

MINOR GREENSPACE AUDIT IDENTIFYING OPPORTUNITIES 2022

Produced by:



On behalf of:



MINOR GREENSPACE AUDIT 2022

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1.0 INTRODUCTION

This audit aims to identify and quantify opportunities for ecological gains across Three Rivers District Council owned greenspaces which do not have bespoke management plans.

This report includes the following sections:

- Key concepts (section 3) outlining the considerations which underpin the approach
- Management prescriptions (section 4) describes the methodology employed and considers the management options
- Opportunities (section 5) outlines the results of the audit
- Estimated costs (section 6) provides outline cost figures for implementation firstly

By clearly and concisely explaining and implementing key principles, it is hoped that this report will be accessible and useful to councillors, officers, contractors and the public to ensure a unity of approach and outcome. The report is not time bound, but simply highlights where enhancements can be made and is for Three Rivers District Council to prepare an implementation programme over a number of years, subject to budget and resources.

Public greenspaces have always served a dual purpose: they play a vital role in public mental and physical health while acting as wildlife havens. The opportunities recommended in this report aim to enhance rather than transform green spaces; making them better for biodiversity while continuing to provide a vital resource for the local population. Scientific evidence suggests this is possible and has been achieved elsewhere in the UK. This evidence has been supported by the successful pilot implementation of schemes for North Herts District Council and St Albans City and District Council in 2020/2021.

This report identifies opportunities for minor greenspaces by recommending one of a discrete set of management prescriptions, described in the next section. These interventions are designed to be:

- 1. In keeping with the greenspace and its typical use.
- 2. Cost effective.
- 3. Easy to implement within the existing framework.

2.0 KEY CONCEPTS

2.1 Common approach

The two cornerstones of grassland management interventions and tree planting are complemented by a limited suite of set management interventions which may be implemented "off the shelf" to maximise ecological opportunities without the need to develop full management plans for each site.

The advantage of this approach is the enjoyment of economies of scale – running large implementation contracts across a range of sites, potentially scaled up to cover one or more districts.

The principal disadvantage is that some nuance may be lost in implementation. This issue may be minimised by identifying opportunities on generally poor amenity grassland so that the opportunity cost of intervention is low, and including a public engagement phase where appropriate on very well used or sensitive sites.

Taking a common approach should also mean that ongoing management of the areas, following the guidelines in Annex I, may be integrated into multi-year grounds maintenance contracts, supplementing the present mowing regime.

2.2 Dual purpose

Three Rivers District Council declared a climate emergency in 2019. As part of its plans to tackle the climate emergency, TRDC has a commitment for carbon neutrality by 2030 for its own emissions and supporting the district to achieve net-zero by 2045 at the latest. The Council produced a Climate Emergency & Sustainability Strategy, including an aim:

"To ensure net gains in biodiversity to address the ongoing Ecological Emergency, protect and enhance precious habitats and species, and utilise nature to build climate resilience."

The need for public greenspace to offer more in terms of wildlife benefit is becoming increasingly clear in the context of climate change and species loss, and Three Rivers District Council are soon to begin production of a biodiversity and nature recovery strategy. Global warming associated with climate change creates "mismatches" in plant/pollinator phenology, compounding the pressure felt by pollinator populations from factors such as the intensive use of agrochemicals and habitat loss or fragmentation. Adjustments to greenspace management, as proposed in this report, should contribute to reducing this pressure and if applied on a large scale, contribute significantly to biodiversity gains across the district.

Whilst some management approaches may preclude certain competing uses (e.g. a newly planted wildflower meadow restricting casual sports or picnicking), in many cases differing uses of the space can co-exist. Data collected in a 2016 survey by the House of Commons Communities and Local Government Committee found that the most popular uses for public parks were 'going for independent walks', 'seeing nature', 'going for runs' and 'enjoying the peace and quiet'. There will be significant opportunities to accommodate these uses alongside improved habitats and provide publicly supported ecological improvements.

2.3 Ecological networking

Part of the on-site surveying process is to both identify opportunities to improve positive features, and identify shortcomings where the lack of a particular habitat constitutes a significant restraint to the site's ecological potential.

Ecological networks are a key part of the UK Government's 25-year environment plan, with resilience a principal factor. Greenspaces and local rights of way form the basis of ecological networks in suburban spaces, meaning that any opportunities to further the connectivity of sites should be realised.

Improved connective habitats naturally improve marginal habitats, which can be overlooked in carefully managed local authority greenspaces.

2.4 Carbon sequestration

Carbon sequestration is the process of capturing and storing carbon dioxide, a greenhouse gas and contributor to global warming.

The effect of improved grassland management practices on carbon sequestration rates is difficult to categorise without specialised analysis given the complexities of carbon storage in soil. A saving of diesel from less frequent mowing may be expected, though again any calculation would be site specific.

Quantifying the levels of carbon sequestered by tree planting, be that specimen tree, woodland or hedge planting is more easily achieved given the established framework of metrics established to facilitate the nascent carbon credit market. In the case of woodland area planting, the 'woodland carbon code' organisation offers a calculator found at <u>www.woodlandcarboncode.org.uk/</u>. The results from this calculator are summarised in the outcomes table found in Section 4 below and are based on carbon sequestration to maturity.

Figures provided for carbon sequestration should be considered as indicative values only.

2.5 Biodiversity net gain

Biodiversity net gain is a concept whereby developers in the future will be expected to realise aggregate, quantifiable improvements to biodiversity as part of the project. The metric is still in the development stage, though expected to become mandatory.

The proposed framework is easily transferable and may be applied to biodiversity targets across the county or borough. Upon widescale implementation, it is expected that opportunities will exist to sell 'units' of biodiversity gain through a market. The outcomes table in Section 4 includes estimates of the biodiversity net gain units to come about from each of the proposed interventions.

Calculations were made using <u>Natural England Biodiversity Metric 3.0.</u> This requires information on current habitat type and condition, and habitat type and condition following intervention. As sites were not formally surveyed as part of this audit, we have made a set of assumptions, detailed in Annex II, to enable biodiversity unit scoring and ensure consistency. Figures provided should therefore be regarded as indicative only. Formal habitat survey will be required to confirm these calculations should areas be considered as off-set sites for developments. In addition, the post-implementation values are based on the assumption of the successful implementation of the specifications found in Annex I with ongoing monitoring and management to maintain the required standards.

3.0 MANAGEMENT PRESCRIPTIONS

The below management prescriptions are a discrete set of off-the-shelf prescriptions which correspond to areas mapped in Annex II. On-the-ground surveys were carried out in summer 2021 by members of the Hertfordshire County Council Countryside & Rights of Way Land Management team. All members of that team have experience assessing and writing management plans for grassland and woodland sites.

3.1 Spring Wildflowers

Planting bulbs and spring-flowering plants offers the opportunity to provide an early-season nectar source for pollinators at minimal inconvenience to recreational greenspace usage. This is particularly useful in areas where usage is high in the summer, for picnicking and the like, where other options may not be appropriate.

Another useful aspect of spring flowers can be delineating different management areas, such as between amenity and conservation grassland to ease proper implementation.

Native bulbs such as bluebell, wood anemone, lesser celandine, snake's-head fritillary or wild garlic, as well as wildflowers such as cowslip or cuckoo flower, represent the best option for supporting native ecology. These species, however, are generally adapted to the woodland floor rather than grassland areas.

Crocuses are the best non-native option and should form the majority of the open planting mix. Bumble bees, solitary bees and honey bees will all readily take advantage of crocus nectar when emerging from hibernation in early spring. They may be supplemented by other nectar providing species as appropriate, please see the specification found in Annex I for more detail.

3.2 Wildflower Meadows

3.2.1 Meadow Establishment

3.2.1.1 Amended Mowing Regime

Relaxing the mowing regime to a cut-and-lift regime has the potential to give better value for money than intensive amenity mowing. Studies have shown that this simple approach has immediate, measurable benefits. A 2013 trial in Saltdean, East Sussex illustrated that this approach led to a 3 to 5 times greater abundance of flowers and flower-visiting insects in long-grass areas. In that study public approval stayed high, an important aspect to this approach which can be aided by the provision of interpretation alongside the sympathetic design of meadow areas to complement well-used amenity grassland.

The principal shortcoming of this approach is that although the number of flowers and pollinators increased significantly the diversity of species did not. Diverse ecological systems are more resilient to the climate change induced stresses. The following management prescriptions address this shortcoming and pro-actively improve grassland eco-systems.



Figure 1: Species like tufted vetch can soon re-emerge when mowing is relaxed.

3.2.1.2 Meadow Enhancement

Creating exemplary wildflower meadows requires higher resource input than an annual cutand-lift regime, be that in terms of financial resources or staff/volunteer time. Key elements of successful schemes, according to Natural England are:

- 1. Targeting invest resources where returns will be greatest
- 2. Site preparation bare ground and appropriate seed sources are necessary
- 3. Effective and adaptive management variability in soil type and other local factors mean what works at one site may not be effective elsewhere

A principal aim of the site surveys was identifying the areas worthy of increased investment, should those resources be available. A key indicator of the potential for success is soil fertility, exhibited by coarse grasses such as rye grass and signs of rank grassland.

A full specification appears in Annex I. Key components of that specification are

- 1. The provision of a short sward with at least 50% bare ground vital for the success of new seeds
- 2. The broadcast of the appropriate wildflower seed mix
- 3. Rolling or treading in of the seeds
- 4. Including newly sown areas in "amenity grass" management for the first year to ensure proper establishment

5. Management through a 'Conservation Cut' or 'Hay Meadow Cut' regime as detailed below

The target areas mapped include the provision of paths cut through the meadow as appropriate and close-cut margins adjacent to paths.

The use of "green hay" was considered, where seed rich hay from a similar donor site nearby is transferred. For the marginal gain of local genetic adaption, the process requires a great investment of labour and is felt to be suitable for bespoke operations on ecologically important sites.

Similarly, crocuses or similar early flowering bulbs can be planted around the wildflower areas in a linear fashion. This demarcation of wildflower and amenity areas is useful for the first amenity cut of the year however it is felt that the financial and time investment too high for this minor utility. The approach is useful under some circumstances and may be considered for appropriate sites, as with the green hay approach above.

3.2.2 Meadow Management

3.2.2.1 Conservation Cut

A cut-and-lift will be carried out in autumn. Cuttings are removed as leaving them in place has a smothering and fertilising effect, leading to rank grassland rather than a wildflower meadow. It should be ensured that contractors have the proper equipment to undertake the cut-and-lift. A full specification for the work may be found in Annex I.

3.2.2.2 Hay Meadow Cut

This is the optimal management approach for meadows but has additional resource requirements than a conservation cut. An annual hay meadow cut-and-lift is carried out in between late July and late August. A second cut is done in the Autumn, where the grass may be collected and removed off site, depending on the amount of regrowth.

3.3 Enhanced amenity

Limited benefits can be realised by simply raising the cutting height of amenity cuts. This can be targeted at less-used spaces where a level of neatness is still required or some recreational use needs to be retained, e.g. smaller roadside verges, areas of green spaces away from formal sports pitches, small green spaces adjacent to properties. Raising the cutting height to a minimum of 50mm will allow existing species typical of amenity areas (e.g. yarrow, daisy) to flower, and could be supplemented with seeding of other low-growing herb species to increase species diversity.

