

CADWELL LANE PLAYING FIELD GREENSPACE ACTION PLAN (GAP) 2016 – 2021



February 2016



AMENDMENTS

AMENDMENT DATE	SECTION UPDATED	DETAILS	OFFICER

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APPENDICES

1 SITE SUMMARY

Name Cadwell Lane Playing Field

Address Cadwell Lane

Hitchin SG4 0AE

Grid ref TL 519089 230650

Size 2.3 ha (5.6 acre)

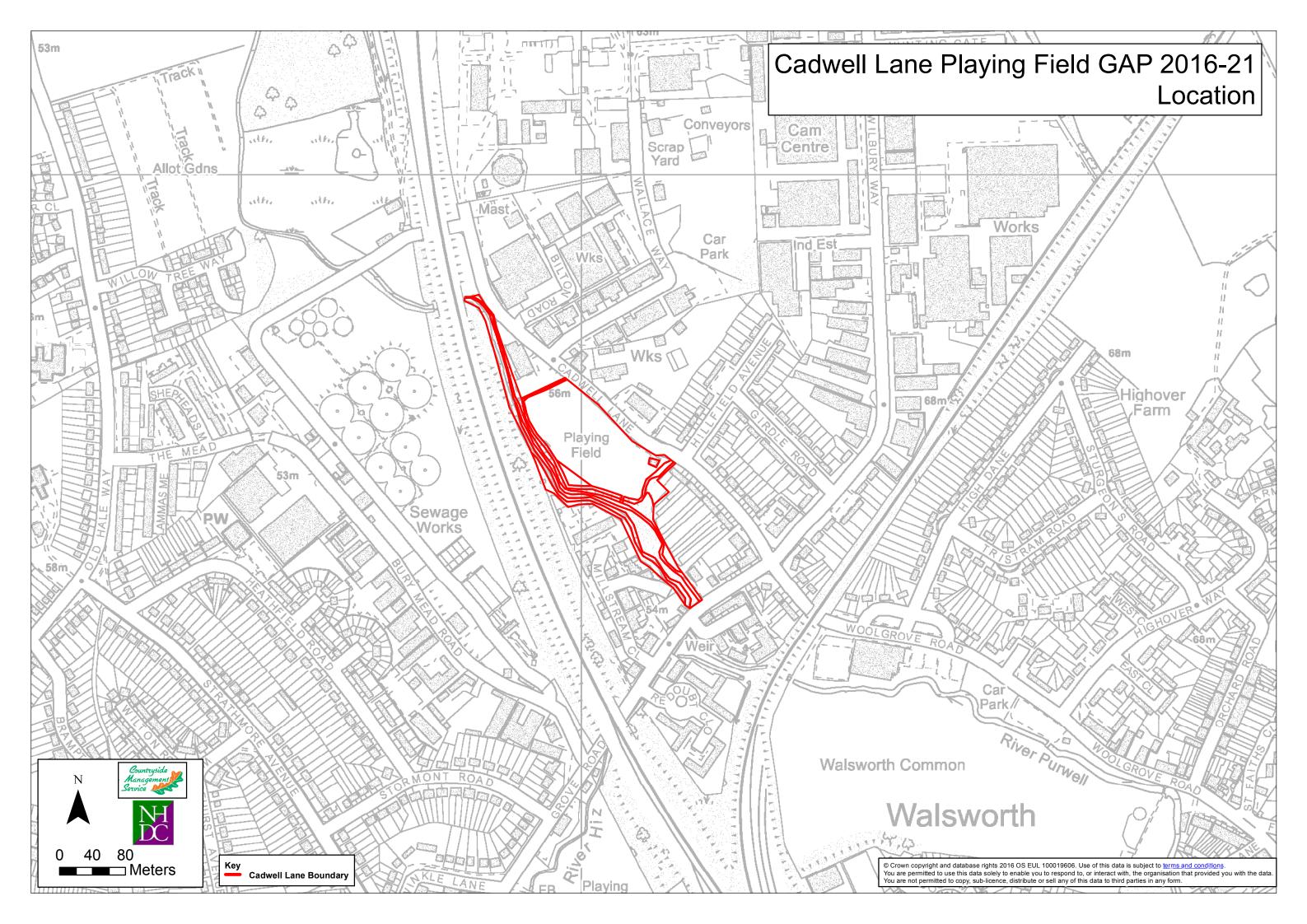
