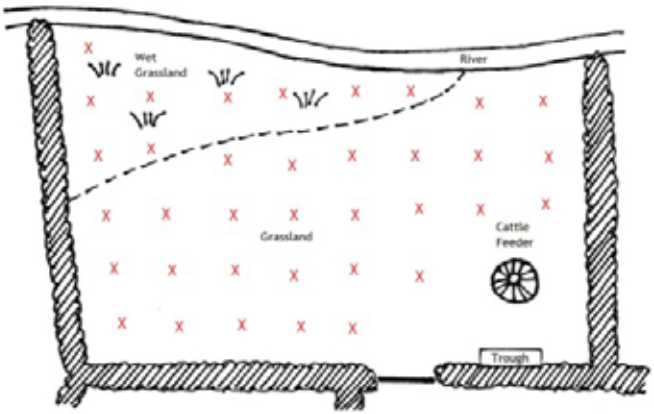
5. Carry on surveying until you have reached the end of your 'W' walk or grid pattern and have covered the entire survey area.

'W' Sampling Pattern



'W' sampling pattern. The wet and dry areas of the field may be surveyed seperately using different Rapid Assessment record forms with different indicator plants.

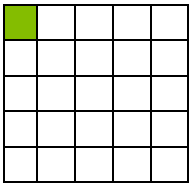
Grid Sampling Pattern



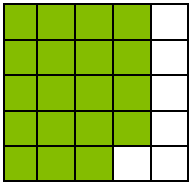
Grid sampling pattern. The wet and dry areas of the field may be surveyed seperately using different Rapid Assessment record forms with different indicator plants

How to assess a percentage cover

If a question asks whether the plant coverage is above or below a certain percentage, the easiest way to decide whether this is the case is to imagine the plant is grouped into a corner or line against one edge of the quadrat. The coverage can then be estimated depending on the number of squares filled by the plant on an imaginary 5 x 5 grid of the quadrat. Each square represents 4%.



For example, answering the question on the example form 'Yorkshire fog >5%?' would be a 'No' if 1 square is filled, as coverage is 4%.



For example, answering the question on the example form 'Single species >70%?' would be a 'Yes' if 19 squares are filled, as coverage is 76%.

Grid Reference

There are several ways of taking a grid reference. A 10-figure grid reference is needed for the most detailed fix on the location. However, you can note down a 6 figure grid reference using a close-up map of the site.

To do this you need to identify the horizontal lines called 'northings' and vertical lines called 'eastings'. These are located at every 1km interval on a map creating a series of squares covering the UK and each 1x1km square is called a monad. Grid references are easy if you can remember that you always have to go along the corridor before you go up the stairs.

To find the number of a monad, first use the eastings to go along the corridor until you come to the bottom left-hand corner of the monad you want. Write this two-figure number down. Now imagine this monad is divided up into 100 tiny squares with 10 squares along each side. Still remembering to go along the corridor mark down the number of small squares where your point falls. This creates the first three digits of a grid reference. To create the next three digits repeat this process using the northings to go up the stairs until you find the same corner of the monad. Mark down these two numbers and then imagine the monad is spilt into 100 tiny squares with 10 squares along each side. Still remembering to go up the stairs mark down the number of small squares where your point falls. To get the two letter code for the front of the grid reference look at the corner of the map. The UK is split into 100x100km squares and each of these huge squares is given a code so that it can be located across the country. Altogether this creates the grid reference i.e. Stonehenge is at SU 122 422.

An alternative way to get a more detailed grid is to use a handheld GPS unit. These can give up to 10 figure grid references with varying degrees of accuracy depending on the satellites available. Each GPS unit is different, and you may need to read the instructions to find out how to use it.

There are good mobile apps that can provide a 6, 8 or 10 figure grid reference[1].

[1] Apps sourced on 1st February 2015. Newer or alternative apps may be available.

For Windows Phones (and tablets);

- GPS to Grid Ref (green icon with OS on it). It currently costs £0.79 but will convert long & lat from the phone's internal navigation into a 10 figure OS grid reference.

- Grid Ref UK and Ireland (UK map icon) which will give you a 6 figure OS grid reference and is free (but not as good as an 8 or 10 figure grid ref).

For Android and iPhones (and tablets);

- OS Mapfinder (map with the OS logo on top) will project your location onto an OS map at a large scale (more detailed maps can be downloaded for a fee). By pressing on the icon hovering on your position you can get a 10 figure grid reference. This app is free (which you won't need the more detailed maps for Rapid Assessment).

All of the apps should be downloaded prior to the survey as some also require base maps to be downloaded to work (such as OS Mapfinder which needs to download the large-scale maps) and need internet access to do this. They may not be usable without downloading this background information.

All of these apps use satellite technology so you do not need to be in mobile reception to get a grid reference, but where satellite access is restricted, such as in woodland when the trees are in leaf, in gorges and tunnels etc., they may not be able to connect to a satellite to provide a grid reference, or the grid reference may be inaccurate.

If you cannot do any of these do not worry. Although this is really useful information as it will help inform management, it is not absolutely essential. Doing a survey without taking grid references is much better than surveys not being completed at all.