3.4 Woodland edge succession and ride management

Scrubby woodland edges are often an overlooked and rare feature of urban and suburban greenspaces. The deliberate introduction of woodland edge habitat can have a great impact to biodiversity as this habitat benefits insects, birds and mammals. For birds especially,

woodland edges are vital as nesting habitats and food sources, with a positive correlation found between density of low vegetation in the woodland edge and avian species diversity.

Scrubby woodland edge can also stop unwanted "desire lines" which disturb wildlife in woodland compartments. Such edges also reduce problems of compaction of mature tree roots and practices such as dumping vegetative waste at the foot of mature trees.

Woodland rides, where a scrubby edge is formed on either side of a path through a woodland, has a similar beneficial impact and is managed in much the same way.

A full specification is found in Annex I but the process is very simple. Ceasing all mowing at the woodland margin and alongside woodland paths will cause a scrubby edge to develop naturally, the terminal height of scrubby species such as hawthorn, spindle and dogwood naturally maintain a graduated edge. The margin of "tall herbs" should be mown over a two-year rotation to stop woody succession and maintain proper edge graduation. Some control of the scrubby areas may be necessary to maintain a properly graduated edge if the scrub begins to develop into high forest. When mowing, the cut material does not need removal and can be left on the ground. Unlike with wildflower meadows there is not a need to create a low nutrient environment.



Figure 2: Exemplary woodland edge

3.5 Hedge planting and restoration

Hedges connect fragmented habitats and offer many of the same benefits to wildlife as woodland edge. Hedges offer the benefits of shelter and food provision for birds and insects alongside screening and flood mitigation.

The drawback of hedge planting in urban spaces is the ongoing maintenance costs. Additionally, poorly planned hedges can provide havens for anti-social behaviour. The planning of new hedges only where hedge cutting already happens can help to decrease the marginal cost of maintenance, otherwise hedge planting opportunities are identified and careful planning ensures the screening provided by hedges is used in a positive way

3.6 Pond creation and wetland enhancements

At least two thirds of UK freshwater species may be found in ponds, offering a great opportunity to improve the ecological diversity of any greenspace. The ponds themselves support food webs which include amphibians, damselflies and beetles to name a few. These species and the marginal habitats around ponds provide habitat for birds such as reed warblers, bats such as Daubenton's bat and offer a water source for terrestrial mammals.

Ponds offer additional benefits to flood risk management and water pollution, and can offer a focal point for site visitors to observe and learn about wildlife.

Similarly, wetland areas and shallow scrapes, often fed by groundwater, will provide seasonally wet areas offer a valuable habitat.

Any source of fresh water represents an opportunity to build a pond. Ponds can enhance almost any habitat, be it grassland, heathland or woodland. A prudent approach should be taken in busy areas where ponds may represent a safety hazard, and polluted water can severely limit the wildlife benefits offered by ponds.



Figure 3 A small but clean pond

3.7 Woodland Creation

In these times the need for tree planting to sequester carbon is more apparent than ever. This report aims to identify areas where trees could be planted which would enhance these greenspaces or at least not detract from their normal function.

There are a multitude of social benefits to planting trees in urban and suburban settings: an improvement of health and wellbeing, screening, absorption of noise and reduction in temperatures. The environmental benefits are also numerous, woodlands are cornerstone of native eco-systems and play a role in both climate change resilience and mitigation.

The benefits of tree planting are well known but the limited size and dual functionality of the surveyed minor greenspaces mean that careful consideration is necessary with regards to planting locations.

The species mix is again generalised for ease of contract management and to enjoy economies of scale. The species mix is all native and has been successful at other Hertfordshire sites.

This approach to planting is cost effective as whips (1-year old saplings) can be planted at 2 metre intervals, by contractors or volunteers then thinned in five-year intervals. After 20 years a maturing, native copse or woodland extension will be apparent (full specification in Appendix I).

3.8 Standard Tree Planting

There are areas where area planting is inappropriate and singular specimens should be planted instead. Planting individual trees offer many of the same benefits of the above section. The effect of a large, open grown tree cannot be understated and may be enjoyed for generations to come. Again, this report aims to identify opportunities rather than suggest that all recommended trees should be planted in the next financial year.

To avoid the lengthy process of soil testing analysis, an accepted rule-of-thumb is that tree species already thriving on site are viable for planting. This approach also ensures the newly planted species are in keeping with the greenspace.

Sites should be assessed on an individual basis prior to planting specimen trees. In some instances, year old "whips" may prove the cost-effective solution, though "standards" of 2m-3m height may be more resistant to anti-social behaviour. When determining the planting costs there is a need to factor in maintenance for the early years to establishment, mostly involving watering.

4.0 **OPPORTUNITIES**

4.1 Overall Summary Table

Site	Total viable site area (m²)	Spring wildflowers (m^2)	Conservation cut (m²)	Hay meadow cut (m²)	Future hay meadow enhancement (m²)	Edge succession & ride management(m²)	Hedge planting (m²)	Hedge restoration (m^2)	Enhanced amenity cut (m^2)	Rewilding areas (m²)	Pond creation and wetland enhancements (m^2)	Standard tree planting (Estimated no. of trees)	Woodland Creation (m²)
Anne Shaw Gardens South Oxhey Ward, WD19 7AT	994											2	
Anthony Close Oxhey Hall & Hayling Ward, WD19 4NA	6,410	1,509										3	
Ashburnham Drive Oxhey Hall & Hayling Ward, WD19 7PU	1,004	138							337			2	
Ashburnham Drive Play Area Oxhey Hall & Hayling Ward, WD19 7PU	1,383		35									2	
Baldwins Lane Playing Field & Play Area Dickinsons Ward, WD3 3LE	16,996		2,084			573		129				5	
Barton Way Playing Fields Durrants Ward, WD3 3QA	22,607		4,040					63				8	817
Batchworth Hill Rickmansworth Town Ward, WD3 1JP	526												
Beechen Wood and Play Area Chorleywood South & Maple Cross Ward, WD3 9TF	19,850	576						1,176					

Site	Total viable site area (m²)	Spring wildflowers (m ²)	Conservation cut (m ²)	Hay meadow cut (m²)	Future hay meadow enhancement (m^2)	Edge succession & ride management(m²)	Hedge planting (m²)	Hedge restoration (m ²)	Enhanced amenity cut (m²)	Rewilding areas (m²)	Pond creation and wetland enhancements (m ²)	Standard tree planting (Estimated no. of trees)	Woodland Creation (m²)
Bell Close Abbots Langley & Bedmond Ward, WD5 0QU	215											1	
Berry Lane and Mead Place Penn & Mill End Ward, WD3 7HB	33,144		317	16,025	16,025					6,770			
Birkdale Gardens Oxhey Hall & Hayling Ward, WD19 7AN	5,847								2,824				
Buttlehide Chorleywood South & Maple Cross Ward, WD3 9TY	2,029		660			328							
Cassiobridge Recreation Ground Dickinsons Ward, WD3 3DG	4,521	67	462				103					5	318
Cheshire Drive Leavesden Ward, WD25 7GP	1,790		583				159						
Chorleywood Road Cemetery Rickmansworth Town Ward, WD3 4EH	16,545												
Church Hill, Bedmond Abbots Langley & Bedmond Ward, WD5 0RN	4,001												
Coombe Hill Road Open Space Penn & Mill End Ward, WD3 8ND	11,471			7,791	7,791							7	1,092
Denham Way Chorleywood South & Maple Cross Ward, WD3 9SP	56,660		9,026							6,142	687	13	1,460

Site	Total viable site area (m²)	Spring wildflowers (m ²)	Conservation cut (m ²)	Hay meadow cut (m²)	Future hay meadow enhancement (m²)	Edge succession & ride management(m²)	Hedge planting (m²)	Hedge restoration (m ²)	Enhanced amenity cut (m²)	Rewilding areas (m²)	Pond creation and wetland enhancements (m ²)	Standard tree planting (Estimated no. of trees)	Woodland Creation (m ²)
Dickinson Square Dickinsons Ward, WD3 3HA	1,539												
Dowding Way Open Space Leavesden Ward, WD25 7GA	4,414		717			235							
Eastbury Recreation Ground Moor Park & Eastbury Ward, HA6 3HU	12,576		2,340									5	
Fearney Mead Play Area Penn & Mill End Ward, WD3 8QF	286	55											
Fortune Common Rickmansworth Town Ward, WD3 1HU	9,281			7,191	7,191						222		
Furtherfield Leavesden Ward, WD5 0PL	108,826									108,826			
Gade View Gardens Gade Valley Ward, WD4 8PQ	265												
Grove Crescent Dickinsons Ward, WD3 3JS	2,052	182										1	
Hallowes Crescent Oxhey Hall & Hayling Ward, WD19 7NT	3,056		1,355									5	
Hayling Road Play Area Oxhey Hall & Hayling Ward, WD19 7BW	5,604		677				357		608			6	
Hayling Road Verges Oxhey Hall & Hayling Ward, WD19 7JR	10,633	1,296							3,204				

Site	Total viable site area (m²)	Spring wildflowers (m ²)	Conservation cut (m ²)	Hay meadow cut (m²)	Future hay meadow enhancement (m²)	Edge succession & ride management(m²)	Hedge planting (m²)	Hedge restoration (m ²)	Enhanced amenity cut (m²)	Rewilding areas (m²)	Pond creation and wetland enhancements (m ²)	Standard tree planting (Estimated no. of trees)	Woodland Creation (m ²)
Huntercrombe Gardens South Oxhey Ward, WD19 6TN	2,501	1,112										3	
Jacketts Field Abbots Langley & Bedmond Ward, WD5 0PA	5,477					116	159					11	
Jordans Road Penn & Mill End Ward, WD3 8GN	636	162											
King George V Playing Ground Penn & Mill End Ward, WD3 8JN	32,317		5,073				123						
Land at Tudor Way Penn & Mill End Ward, WD3 8HY	2,886			1,092	1,092							21	
Land to the rear of The Queens Drive Penn & Mill End Ward, WD3 5FH	4,415		1,780				62					5	
Langley Lane Play Area Leavesden Ward, WD5 0LX	12,393												
Lincoln Drive Play Area South Oxhey Ward, WD19 7GE	129												
Northwick Road South Oxhey Ward, WD19 6JH	5,158	482	491									11	
Oak Green Abbots Langley & Bedmond Ward, WD5 0PH	1,169												

Site	Total viable site area (m²)	Spring wildflowers (m²)	Conservation cut (m ²)	Hay meadow cut (m²)	Future hay meadow enhancement (m²)	Edge succession & ride management(m²)	Hedge planting (m²)	Hedge restoration (m ²)	Enhanced amenity cut (m²)	Rewilding areas (m²)	Pond creation and wetland enhancements (m ²)	Standard tree planting (Estimated no. of trees)	Woodland Creation (m ²)
Oaklands Avenue Play Area Oxhey Hall & Hayling Ward, WD19 4LN	3,180		761									6	
Prestwick Road South Oxhey Ward and Carpenders Park Ward, WD19 6TQ	7,417								1,494			5	
Rickmansworth Golf Course Moor Park & Eastbury Ward, WD3 1QL	331,226								21,701				
Rickmansworth Park Rickmansworth Town Ward, WD3 1FX	22,716			4,259	4,259	1,437						4	
Romily Drive Open Space Carpenders Park Ward, WD19 5EJ	19,978		2,246	3,268	3,268			281				8	731
Rosehill Gardens Gade Valley Ward, WD5 0HF	4,010								705			2	
Scotsbridge Rickmansworth Town Ward, WD3 1HU	20,144		1,150			450							
Skidmore Way Rickmansworth Town Ward, WD3 1TA	2,858	23	200			176							
Tanners Hill Leavesden Ward, WD5 0LT	1,947		1,807									7	
Tanners Wood Abbots Langley & Bedmond Ward, WD5 0PX	26,683		2,378									3	
The Grove Rickmansworth Town Ward, WD3 1NG	11,273												