Owner North Herts District Council

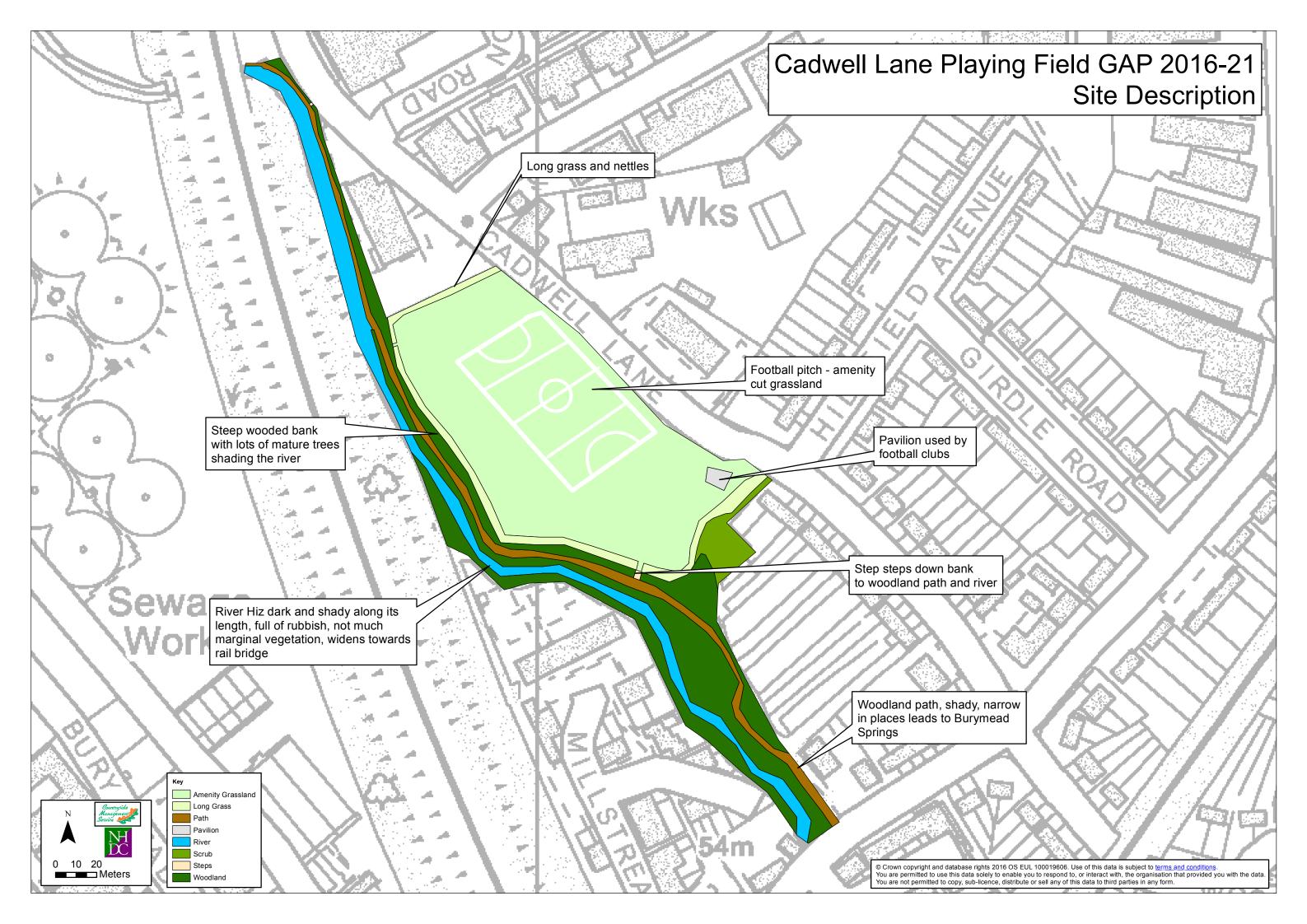
VISION STATEMENT

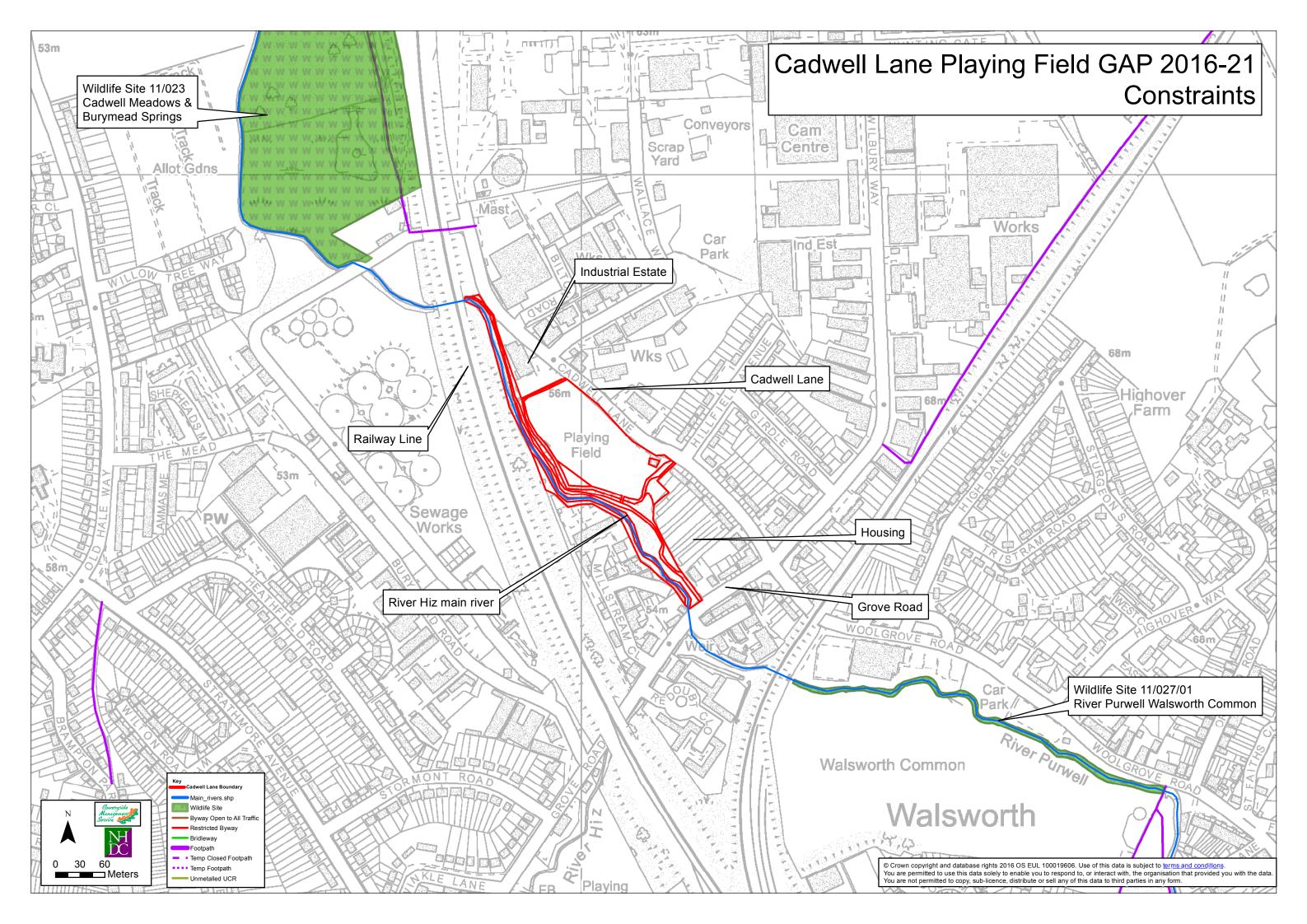
For Cadwell Lane Playing Field to be a popular and well-used green space in Hitchin. Cadwell Lane Playing Field and the River Hiz will provide a wealth of biodiversity and recreation for the local community to be involved with and enjoy.