Example survey form for neutral grassland

Enter the name of the grassland, date of survey and the surveyors along the top line

Site: *Spring meadow*		Date:*28-06-2015*				Surveyors:																						
						Positive indicator spp													Negative indicator spp						Tuft grasses			
Sample number	Grid reference	Sward height >5cm in June/July	Single species >70%	Herbs >40%	<5% scrub	Betony	Field scabious	Self-heal	Common bird's-foot trefoil	Yellow rattle	Bulbous buttercup	Meadow buttercup	Oxeye daisy	Common / black knapweed	Yellow rattle	Crested dog's-tail	Cuckoo flower / Lady's-smock	Yellow vetchling	Stinging nettle	Broadleaved dock / curled-leaf dock	Creeping thistle / spear thistle	Ragwort	Soft rush / hard rush	Bracken	Cock's-foot >10%	False oat grass >10%	Yorkshire fog >5%	Additional species?
1	*SPxxxxxxxxxx*	*Y*	*N*	*Y*	*Y*	*Y*	*N*	*N*	*Y*	*Y*	*Y*	*N*	*Y*	*Y*	*Y*	*Y*	*N*	*Y*	*N*	*N*	*N*	*Y*	*N*	*N*	*Y*	*N*	*Y*	
2	*SPxxxxxxxxxx*	*Y*	*N*	*Y*	*N*	*Y*	*N*	*Y*	*Y*	*Y*	*Y*	*N*	*N*	*Y*	*Y*	*Y*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*N*	*Y*	*N*	*Y*	
3	*SPxxxxxxxxxx*	*Y*	*N*	*Y*	*N*	*N*	*Y*	*N*	*Y*	*Y*	*Y*	*N*	*Y*	*Y*	*Y*	*Y*	*N*	*Y*	*N*	*N*	*N*	*Y*	*N*	*N*	*N*	*N*	*N*	
4	*SPxxxxxxxxxx*	*N*	*N*	*Y*	*N*	*N*	*Y*	*Y*	*Y*	*N*	*Y*	*N*	*Y*	*Y*	*Y*	*Y*	*N*	*N*	*Y*	*N*	*Y*	*N*	*N*	*N*	*Y*	*N*	*N*	

This is the sample point along the 'W' walk or grid pattern

Using the grid reference we can locate each recording point and see if there are any plants in particular parts of the grassland. This may help target management such as scrub and bracken control

Y indicates that the 1m^2 was covered by more than 40% flowering plants

N indicates that the 1m^2 has more than one species covering more than 70% of the ground. If a single species was covering 70% of the 1m^2 then this would change to a *Y*.

N indicates that there is no cuckoo flower in the 1m^2

N indicates that there is no ragwort in the 1m^2

Y indicates that the 1m^2 was covered by more than 10% cock's-foot

Plantlife

Ulster Wildlife

Ymddiriedolaeth Genedlaethol National Trust

The Wildlife Trusts Somerset

The Wildlife Trusts Northumberland

Wiltshire Wildlife Trust

Working for your Countryside
Medway Valley Countryside Partnership

Scottish Wildlife Trust

Cotswolds Conservation Board

rspb giving nature a home

heritage lottery fund
LOTTERY FUNDED

Heathland Monitoring Form

Site: **Compartment**:

Date: **Time**: **Assessed by**:

Habitat Attribute (*negative indicators)	**Percentage Cover** (*please tick*) **D**ominant >75%, **A**bundant 75-51%, **F**requent 50-26% **O**ccasional 25-11%, **R**are 10-1%, **X** 0%						**Target % Cover**
	D	**A**	**F**	**O**	**R**	**X**	
Bare ground							1-10% (R)
Pioneer heather							10-40% (F)
Building/Mature heather							20-80% (A)
Degenerate heather							<30% (R,O)
Other dwarf shrubs (ie *Ulex* spp, Bilberry, *Erica* spp)							<50% (O)
Graminoids (ie *Agrostis* spp, *Carex* spp, *Festuca* spp, *Molinia caerulea*)							<25% (O)
Desirable Forbs (exc dwarf shrubs (ie *Galium saxatile, Polygala serpyllifolia, Potentilla erecta*)							At least 2 species present (O)
Bryophytes & Lichens							No target
*Bracken							<10% (R)
**Rubus* spp, Nettles, Ragwort, Creeping or Spear thistles, Willowherb, Foxglove							<5% (R)
*Birch and other trees (inc seedlings)							<15% (R)
*Non-native species (ie Rhododendron)							0%

Notes (ie recent management activity or other activities that may have an impact on the site):

Important or rare species or features recorded:

Rusthall Commons Survey Photos

R 1

R 2

R 3

R 4

R 5

R 6

R 7

R 8

R 9

Tunbridge Wells Commons Survey Photos

TW 1

TW 2

TW 3

TW 4

TW 5

TW 6

TW 7

TW 8

TW 9

TW 10

TW 11

TW 12

TW 13

TW 14

TW 15

TW 16

TW 17

TW 18

TW 19

TW 20