Site	Total viable site area (m²)	Spring wildflowers (m²)	Conservation cut (m ²)	Hay meadow cut (m²)	Future hay meadow enhancement (m²)	Edge succession & ride management(m²)	Hedge planting (m²)	Hedge restoration (m ²)	Enhanced amenity cut (m²)	Rewilding areas (m²)	Pond creation and wetland enhancements (m ²)	Standard tree planting (Estimated no. of trees)	Woodland Creation (m ²)
The Oaks Oxhey Hall & Hayling Ward, WD19 4LR	622	30											
The Swillet Playing Field Chorleywood South & Maple Cross Ward, WD3 5BG	6,610		2,108				309					3	
Toms Lane Abbots Langley & Bedmond Ward, WD5 0RA	37,775									37,775			
Windmill Drive Dickinsons Ward, WD3 3FB	476												
Woodcock Hill Cemetery and Shepherds Close Dell Rickmansworth Town Ward, WD3 1PD	8,509		8,202										
Woodhall Lane Carpenders Park Ward, WD19 6HA	7,958								3,128			3	
TOTAL	944,988	5,632	48,790	39,626	39,626	3,315	1,272	1,649	34,001	159,513	909	150	4,418

4.2 Carbon Sequestration and Biodiversity Units

By carrying out the recommended interventions, there will be resulting benefits for both carbon sequestration and biodiversity units.

Carbon sequestration figures were calculated for tree planting until maturity, as detailed in section 2.4.Biodiversity units were calculated using the assumptions outlined in Annex II. The following matrix shows the indicative biodiversity unit change per hectare from making each of the management interventions, dependent on the existing management regime. For example, planting woodland on amenity grassland results in an increase of six biodiversity units per hectare.

	Enhanc ed amenit y (no seedin g)	Enhanc ed amenit y (seedin g)	Wildflo wer Meado w – Amend ed Mowing	Meadow - Enhance ment	Edge successi on/ New rewilding areas	Woodla nd plantin g	Scrub planti ng	Hedg e planti ng
Current amenity grasslan d	0	2	2	6	6	6	6	NA
Current poor quality conserva tion grasslan d	-2	0	0	4	4	4	4	NA

Site	Carbon sequestration (t)	Biodiversity net gain (units)
Anne Shaw Gardens	1.52	0.00
Anthony Close	2.28	0.00
Ashburnham Drive	1.52	0.03
Ashburnham Drive Play Area	1.52	0.02
Baldwins Lane Playing Field and Play Area	3.79	0.99
Barton Way Playing Fields	37.07	2.64
Batchworth Hill	0.00	0.00

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Beechen Wood and Play Area	0.00	0.00
Bell Close	0.76	0.00
Berry Lane and Mead Place	0.00	13.74
Birkdale Gardens	0.00	0.28
Buttlehide	0.00	0.33
Cassiobridge Recreation Ground	15.86	0.37
Cheshire Drive	0.00	0.12
Chorleywood Road Cemetery	0.00	0.00
Church Hill, Bedmond	0.00	0.00
Coombe Hill Road Open Space	46.75	5.33
Denham Way	65.26	6.37
Dickinson Square	0.00	0.00
Dowding Way Open Space	0.00	0.57
Eastbury Recreation Ground	3.79	0.64
Fearney Mead Play Area	0.00	0.00
Fortune Common	0.00	4.31
Furtherfield	0.00	0.00
Gade View Gardens	0.00	0.00
Grove Crescent	0.76	0.00
Hallowes Crescent	3.79	0.27
Hayling Road Play Area	4.55	0.47
Hayling Road Verges	0.00	0.00
Huntercrombe Gardens	2.28	0.00
Jacketts Field	8.35	0.07
Jordans Road	0.00	0.00
King George V Playing Ground	0.00	3.04
Land at Tudor Way	15.94	0.66
Land to the rear of The Queens Drive	3.79	0.36
Langley Lane Play Area	0.00	0.00
Lincoln Drive Play Area	0.00	0.00
Northwick Road	8.35	0.29
Oak Green	0.00	0.00
Oaklands Avenue Play Area	4.55	0.15
Prestwick Road	3.79	0.15
Rickmansworth Golf Course	0.00	2.17
Rickmansworth Park	3.04	1.71
Romily Drive Open Space	33.81	3.13
Rosehill Gardens	1.52	0.07
Scotsbridge	0.00	0.50
Skidmore Way	0.00	0.23
Tanners Hill	5.31	0.36
Tanners Wood	2.28	0.48
The Grove	0.00	0.00
The Oaks	0.00	0.00
The Swillet Playing Field	2.28	0.42
Toms Lane	0.00	0.00
Windmill Drive	0.00	0.00
Woodcock Hill Cemetery and Shepherds Close Dell	0.00	1.64
Woodhall Lane	2.28	0.00
TOTAL	286.78	51.9

5.0 ESTIMATED COSTS

Estimated costs are for delivery of opportunities on district owned sites and are based on delivery by contractors. Savings and improved community engagement could be realised by delivering some smaller scale seeding/planting through volunteer activities.

Pollinator option	Estimated cost
Conservation cut	Delivered through GM contract
Enhanced amenity cut (no seeding)	Delivered through GM contract
Wildflower seeding (per hectare)	£4,000

For woodland options, first year costs cover the initial planting, followed by aftercare costs in the second and third years.

Woodland option	Estimated cost following delivery		
	Year 1	Year 2	Year 3
Area tree planting (per hectare)	£8,000	£5,000	£5,000
Hedge planting (per kilometre)	£16,500	£4,500	£4,500
Specimen tree planting (per tree)	£300	£50	£50
Cease mowing to allow succession to woodland	Delivered through GM contract		

6.0 ANNEX I: SPECIFICATIONS

6.1 Spring wildflowers

- 1. As a general rule, September is the best time of year to plant bulbs
- 2. Planting typically takes place on amenity grass areas. If this is not the case site preparation should be carried out, removing all heavy vegetation by mechanical means or hand tools. Planting should occur in short grass or bare earth
- 3. The best bulb planting displays are highly situational, and this is reflected in the species mix. Examples of bulb mixes:
 - a. *Native mix* used around trees or a woodland context: 40% bluebells, 20% wood anemone, 20% lesser celandine, 20% snake's-head fritillary
 - Amenity pollinator mix directly sown into areas of open amenity grassland to offer spring colour and a nectar source: 50% crocus, 30% primrose, 10% snowdrop, 10% grape hyacinth
- 4. All bulb planting should be carried out in well-drained soil, in full or dappled sunlight
- 5. To achieve a natural feel with a native mix, for example, the bulbs may be hand broadcast over the area to achieve "natural" spacing. Volunteers working in pair and equipped with digging spikes should then aim to plant each bulb in a hole three times as deep as the bulb diameter
- More formal settings may call for a grid pattern. Here biodegradable spray paint should be used in conjunction with a tape measure to achieve a grid with planting at 10cm depth at 10cm intervals
- 7. Areas of bulb planting may be managed as general amenity grass once the plants have died back. This usually occurs by mid-June

6.2 Wildflower meadow cuts

- 1. The mapped meadow areas should be cut as either a conservation cut, or hay meadow cut:
 - a. Conservation Cut cut once between late June and the end of August wherever possible, the timing in this period will ideally be changed from one year to the next.
 - b. Hay Meadow Cut as above, but with a second cut in autumn
- 2. The grass should be cut using a tractor and topper (or pedestrian tractor and Allen scythe for harder-to-access areas) to a sward height of 40mm-60mm. Using machinery such as flails should be avoided as this obliterates the grass. Volunteer groups may cut grassy areas using a scythe or heavy-duty strimmer.
- 3. The cut grass should be left for a period of 4-7 days to allow drying and seed dispersal.
- 4. The arisings should then be lined using a tractor and tedder, collected with a baler then removed from site. Smaller versions of these implements may be mounted on

pedestrian tractors or volunteer parties may rake up the arisings and pitch them into a trailer.

5. In some circumstances the arising "hay" may be useful to local farmers however due to the likely presence of contaminants (dog muck) the bales should be disposed of as green waste.

6.3 Meadow enhancements

Timing

1. The work is to be carried out in September or October.

Preparation

- 1. Prior to the work being carried out a site meeting should be held between the Supervising Officer and Contractor's Foreman to confirm key elements of the specification.
- 2. Any existing long grass should be cut by the District grounds maintenance team and arisings taken from site prior to other preparations taking place.
- 3. The two areas should be mechanically scarified so that between 50% and 70% of the topsoil is exposed over a given area.

Seeding

1. The seed mix must be native and similar to the following suggestions and sown as specified by the supplier. Any changes must be confirmed by the Supervising Officer:

Emorsgate Seeds EM2 - Standard General Purpose Meadow Mixture EM2 - Standard General Purpose Meadow Mixture | General purpose meadow mixtures | Meadow and Grassland | Emorsgate Seeds – (01553) 829 028 (wildseed.co.uk)

N1 – General purpose meadow mixture

N1 General Purpose Meadow Mixture | UK Delivery | Naturescape

2. The area should then be rolled with a grooved or notched roller without additional cultivation to cover or incorporate the seed.

Ongoing management

- 1. To ensure the long-term success of newly planted meadows and wildflower areas they should ideally be cut every 8 weeks in the first year after sowing. It is suggested that these areas be included with the amenity grass cutting schedule during that year. This ensures good root development of perennials and grasses, meaning they are more likely to establish effectively.
- 2. Thereafter a hay meadow or conservation cut mowing regime serves as the most cost-effective long-term management tool of wildflower enriched grassy areas. This will involve a cut-and-lift between late July and the end of August, ideally at different times during this window each year. For hay meadow cuts a second cut is done in the autumn, with cuttings removed from site where there has been significant new growth.

6.4 Enhanced amenity

Can usually be achieved using the same machinery as general amenity cut. Simply raise cutting height to a minimum of 50mm.

If seeding, use the same ground preparation as for 'wildflower meadow creation', but use a seed mix of low-growing species, either a custom mix or an existing available mix e.g.:

Emorsgate Seeds EL1 – Flowering Lawn Mixture

EL1 – Flowering Lawn Mixture | General purpose meadow mixtures | Meadow and Grassland | Emorsgate Seeds – (01553) 829 028 (wildseed.co.uk)

N14 – Flowering Lawn Mixture

N14 Flowering Lawn Mixture | UK Delivery | Naturescape

6.5 Woodland edge succession and ride management

- 1. All mowing and disturbance should cease in the area identified for woodland edge succession or ride management. Natural regeneration will occur.
- 2. Adaptive management is necessary to maintain the proper graduation from soft herbs, scrub then woodland. Local volunteer teams are ideally placed to carry out this management, mowing the soft vegetation as appropriate. Coppicing of scrub may be necessary on a long rotation to ensure the margin does not become high forest. Generally, the natural species mix and terminal height of scrubby species mean intensive management is unnecessary.