This will be achieved by the following aims:

- To provide clear and welcoming access into and throughout the site
- To ensure that visitors to Cadwell Lane Playing Field feel safe and able to enjoy the site at all times
- To ensure the standard of maintenance is maintained and relevant
- To ensure ongoing costs are sustainable and secure external funding for capital works
- To restore the River Hiz to an attractive and thriving habitat, rich in wildlife
- To make Cadwell Lane Playing Field and River Hiz places that people can enjoy
- To support and encourage community involvement at Cadwell Lane Playing Field and surrounding sites
- To promote awareness and interest in Cadwell Lane Playing Field and River Hiz







2.3 INTRODUCTION

Cadwell Lane Playing Field is a 2.3 hectare (5.6 acre) open space owned by North Hertfordshire District Council, and managed in partnership with Countryside Management Service (CMS). The site, formerly an old landfill, is bordered by an industrial area to the north, residential area to the south, River Hiz and railway line to the east and Cadwell Lane to the west.

There is a full sized football pitch surrounded by amenity cut grassland, turning to nettles then trees. Longer areas of grass away from the pitch have interesting flower species including bulbous buttercup, yarrow, stitchwort, speedwell and cranesbill. The pavilion at the southern end of the site is used by two local football teams during the season.

To the east of the site is a wooded bank leading to the River Hiz. The River Hiz is a chalk river, an important wetland habitat under threat globally. There are small patches of common reed and willowherb and plants characteristic of the clear waters of chalk rivers such as watercress, starwort and water-crowfoot. The river is heavily shaded along most of its length past Cadwell Lane Playing Field from Grove Road in the south, to the railway bridge in the north.

2.4 LANDSCAPE & GEOGRAPHY

Cadwell Lane Playing Field is in the North Herts Landscape Character Area 217 – River Oughton and Purwell. The area's key characteristic is meandering watercourse with associated ponds and water bodies and linear woodland belts following the watercourse. The River Hiz is typical of this character area with its wooded banks of poplar, willow and ash, with mature hawthorns dotted along the banks. The geology of the character area is one of poor draining gleyed soils over alluvial drift.

As the area has developed, the site has become land locked with an industrial area to the north, residential area to the south, River Hiz and railway line to the east and Cadwell Lane to the west.

2.5 HISTORY

The site was formerly used for landfill but there are no records of what has been buried in the area. When the site was turned into a greenspace, the grass struggled to grow, causing problems for the football teams using the pitch. In 2013 topsoil and turfs were brought in from Wembley Stadium when it was having its pitch relayed to improve the condition of Cadwell Lane Playing Field. This made a great improvement to the poor condition of the site.

2.6 HABITATS & WILDLIFE

2.6.1 GRASSLAND

Most of the grassland is amenity cut for the majority of the year as it is used as a football pitch. Areas of grass away from the pitch have developed an interesting mix of flower species including bulbous buttercup, yarrow, stitchwort, speedwell and cranesbill. The site then rapidly turns to nettles and scrub.

2.6.2 TREES, WOODLAND & SCRUB

There are small scrubby bushes around the edge of the grassland, which are dwarfed by the mature poplars on top of the bank creating a backdrop to the football pitch. The steeply sloped banks down to the river have pockets of hawthorn and elder growing up from them along with larger mature trees.

Woodland has developed along the river corridor, shielding the steep bank. With large old pollarded willows by the river, mature sycamores along the banks and an area of alders on one of the lower lying areas near to the river. At the Grove Road end of the site there are patches of non-native snowberry and false acacia trees. There is a small riverside path that winds its way through the woodland along the river bank from Grove Road past Cadwell Lane Playing Field and onto to Burymead Springs, where you can join Hitchin public footpath 26 to Ickleford.

2.6.3 RIVER

The River Purwell, which flows from Purwell Meadows Local Nature Reserve, past Walsworth Common, joins the River Hiz just before Grove Road. As one they flow past Cadwell Lane Playing Field, into the River Ivel, which joins the River Great Ouse and finally enters the North Sea at The Wash near Kings Lynn.