6.6 Hedge planting and restoration

400mm-600mm whips should be planted in secured 600mm tree tubes in two lines at 0.5m spacings, parallel and offset by 0.5m. The suggested species mix:

50% hawthorn, 10% hazel, 10% spindle, 10% blackthorn, 10% field maple, 10% common dogwood

Restoration of existing hedgerows will need a specific approach depending upon the current condition. It is likely to involve operations such as coppicing or laying existing hedgerow plants with infill planting, with the sort of native species identified above, wherever there are gaps.

6.7 Pond creation and wetland enhancements

Pond creation and wetland scrapes are highly situational and should be specified individually. Each pond or scrape should be designed with care to ensure longevity. They are likely to be excavated to a maximum depth of around 1m and an average depth of around 0.5m, with gentle, uneven slopes around the edges. Establishment of marginal or aquatic vegetation may be appropriate.

6.8 Woodland creation

UK grown native tree stock will be planted as 400mm-600mm whips at 2 metres spacing (to achieve a planting rate of 1100 per hectare) using secured 600mm tree tubes. The seed origin of these whips should be from local seed zone 402 at an elevation zone below 300m and will conform to British Standard 3936. The supplying nursery should provide a certificate of local provenance, a "UK sourced and grown" assurance or equivalent, be able to demonstrate that the trees are free of pests or disease and permit inspection of the growing area and tree stock prior to purchase. An audit trail must be maintained by the purchaser, allowing planted trees to be traced back to nursery. Species – oak, beech, hornbeam, silver birch, cherry, field maple, wych elm.

6.9 Standard tree planting

This work should be carried out from October to February. It is recommended to plant native species already on-site to maximise the chances of success. "Whips" may be planted within 1.2m by 300mm diameter weld mesh tree guards as a cost-effective solution in areas of little anti-social behaviour (Forest Research has found whips to overtake standards within 5 years).

2m-3m tall specimen trees, if appropriate for the site, should be planted as follows, assuming a typical nursery planting kit:

- 1. Prepare a square hole 25% wider and the root ball (typically 0.5m wide) and slightly shallower than the root ball (typically 0.4m) so that the slightly flared "base" of the tree will be above ground, ensuring proper root anchoring and stability
- 2. A pair of 1.8m stakes of 50mm diameter should then be driven, equidistant from one another in line with the prevailing wind, 300mm deeper than the base of the hole, with at least 100mm clearance either side of the root ball
- 3. The fabric container should then be removed from the root ball and the tree places in the hole, with any adjustments made to ensure proper placement of the trunk base
- 4. If fertiliser has been included with the tree this should be added to the spoil from the hole, and that spoil should be returned to the hole, being very lightly compacted by hand.
- 5. The ties should then be nailed to the stakes and secured to the tree as per instructions.
- 6. A 50mm layer of mulch should be added on top of the exposed earth around the tree
- 7. The tree should be "watered in", with 20L of water applied through a hose.

Biodiversity units/ha were calculated based on a number of assumptions about the current habitat type/condition, along with each management regime/intervention, outlined in the two tables below. Hedge planting is not included as the biodiversity unit score for hedgerows is calculated on a linear basis and not directly comparable to habitat areas.

Current management regime	UK Habitat Classification	Distinctiveness score	Condition score	Strategic significance score	Total score (Biodiversity Units)
Amenity grassland	Modified grassland (g4)	Low – 2	Poor – 1	Low – 1	2
Conservation cut (poor quality grassland)	Modified grassland (g4)	Low – 2	Moderate – 2	Low – 1	4

New management regime	UK Habitat Classification	Distinctiveness score	Condition score	Strategic significance score	Total score (Biodiversity Units)	Time to target condition (years)
Enhanced amenity (no seeding)	Modified grassland (g4)	Low – 2	Poor – 1	Low – 1	2	1
Enhanced amenity (seeding)	Other neutral grassland (g3c)	Medium – 4	Poor – 1	Low – 1	4	5
Conservation cut (no seeding)	Modified grassland (g4)	Low – 2	Moderate – 2	Low – 1	4	4
Meadow creation	Other neutral grassland (g3c)	Medium – 4	Moderate – 2	Low – 1	8	5
Edge succession	Mixed scrub (h3h)	Medium – 4	Moderate – 2	Low – 1	8	10

Woodland planting	Other lowland	Medium – 4	Moderate – 2	Low – 1	8	30
	mixed					
	deciduous					
	woodland (w1f7)					
Scrub planting	Mixed scrub (h3h)	Medium – 4	Moderate – 2	Low – 1	8	5

8.0 ANNEX III: MANAGEMENT PRESCRIPTION TABLES

8.1 Spring Wildflowers

Site	Total Viable Site Area (m2)	Area of Spring Wildflowers (m2)	% Cover of the Site
Anthony Close	6,410	1,509	23.5
Ashburnham Drive	1,004	138	13.7
Beechen Wood and Play Area	19,850	576	2.9
Cassiobridge Recreation Ground	4,521	67	1.5
Fearney Mead Play Area	286	55	19.2
Grove Crescent	2,052	182	8.9
Hayling Road Verges	10,633	1,296	12.2
Huntercrombe Gardens	2,501	1,112	44.5
Jordans Road	636	162	25.5
Northwick Road	5,158	482	9.3
Skidmore Way	2,858	23	0.8
The Oaks	622	30	4.8

8.2 Conservation Cut

Site	Total Viable Site Area (m²)	Area of Conservation Cut (m²)	% Cover of the Site
Ashburnham Drive Play Area	1,383	35	2.5
Baldwins Lane Playing Field & Play Area	16,996	2,084	12.2
Barton Way Playing Fields	22,607	4,040	17.9
Berry Lane and Mead Place	33,144	317	1

Buttlehide	2,029	660	32.5
Cassiobridge Recreation Ground	4,521	462	10.2
Cheshire Drive	1,790	583	32.6
Denham Way	56,660	9,026	15.9
Dowding Way Open Space	4,414	717	16.2
Eastbury Recreation Ground	12,576	2,340	18.6
Hallowes Crescent	3,056	1,355	44.3
Hayling Road Play Area	5,604	677	12.1
King George V Playing Ground	32,317	5,073	15.7
Land to the rear of The Queens Drive	4,415	1,780	40.3
Northwick Road	5,158	491	9.5
Oaklands Avenue Play Area	3,180	761	23.9
Romily Drive Open Space	19,978	2,246	11.2
Scotsbridge	20,144	1,150	5.7
Skidmore Way	2,858	200	7
Tanners Hill	1,947	1,807	92.8
Tanners Wood	26,683	2,378	8.9
The Swillet Playing Field	6,610	2,108	31.9
Woodcock Hill Cemetery and Shepherds Close Dell	8,509	8,202	96.4

8.3 Hay Meadow Cut

Site	Total Viable Site Area (m²)	Area of Hay Meadow Cut – Establishment (m²)	% Cover of the Site
Berry Lane and Mead Place	33,144	16,025	48.3
Coombe Hill Road Open Space	11,471	7,791	67.9
Fortune Common	9,281	7,191	77.5
Land at Tudor Way	2,886	1,092	37.8
Rickmansworth Park	22,716	4,259	18.7
Romily Drive Open Space	19,978	3,268	16.4

8.4 Future Hay Meadow Enhancement

Site	Total Viable Site Area (m²)	Area of Hay Meadow Cut – Establishment (m²)	% Cover of the Site
Berry Lane and Mead Place	33,144	16,025	48.3
Coombe Hill Road Open Space	11,471	7,791	67.9
Fortune Common	9,281	7,191	77.5
Land at Tudor Way	2,886	1,092	37.8
Rickmansworth Park	22,716	4,259	18.7
Romily Drive Open Space	19,978	3,268	16.4

8.5 Enhanced Amenity Cut

Site	Total Viable Site Area (m²)	Area of Enhanced Amenity Cut (m ²)	% Cover of the Site
Ashburnham Drive	1,004	337	33.6
Birkdale Gardens	5,847	2,824	48.3

Hayling Road Play Area	5,604	608	10.8
Hayling Road Verges	10,633	3,204	30.1
Prestwick Road	7,417	1,494	20.1
Rickmansworth Golf Course	331,226	21,701	6.6
Rosehill Gardens	4,010	705	17.6
Woodhall Lane	7,958	3,128	39.3

8.6 Rewilding Areas

Site	Total Viable Site Area (m ²)	Area of Rewilding (m ²)	% Cover of the Site
Berry Lane & Mead Place	33,144	6,770	20.4
Denham Way	56,660	6,142	10.8
Furtherfield	108,826	108,826	100
Toms Lane	37,775	37,775	100

8.7 Woodland Edge Succession and Ride Management

Site	Total Viable Site Area (m²)	Area of Edge Succession and Ride Management (m ²)	% Cover of the Site
Baldwins Lane Playing Field & Play Area	16,996	573	3.4
Buttlehide	2,029	328	16.2
Dowding Way Open Space	4,414	235	5.3
Jacketts Field	5,477	116	2.1
Rickmansworth Park	22,716	1,437	6.3
Scotsbridge	20,144	450	2.2
Skidmore Way	2,858	176	6.2

Site	Total Viable Site Area (m²)	Area of Hedge Planting (m ²)	Area of Hedge Restoration (m ²)	% Cover of the Site
Baldwins Lane Playing Field & Play Area	16,996		129	0.8
Barton Way Playing Fields	22,607		63	0.3
Beechen Wood and Play Area	19,850		1,176	5.9
Cassiobridge Recreation Ground	4,521	103		2.3
Cheshire Drive	1,790	159		8.9
Hayling Road Play Area	5,604	357		6.4
Jacketts Field	5,477	159		2.9
King George V Playing Ground	32,317	123		0.4
Land to the rear of The Queens Drive	4,415	62		1.4
Romily Drive Open Space	19,978		281	1.4
The Swillet Playing Field	6,610	309		4.7

8.8 Hedge Planting and Restoration

8.9 **Pond Creation and Wetland Enhancements**

Site	Total Viable Site Area (m²)	Area of Pond Creation (m ²)	Area of Wetland Enhancement (m ²)	% Cover of the Site
Denham Way	56,660		687	1.2
Fortune Common	9,281	222		2.4

8.10 Woodland Creation

Site	Total Viable Site Area (m²)	Area of Woodland Creation (m ²)	% Cover of the Site
Barton Way Playing Fields	22,607	817	3.6
Cassiobridge Recreation Ground	4,521	318	7
Coombe Hill Road Open Space	11,471	1,092	9.5
Denham Way	56,660	1,460	2.6
Romily Drive Open Space	19,978	731	3.7