The River Hiz is a chalk river. Chalk rivers are extremely rare wetland habitats globally and as such it is included in the Hertfordshire Biodiversity Action Plan, to help protect its flora and fauna. The river flows along the bottom of the steep sided channel, with tree lined banks. It is heavily shaded along most of its length from Grove Road in the South, to the railway bridge in the north. There is little or no marginal or in-stream vegetation. The river past Cadwell Lane Playing Field is silty and full of rubbish.



Shady river channel

Where light has been able to reach the channel, just north of the railway bridge, the vegetation is able to flourish. There are small patches of common reed and willowherb; and plants characteristic of the clear waters of chalk streams such as watercress, starwort and water-crowfoot.



Section of river with more light and vegetation

2.6.4 WILDLIFE

Although it is small in size, the variety of habitats around Cadwell Lane Playing Field and the River Hiz can support a variety of species. In areas of grassland around the edges of the amenity cut playing field there is evidence of ant hills developing. The presence of ants makes the meadow a good place for Green Woodpeckers to feed. Great Spotted Woodpeckers have also been seen in the nearby woodland.

Pipistrelle and Noctule bats have been recorded in the nearby area and would use the margins, trees and hedgerows to forage over. There have been no records from the site but nearby foxes, Muntjac deer and small mammals have been recorded.

The different habitats found on site will support a wide range of moth and butterfly species including Speckled Wood, Comma and Brimstone. Dragonflies and Damselflies are likely to be seen hawking over the grassland or along the more open stretches of river looking for food.

Mallard and moorhen have been recorded on the river. Kingfishers have been observed up the river at Walsworth Common and with the right kind of management will hopefully use this stretch of the Hiz.

There has been the odd fish seen in the river hiding amongst the piles of rubbish in the channel. Invasive signal crayfish are also present on site in the river.

2.7 ACCESS, INFRASTRUCTURE & FACILITIES

2.7.1 ACCESS & CIRCULATION

There are no paved paths across the site, it is all grassed.

2.7.2 SITE ENTRANCES

Pedestrian Entrances

There are several pedestrian access points onto Cadwell Lane Playing Field. Three from Cadwell Lane via access gaps in the knee rail, one from Grove Road walking north via the riverside path and one coming south along the riverside path from Burymead Springs.

Vehicular Entrance

There access for maintenance vehicles off Cadwell Lane onto the playing field, via a locked barrier.

Parking

There is informal parking for a small number of vehicles in laybys on Cadwell Lane alongside the site.

2.7.3 STRUCTURES & PARK FURNITURE

Pavilion

The pavilion at the southern end of the site is used by two local football teams during the season. The building its self is often subject to graffiti and looks slightly run down. There are issues on occasion with anti-social behaviour around the building in the evenings.

Signage

There is a small dated sign with the site name on near to the pavilion.

Dog waste bins, litter bins & fly tipping

There are three dog waste bins on site spread along the Cadwell Lane side of the playing field. There are two litter bins, one by the pavilion and one between the dog bins. They are emptied as required by NHDC grounds maintenance contractors, who are also required to remove litter and fly tipping from the site.

Steps

There is a set of infilled steps with wooden risers at the south western corner of the playing field leading down to the riverside path. Downstream of Cadwell Lane Playing Field and out of North Herts District Council ownership is a second set of infilled steps leading from the riverside path up onto Cadwell Lane.

2.7.4 ATTRACTIONS

Cadwell Lane Playing Field is a short walk away from the historic town centre of Hitchin. Closer to the site are local convenience stores, public houses and the industrial area with small businesses.

2.8 MANAGEMENT, COMMUNITY INVOLVEMENT & EVENTS

2.8.1 MANAGEMENT

Responsibility for the management of Cadwell Lane Playing Field lies with its owners NHDC. The maintenance works are currently carried out by John O'Connor's (JoC) ground maintenance contractors.

Five year Greenspace Action Plans (GAPs) for the site are produced by the Countryside Management Service in consultation with the relevant partners and stakeholders, this is the first such plan for the site.

NHDC own Cadwell Lane Playing Field and up to the middle of the River Hiz that flows past it. For the river to be able to benefit from any restoration works the project will have to extend outside of the boundaries of NHDC ownership. NHDC are committed to working with local landowners to make this project a success.

2.8.2 COMMUNITY INVOLVEMENT & EVENTS

The local football clubs use the site and maintain the pavilion, other than that there has been no community involvement or events of the site.

3 ANALYSIS AND EVALUATION

3.1 A WELCOMING PLACE

Cadwell Lane Playing Field resembles a public green space but at first glance people would think it is nothing more than a football pitch. The access around the site is generally good, the grassland is regularly mown and the ground is reasonably flat.

The signage, with only the site's name on, by the pavilion is tired and dated. A new interpretative style sign about the site, river and wildlife would provide local users with a focal point.

Three wooden routed NHDC style entrance signs should be installed at each corner of the playing field at the entrance points onto Cadwell Lane and steps down to the river, to make the site feel more welcoming.

3.2 HEALTHY, SAFE & SECURE

The safety of users is of primary importance to NHDC. Formal tree safety surveys are undertaken every three years; any works will be prioritised according to a risk assessment.

3.3 CLEAN & WELL MAINTAINED

The football pitch and its immediate surroundings are to continue to be cut as amenity grass between September and May – during the football season.

Entrance/exit points are to be maintained free from encroaching vegetation. Vegetation should be maintained low around the pavilion, steps, sign and bins.