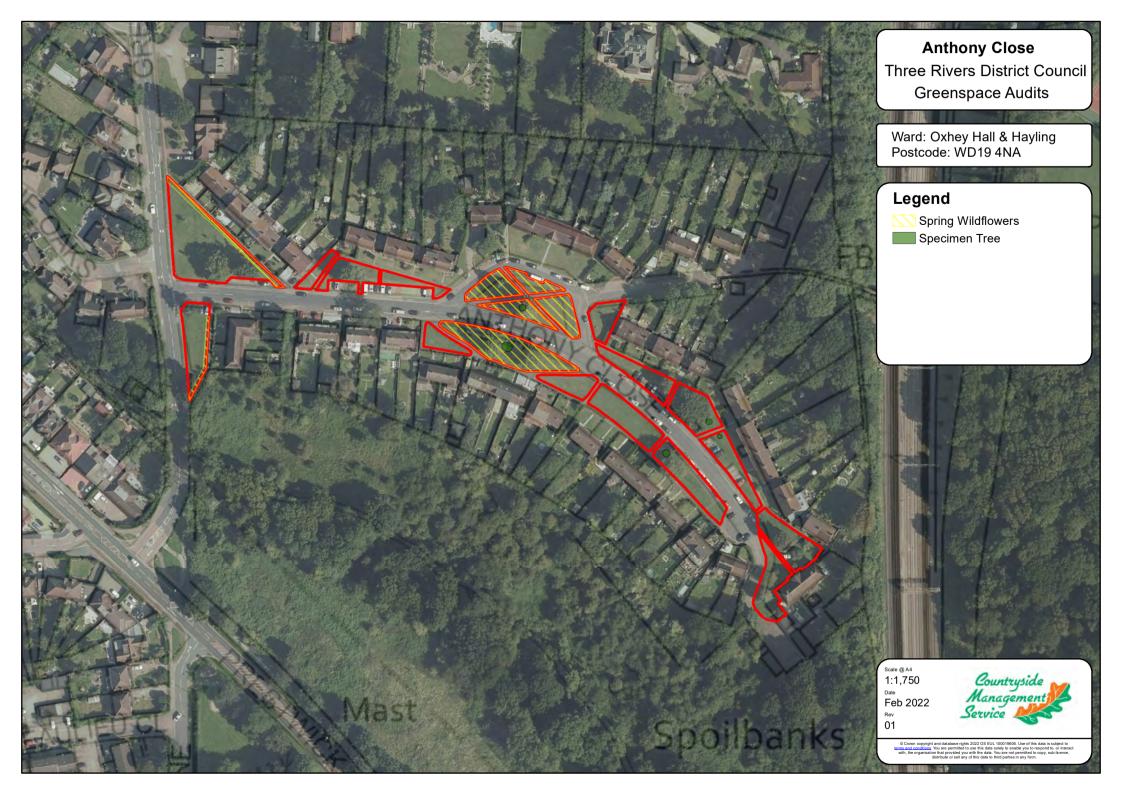
8.11 Standard Tree Planting

Site	Total Viable Site Area (m²)	Number of Trees (No.)	% Cover of the Site (based on 20m ² per tree)
Anne Shaw Gardens	994	2	4.0
Anthony Close	6,410	3	0.9
Ashburnham Drive	1,004	2	4.0
Ashburnham Drive Play Area	1,383	2	2.9
Baldwins Lane Playing Field & Play Area	16,996	5	0.6
Barton Way Playing Fields	22,607	8	0.7
Bell Close	215	1	9.3
Cassiobridge Recreation Ground	4,521	5	2.2
Coombe Hill Road Open Space	11,471	7	1.2
Denham Way	56,660	13	0.5
Eastbury Recreation Ground	12,576	5	0.8

Grove Crescent	2,052	1	1.0
Hallowes Crescent	3,056	5	3.3
Hayling Road Play Area	5,604	6	2.1
Huntercrombe Gardens	2,501	3	2.4
Jacketts Field	5,477	11	4.0
Land at Tudor Way	2,886	21	14.6
Land to the rear of The Queens Drive	4,415	5	2.3
Northwick Road	5,158	11	4.3
Oaklands Avenue Play Area	3,180	6	3.8
Prestwick Road	7,417	5	1.3
Rickmansworth Park	22,716	4	0.4
Romily Drive Open Space	19,978	8	0.8
Rosehill Gardens	4,010	2	1.0
Tanners Hill	1,947	7	7.2
Tanners Wood	26,683	3	0.2
The Swillet Playing Field	6,610	3	0.9
Woodhall Lane	7,958	3	0.8

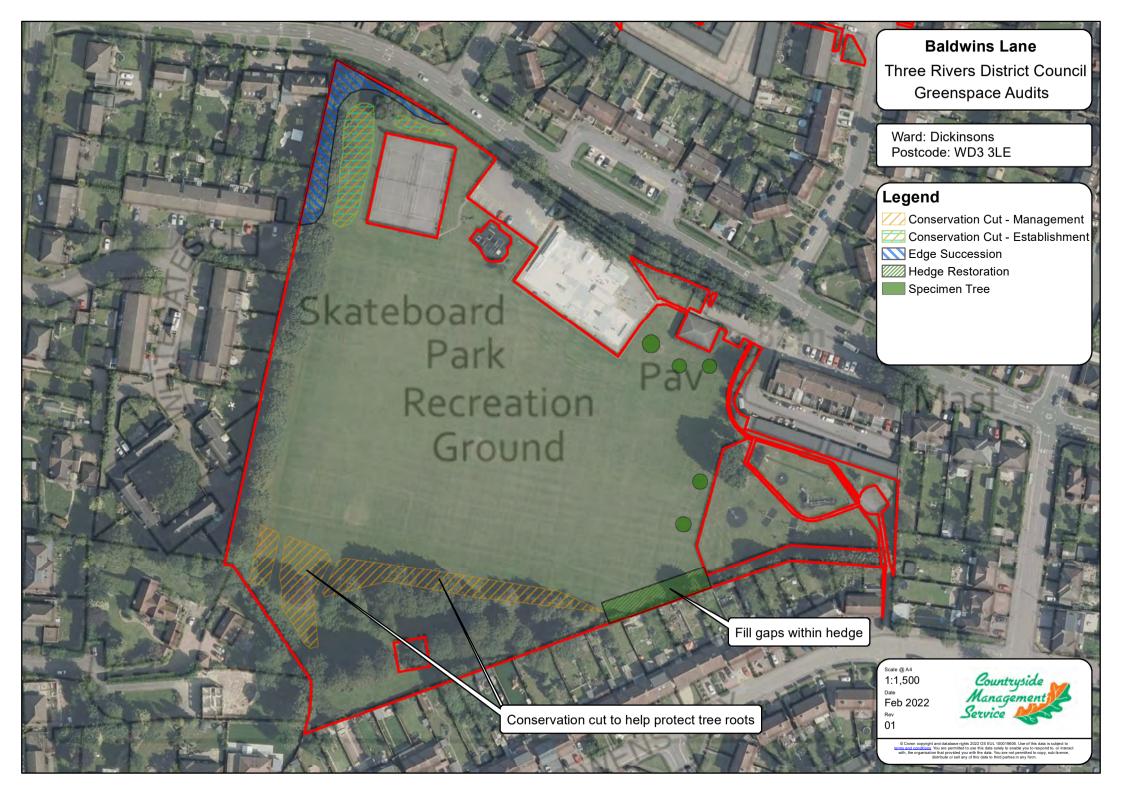
9.0 ANNEX IV: MAPPING





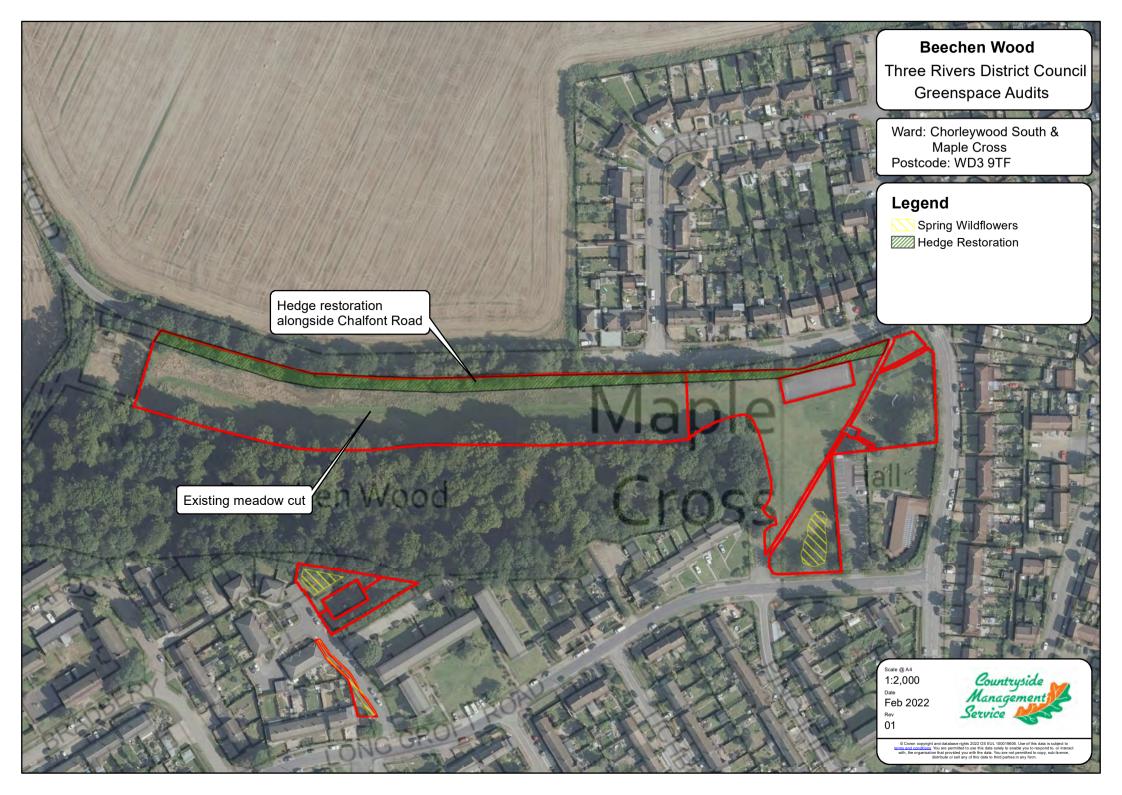








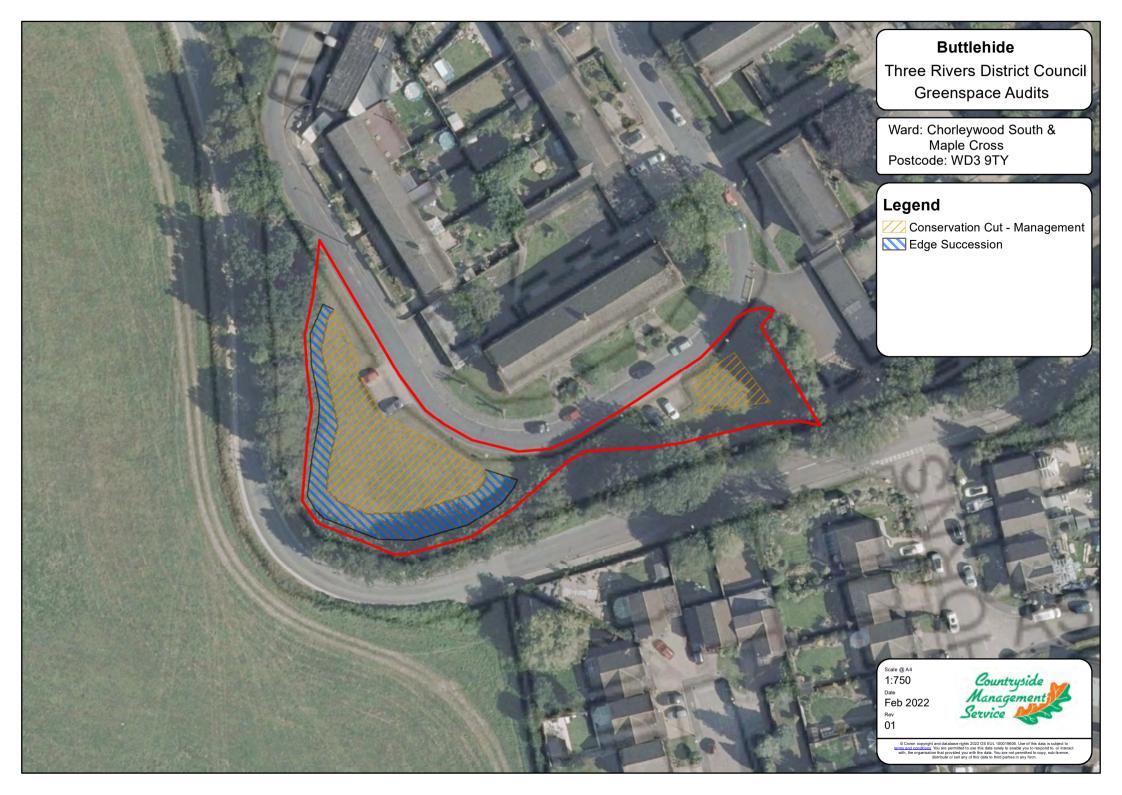














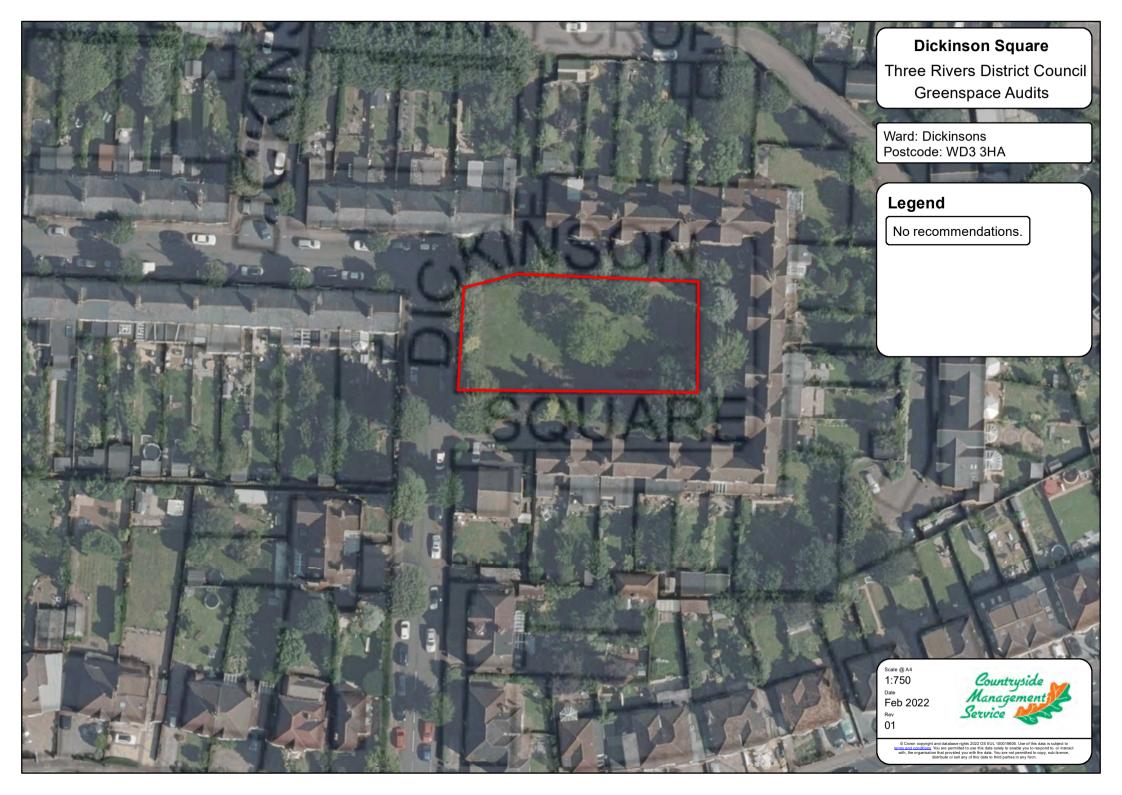














Eastbury Recreation Ground Three Rivers District Council Greenspace Audits

Ward: Moor Park & Eastbury Postcode: HA6 3HU

Legend

Conservation Cut - Management Conservation Cut - Establishment Specimen Tree