The dog waste bins are visited weekly and litter bins around the site are visited daily as part of the Grounds Maintenance contract. Fly tipping occurs occasionally this is currently dealt with as part of the Grounds Maintenance contract.

Pavilion

The pavilion is looking quite dated and suffers from graffiti quite regularly. Graffiti here and elsewhere on the site will be dealt with in accordance with NHDC policies.

Steps

The steps from Cadwell Lane Playing Field to the riverside path are in need of repair. Any rotten timbers will need to be replaced and the steps will need to be refilled with type 1. They should be checked annually for vegetation grown – this should be removed - and to see if any additional topping up is required. The second set of steps leading from the riverside path up onto Cadwell Lane will need the same treatment. This set is not on NHDC land so the landowner's permission will be required and they may be able to help with the costs of any repairs.

Riverside Path

The riverside path that runs alongside Cadwell Lane Playing Field needs to be kept regularly strimmed back so that it is usable. Some places are quite narrow so cutting it back will make it easier to see any hazards and provide views into the river making it a more attractive route.

The path is quite narrow in places and revetments will need to be installed at the side of the path to stop it eroding further. With revetments in place these sections should

be surfaced with type 1 to make them less slippery when wet. Quotes can also be obtained to see how much it would cost to surface the whole section of path that runs from Grove Road to the railway bridge. Any spend would need to be justified, since this is a lower priority route. The path continues onto Ickleford but the focus of this GAP is on the Cadwell Lane Playing Field area and adjacent NHDC land.

The Environment Agency would need to be consulted to see if consents are required for the revetments and path improvement.



Narrow riverside path and limited vegetation in the river

Japanese Knotweed

There is a small patch of Japanese Knotweed at the southern end of the site, in the longer grass behind the pavilion near to the houses, this is being controlled. The control of this species will be ongoing until it is eradicated.

3.4 SUSTAINABILITY

Slight changes to the grounds maintenance contract will not substantially change the cost to maintain the site i.e. reducing area under amenity cut and increasing the area of cut and lift grassland.

Larger scale projects require external funding to be secured to be able to carry out the works sustainably. Using FSC certified timber for signs, producing products that can be recycled at the end of their life and ensuring that all material removed from the site is disposed of in the correct manner will go towards making the site more sustainable.

3.5 CONSERVATION

3.5.1 GRASSLAND

Football Pitch

The football pitch and its immediate surroundings need to be cut as amenity grass between September and May – during the football season. Outside of this time (June to August) the grass should be allowed to grow long and any flowering plants given the chance to set seed.

Marginal Edge

The nettle area around the outside of the amenity grassland is currently cut twice a year. To increase the area of grassland, cut the nettle areas four times a year for at

least two years; this will reduce the dominance of the nettles and allow wildflowers to take hold.

Along the three sides of the site away from the road the grass between the amenity cut areas and the nettle edge should be chain harrowed and sown with a native perennial wildflower mix (for example Emorsgate Seeds EM3 – Special General Purpose Meadow Mixture) in autumn. For the first 12 months cut the area as amenity grassland then put into a cut and lift regime, cutting the grassland in late August, leaving the airings on the ground for a week for the seeds to disperse then removing from site to be composted.

As this area develops over time a grass path should be mown through it for people to get close to and enjoy the wildflowers. This area will then be maintained by an annual cut and lift.

3.5.2 TREES, WOODLAND & SCRUB

Some of the larger trees on the steep bank down to the river cause a great deal of shading to the river. Sycamores have a dense nature especially when mature, coppicing some of these trees will allow more light to reach the river and ground flora.



Shady river and narrow path

There are several mature, previously pollarded willow trees along the river bank. These should be selectively re-pollarded to promote new growth and allow additional light into the river channel. Other mature willows will be selected to be left unpollarded as feature trees.



Mature willow pollard

There are pockets of scrub along the river corridor made up of hawthorn, elder and small sycamores, these again can be coppiced to open up the bank edge. There are a group of alders towards the southern end of the site on slightly lower laying ground, these too should be coppiced to promote new growth and allow more light in to the ground flora.

Around the Grove Road end of the site there is mix of false acacia trees and nonnative snowberry, these should be removed so that native species can recolonise the area. Vegetation should be removed from around the inlet so that the river can be seen from the road.

Due to the size of the trees and difficulty of the site with the steep banks this work will need to be undertaken by contractors. The material must be removed from site, so that it does not get washed into the river and cause blockages. A small amount of suitable material may remain left high up high on the bank out of the flood area to be used for river restoration works – see 3.3.4 river section for more details.

3.5.3 HEDGEROWS

Along the northern edge of the site, alongside the fence is what remains of an unmanaged hedgerow. The remnants of the existing hedgerow should be coppiced, retaining some of the more mature trees as standards. These should be crown-lifted to allow more light into the hedgerow trees.

A new hedgerow should be planted along the fence line to incorporate the existing coppiced hedge plants, using a native mix of hawthorn and field maple. Larger scale tree works will need to be carried out by contractor, while the planting can be undertaken by volunteers. New tree planting will have clear spiral guards and canes for protection installed as the trees are planted. For added protection if required, a fence can be erected around the hedgerow by volunteers.

3.5.4 RIVER

The river has accumulated a wide range of manmade rubbish over the years. Garden rubbish can be seen thrown down the bank behind a lot of properties. NHDC currently clears blockages in the river to ensure the flow of water is not restricted this needs to continue as a priority.