Native specimen trees e.g. oak

Extend wildflower area adjoining tennis courts

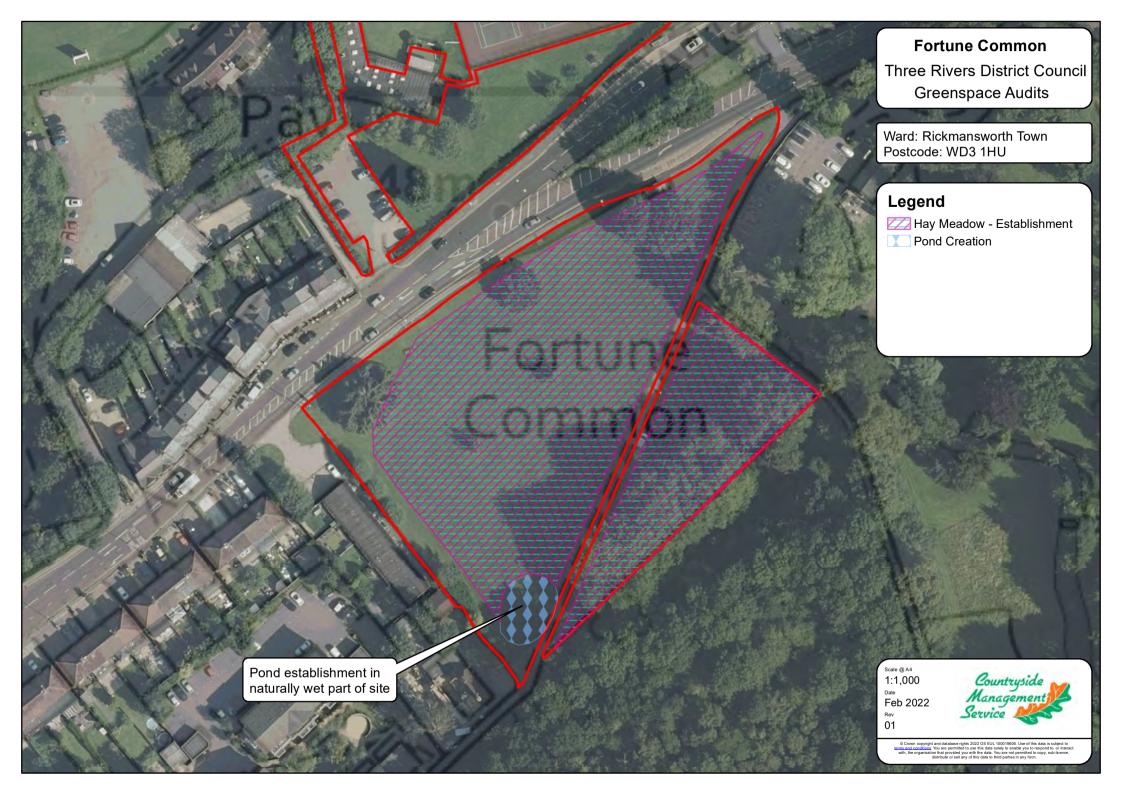
Eastburger Primar

Recreation

hool



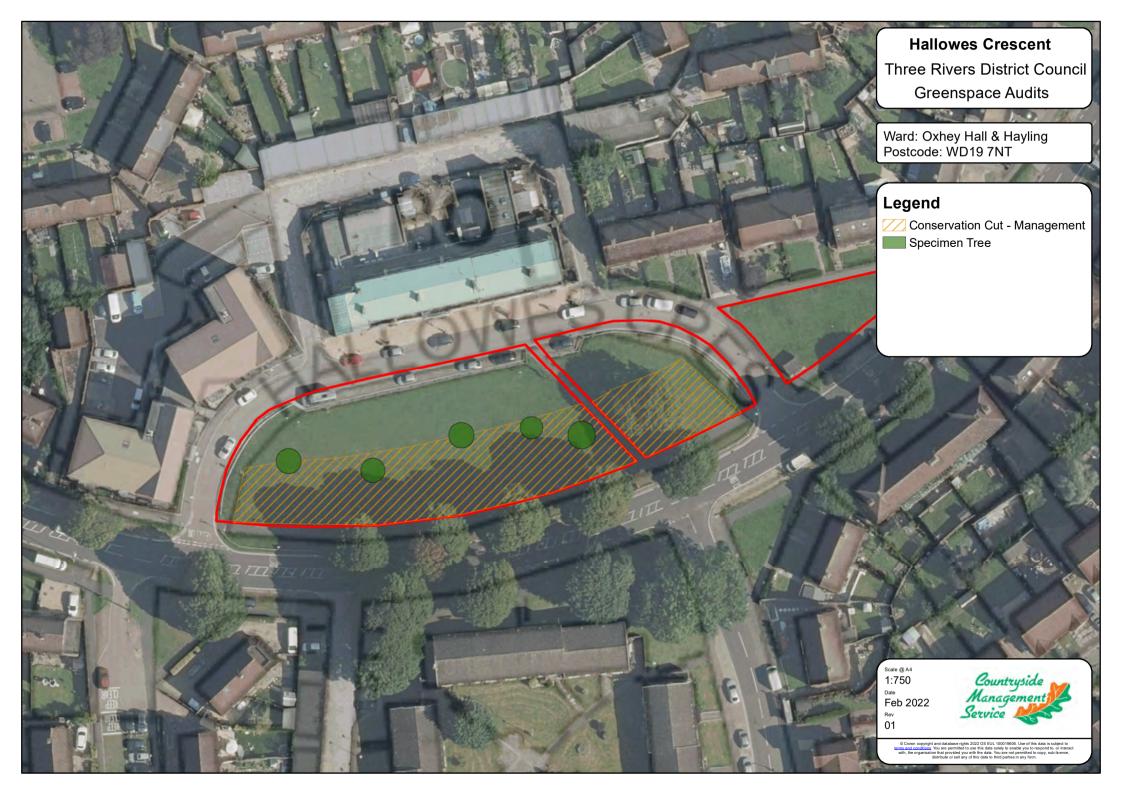


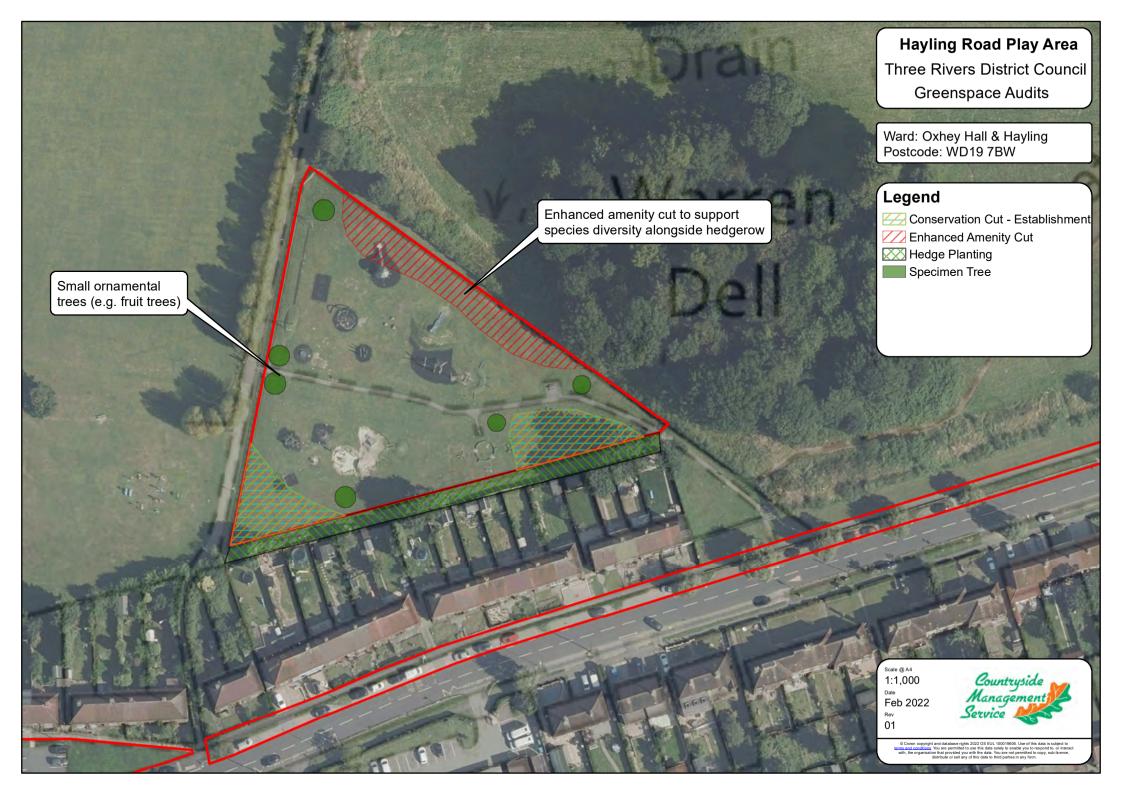










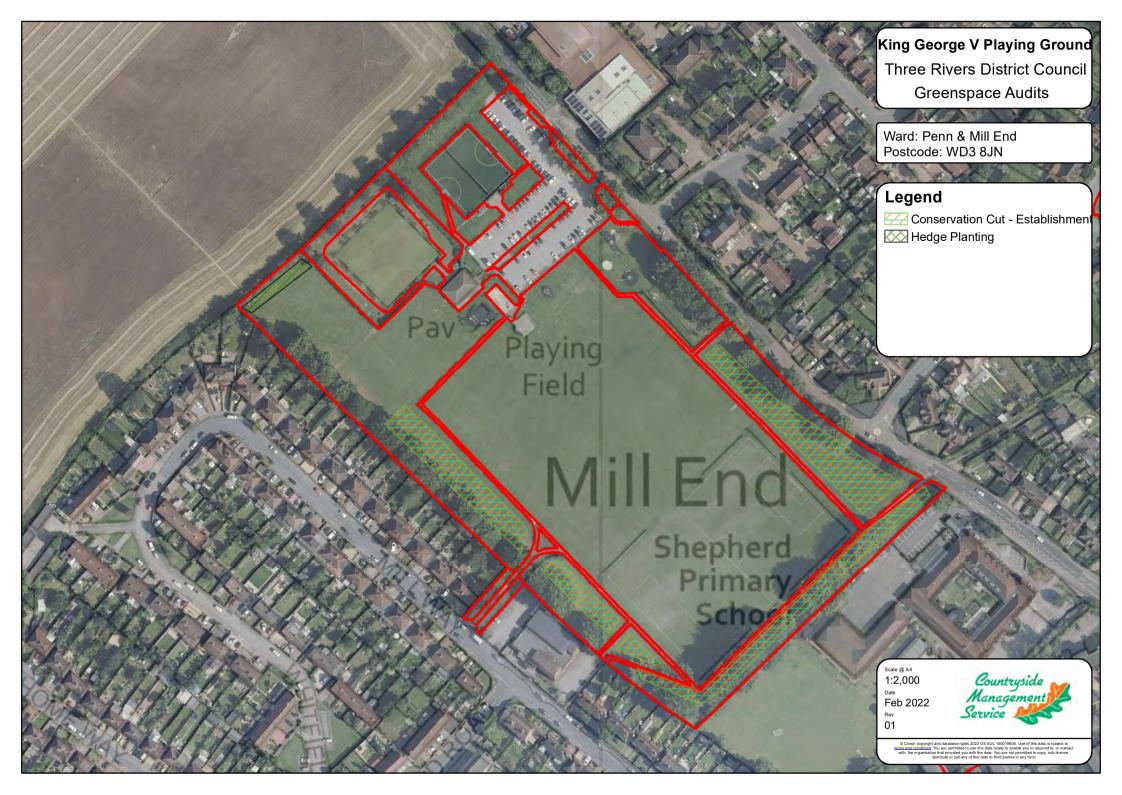


















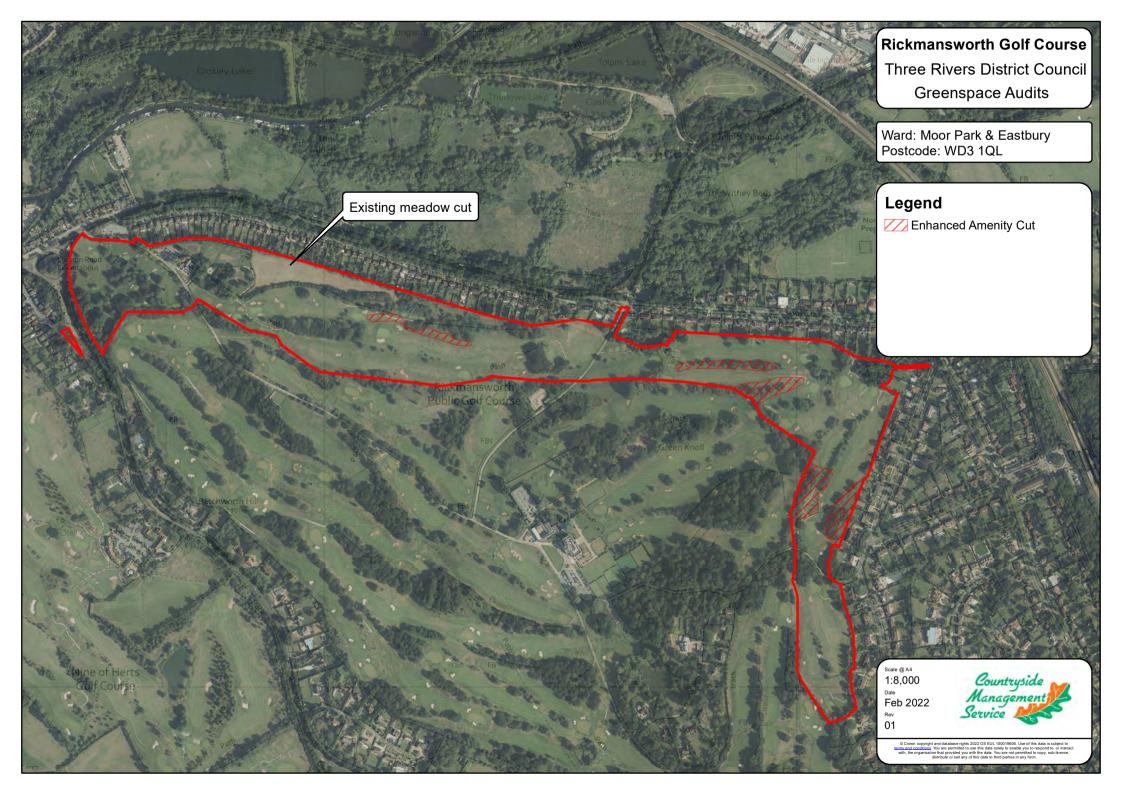


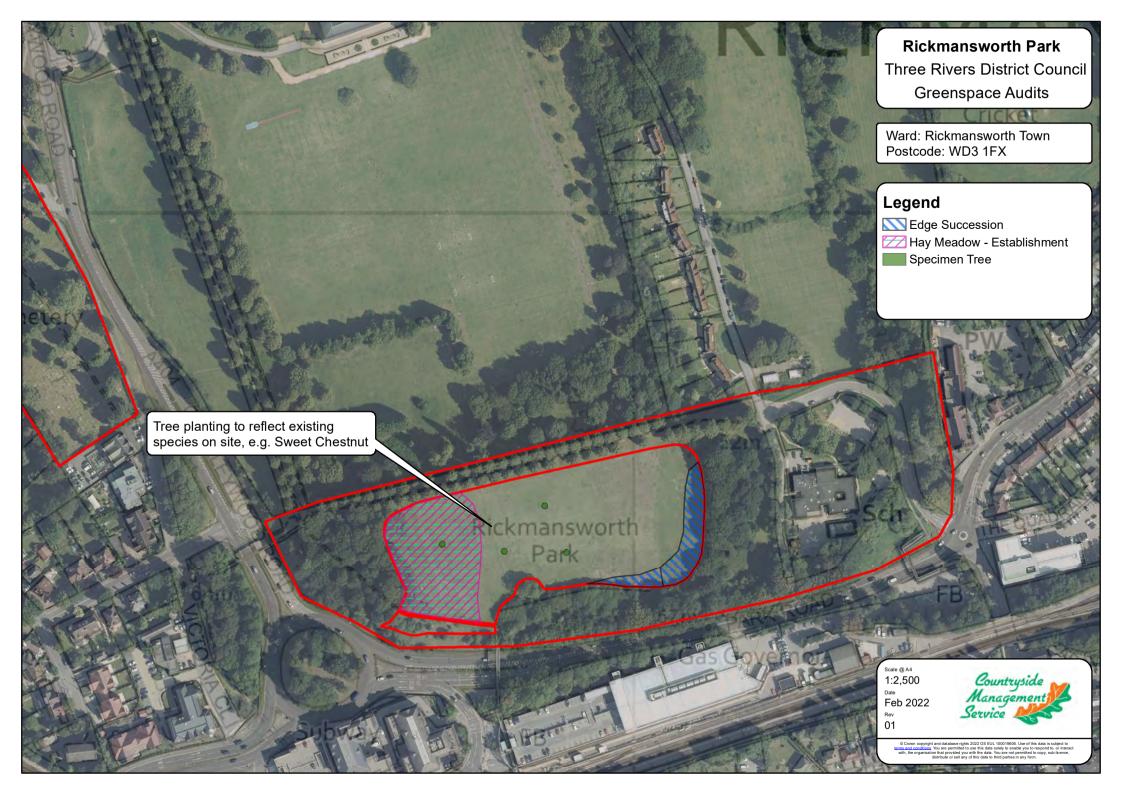




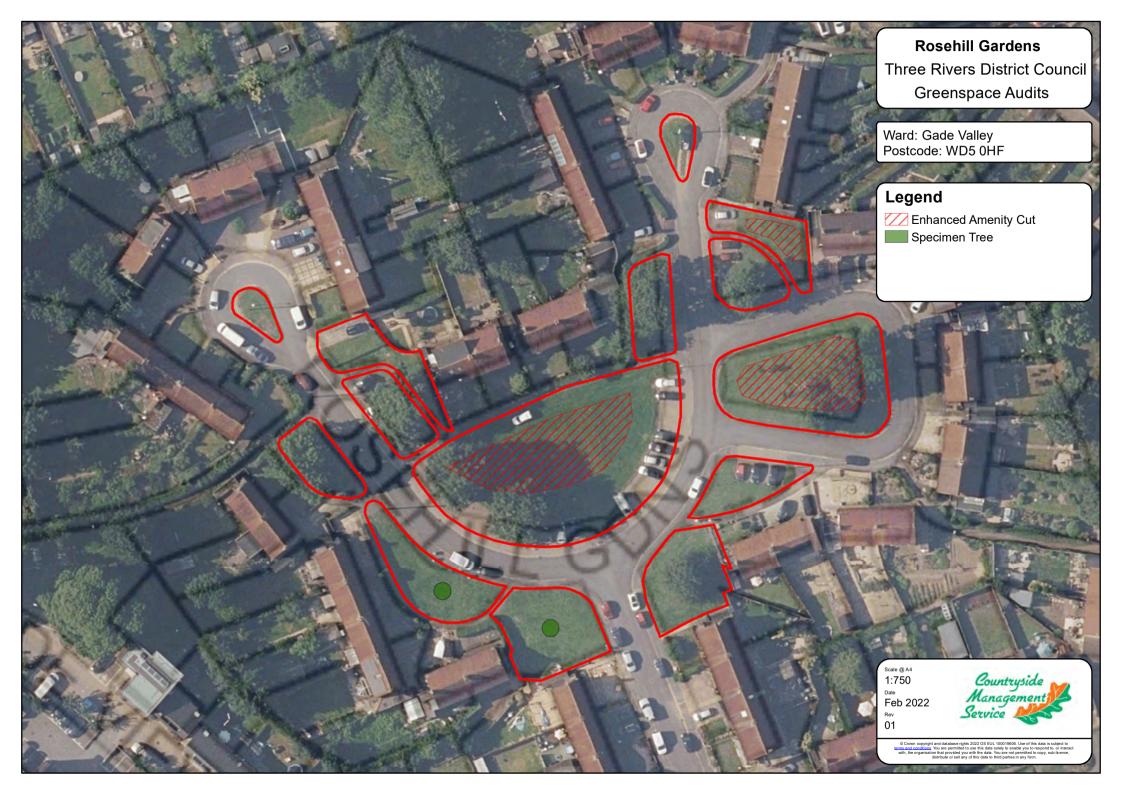


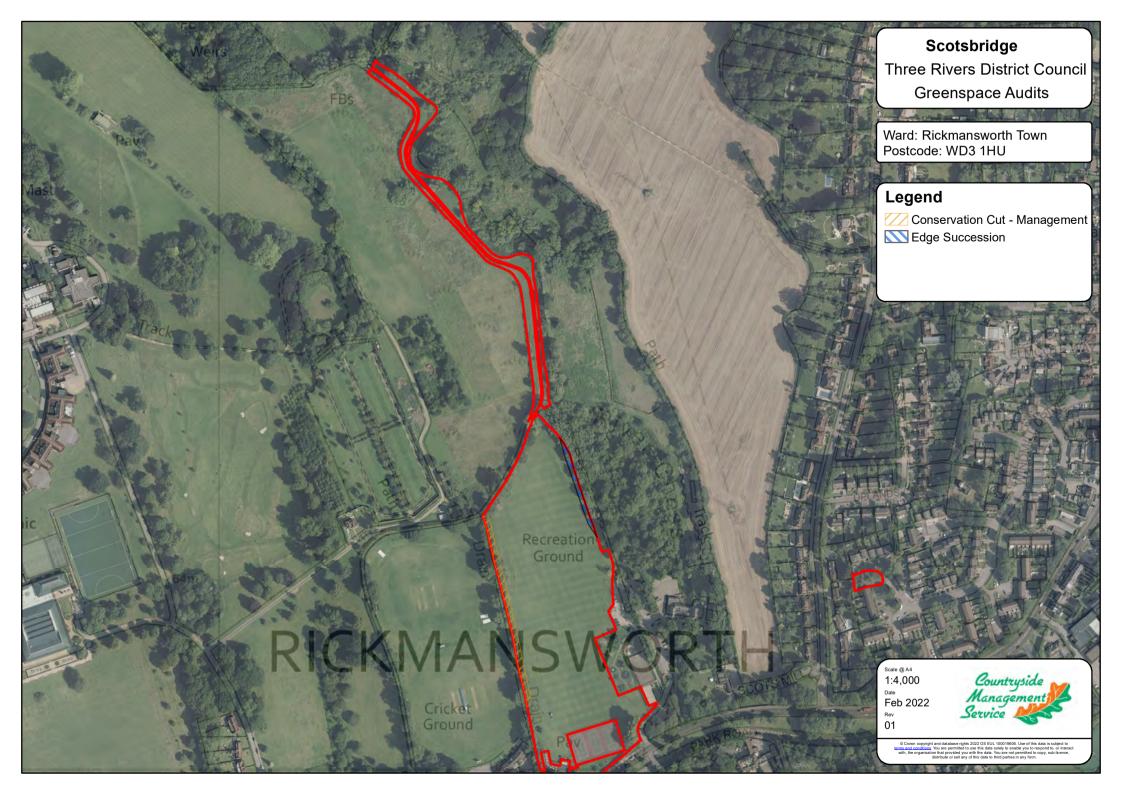


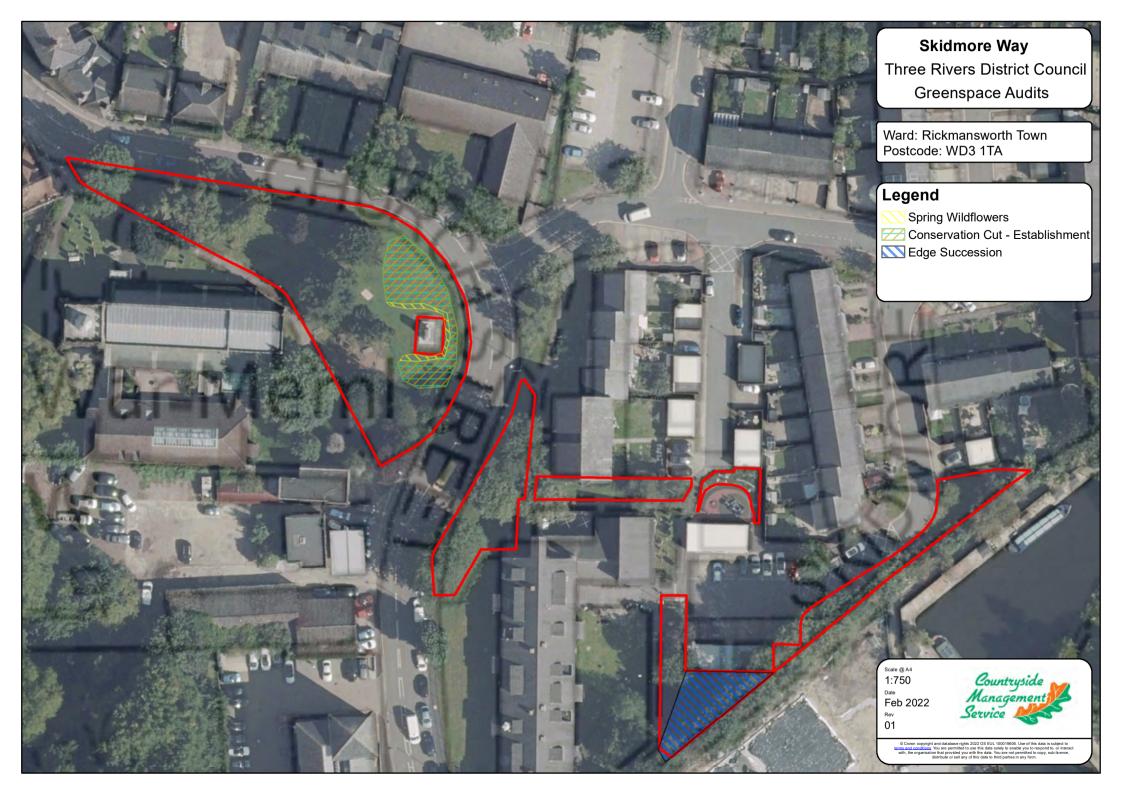




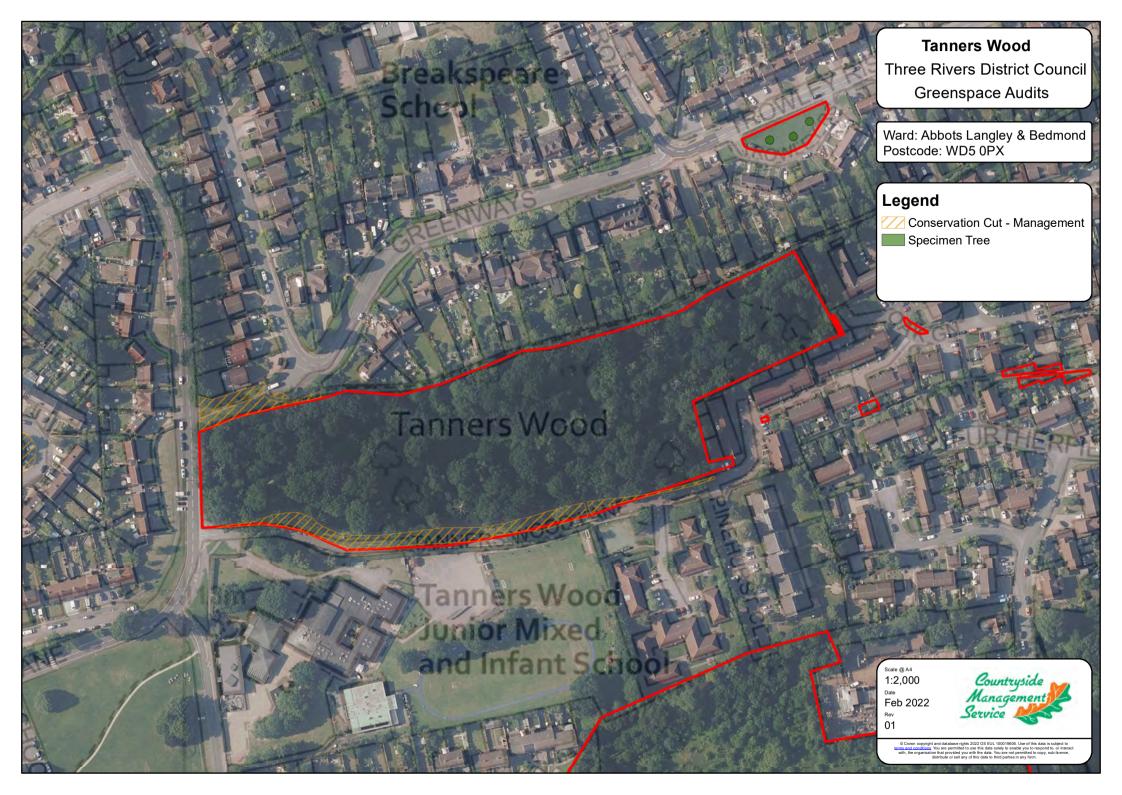
















Small ornamental trees (e.g. fruit trees)

The Swillet Playing Field Three Rivers District Council Greenspace Audits

Ward: Chorleywood South & Maple Cross Postcode: WD3 5BG

Legend

Conservation Cut - Management Hedge Planting Specimen Tree

Recreation Ground Aliot Gdns

Allow establishment of self set oaks