To coincide with the vegetation management works to allow more light into the river, encouraging aquatic plant growth, a river clean up needs to be organised. Smaller scale items can be carried out by CMS volunteers, but for the larger items and to remove the rubbish from site, NHDC grounds maintenance team will be required to assist.





Rubbish in channel

The river has become extremely silted up over time and the water quality has reduced, along with invertebrate and fish numbers. This is partly due to the channel being wide and devoid of flow variability but also due to the amount of leaf fall and nutrients getting into the system. There are several outfalls into the river mainly from surface water drains along this more urban section. The dredged channel has no flow sinuosity and the high banks have cut off any connectivity with the floodplain.

Just upstream of the railway bridge culvert, the river bends to the left and the flows increase. A substantial gravel berm is developing on the upstream right bank. A large surface water drain discharges into the river at this point as well.

Upstream on the River Purwell, work has been carried out on Walsworth Common another NHDC owned green space, to improve water quality. This has been done by installing woody-debris in the river to narrow the channel and direct the flow of water, which redeposits the silts to reveal the gravels. Deflectors should be installed in the channel at Cadwell Lane Playing Field; they will deflect the flow to the opposite bank and cause silt to build up on the downstream side eventually forming a silt berm. In parts of the river there is a lot of fallen woody debris; where it is not blocking the channel, it could be tied into the bank to start to create deflectors.

Where appropriate different river restoration techniques should be used such as using woody material to protect eroding banks and the use of brushwood bundles to help narrow the channel and trap some of the fine sediments.



Deflectors at Walsworth Common

Environment Agency consent will be required for any structure in the watercourse. CMS volunteers and local Environment Agency staff helped to build the deflectors on Walsworth Common so hopefully their expertise can be used here as well. The material retained from the tree works can be used to help make the brash build-outs, which will provide safe areas for fish fry to develop.

These improvements will benefit the flora and fauna that can be found in, using and along the banks of the river. Once areas are opened up and flow is increased, it is hoped that the native wetland plants such as common reed, watercress, starwort and water-crowfoot will soon recolonise the area. With improved habitats fish and other wildlife will also make a welcome return to the area.

The Environment Agency has been carrying out monitoring just downstream from the site. This information can be used as baseline data for the site and once the structures are in place, additional monitoring could take place and the data can be compared to the original data set to see if the area has improved.

3.6 COMMUNITY INVOLVEMENT

Local Volunteers

In the past there has been a limited amount of volunteer activity on the site apart from that of the football clubs.

The proposed wetland works to restore the chalk river will create more volunteer activities on the site. CMS volunteers and possibly Environment Agency staff will be involved with installing the woody-debris structures in the river. This will be a good opportunity to involve and inform local people about the river and its wildlife.

Continue to engage the local community in projects at and around Cadwell Lane Playing Field as and when they arise, subject to funding.

Cadwell Lane Playing Field falls into the Upper and Bedford Ouse Catchment Partnership area, which provides a source of wider community engagement opportunities http://www.ubocp.org.uk.

Consultations & Public Feedback

Stakeholders and the public have been consulted at each stage of the Cadwell Lane Playing Field GAP, from Briefing Document to Draft GAP. All relevant responses have been incorporated into the document.

3.7 MARKETING

There has been little to no promotion or marketing of Cadwell Lane Playing Field. Advertising the river restoration tasks on site so that local people can come and join in is a good way to promote the site and its wildlife. A CMS 'Walks and More' event could be held taking people down the river from Walsworth Common to Cadwell Lane Playing Field and possibly onto Burymead Springs. The time of year and the route may need to be considered as the riverside path in its current state would not be a suitable route.

4 AIMS AND OBJECTIVES

A A WELCOMING PLACE

To provide clear and welcoming access into and throughout the site

- A1 Improving access to, from and around the site where possible linking to residential areas, local greenspaces, businesses and schools, public transport, shops and local amenities
- A2 Update when appropriate signage to/from and around the site while making it more attractive

B HEALTHY, SAFE & SECURE

To ensure that visitors to Cadwell Lane Playing Field feel safe and able to enjoy the site at all times

- B1 Carrying out reactive tree works to address safety issues
- B2 Proactive response to the misuse of the site
- B3 Ensure all access routes and structures are fit for purpose

C CLEAN & WELL MAINTAINED

To ensure the standard of maintenance is maintained and relevant along the route

- C1 Managing and maintaining the paths and signage
- C2 Removing fly tip, litter picking, empty dog bins and carrying out small scale vegetation management

D SUSTAINABILITY

To ensure ongoing costs are sustainable and secure external funding for capital works

- D1 Ensuring ongoing maintenance costs are financially sustainable
- D2 Securing external funding to ensure the viability of capital works

E CONSERVATION

To protect and enhance the biodiversity that can be found on site

- E1 Carry out river restoration works that are beneficial to flora and fauna and aesthetically pleasing
- E2 Maintaining and enhancing all habitats and species on site
- E3 Working with local land owners to protect the biodiversity
- E4 Continuing to carry out invasive species eradication programmes

F COMMUNITY INVOLVEMENT

To support and encourage community involvement at Cadwell Lane Playing Field

- F1 Supporting volunteer activity at Cadwell Lane Playing Field and to ensure all involved operate towards achievement of the GAP
- F2 Encourage the local community to become involved in the management of Cadwell Lane Playing Field in a structured and supported way

G MARKETING

To promote awareness and interest in Cadwell Lane Playing Field

- G1 Improving the visitor experience and enhancing opportunities for informing and educating by installing a new site interpretation panel
- G2 Promotion of volunteer and community events at Cadwell Lane Playing Field

5.0 FIVE YEAR ACTION PLAN

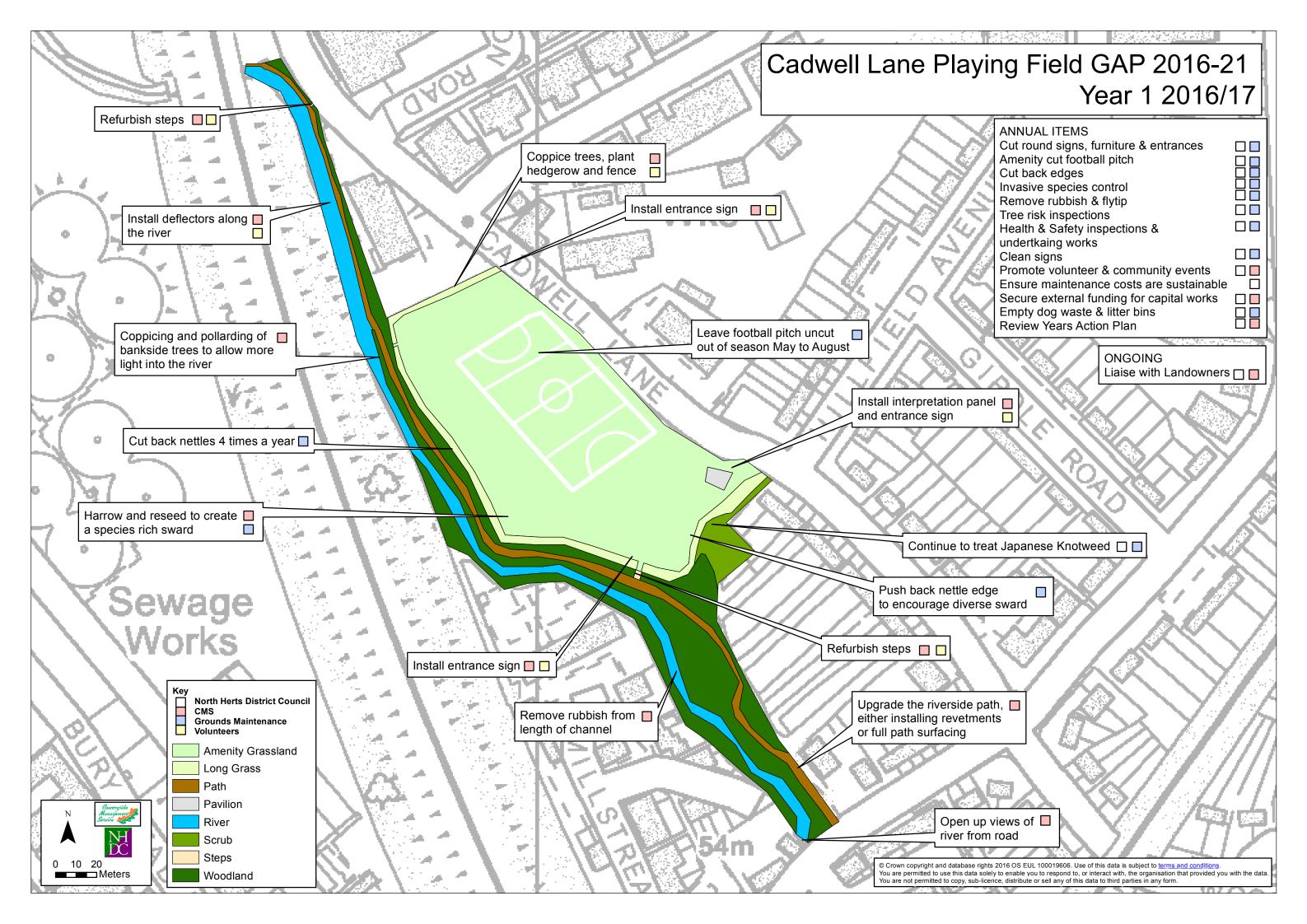
5.1 ANNUAL ITEMS

Action	Obj no.	When	Responsibility	Funding	Estimated Cost (VAT)	Spec ref.	Status Completed/ Comments
Cut round signs, furniture and entrances	C1	Apr-Oct	NHDC	NHDC GM Budget	GM Contract		
Amenity cut football pitch	C1	Sep-May	NHDC	NHDC GM Budget	GM Contract		
Cut back nettles around the edge	E2	Apr, Jun & Sep	NHDC	NHDC GM Budget	GM Contract		
Invasive species control – Japanese Knotweed	E4	Jun-Sep	NHDC	NHDC GM Budget	GM Contract		
Remove rubbish and fly tip	C2	When required	NHDC	NHDC GM Budget	GM Contract		
Tree risk management inspections	B1	Every 3 years	NHDC	NHDC Tree Budget	GM Contract		
Health & safety inspections and undertaking of works	B1	When required	NHDC	NHDC Tree Budget	GM Contract		
Clean signs	C1	When required	CMS	NHDC GM Budget	GM Contract		
Empty dog waste (weekly) & litter bins (daily)	C2	All year	NHDC	NHDC GM Budget	GM Contract		
Promote volunteer and community events at Cadwell Lane Playing Field	F1, F2 & G2	All year	NHDC/CMS	NHDC Budget	GM Contract		
Ensuring ongoing maintenance costs are financially sustainable	D1	Ongoing	NHDC				
Securing external funding to ensure the viability of capital works Review Action Plans	D2	Ongoing	NHDC/CMS				

Abbreviations: CMS – Countryside Management Service, GM – Grounds Maintenance, NHDC – North Herts District Council, Vols - Volunteers

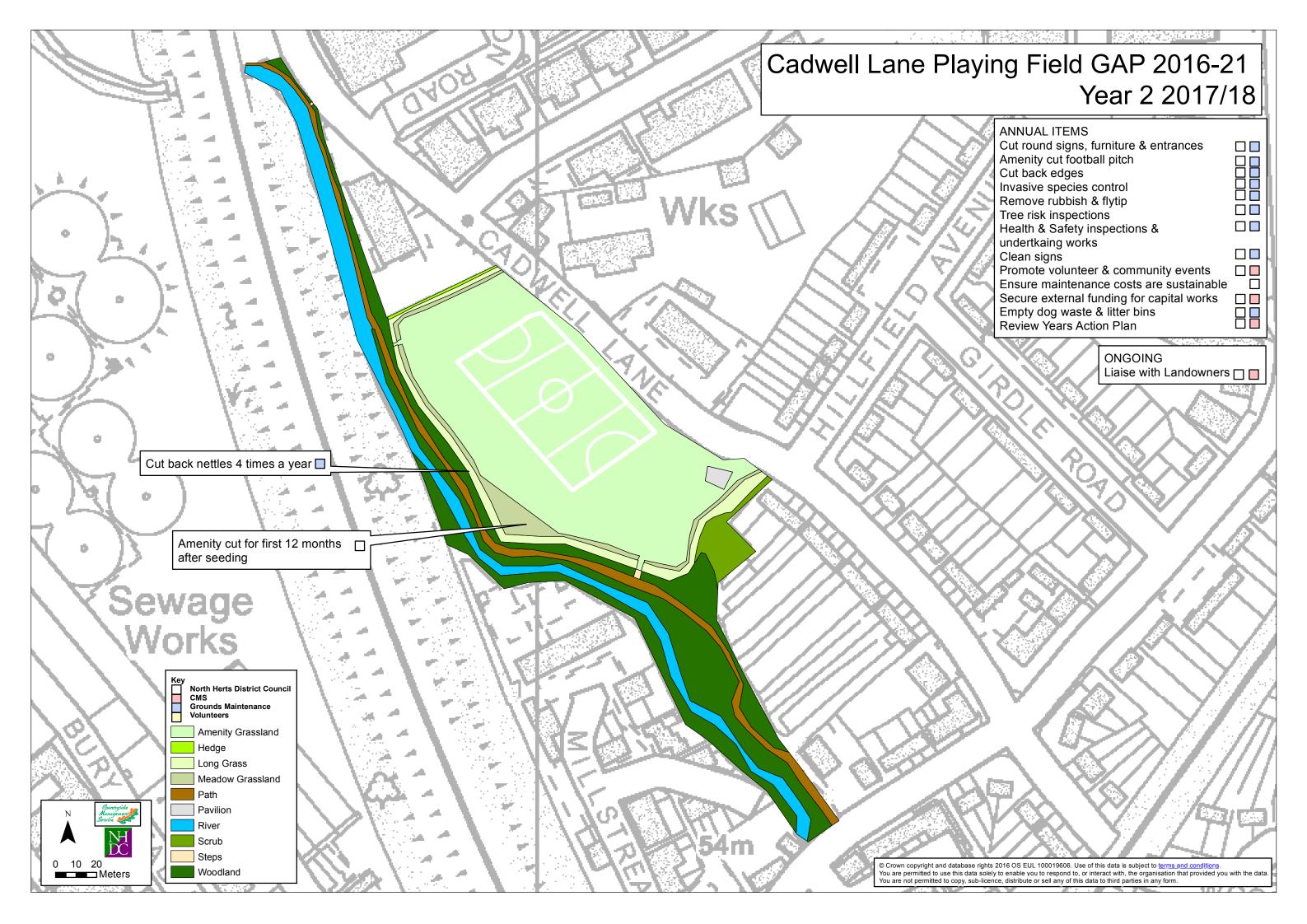
5.2 YEAR 1 ACTION PLAN 2016-17

Action	Obj no.	When	Responsibility	Funding	Estimated Cost (VAT)	Spec ref.	Status Completed/ Comments
Leave football pitch uncut out of season	E2	May-Aug	NHDC	NHDC GM Budget	GM Contract		
Push back nettles around the edge of the grassland	E2	Apr, Jun, Aug, Oct	NHDC	NHDC GM Budget	GM Contract		
Harrow & reseed around edge to create a wildflower area	E2	Oct	CMS	NHDC GM Budget			
Refurbish steps	A1	Aug	CMS	External Funding/ Vols			
Upgrade the riverside path	B3	Aug	CMS	External Funding			
Design and install entrance signs	A2	Aug	CMS	External funding			
Design and install interpretation panel	A2 & G1	Aug	CMS	External funding			
Remove rubbish from river	C1		NHDC/CMS	NHDC GM Budget	GM Contract		
Coppice & pollard bankside trees along river & open up view of river from road	E1, E2 & E3	Sep-Feb	CMS	External Funding			
Install deflectors etc. in river	E1, E2 & E3	Sep-Feb	CMS	External Funding/ Vols			
Coppice trees, plant hedge and fence	E2	Sep-Feb	CMS	External Funding/ Vols			
Liaise with local landowners	E3	Ongoing	NHDC/CMS	N/A			
Review Year 1 Action Plan		Mar 17	NHDC/CMS				



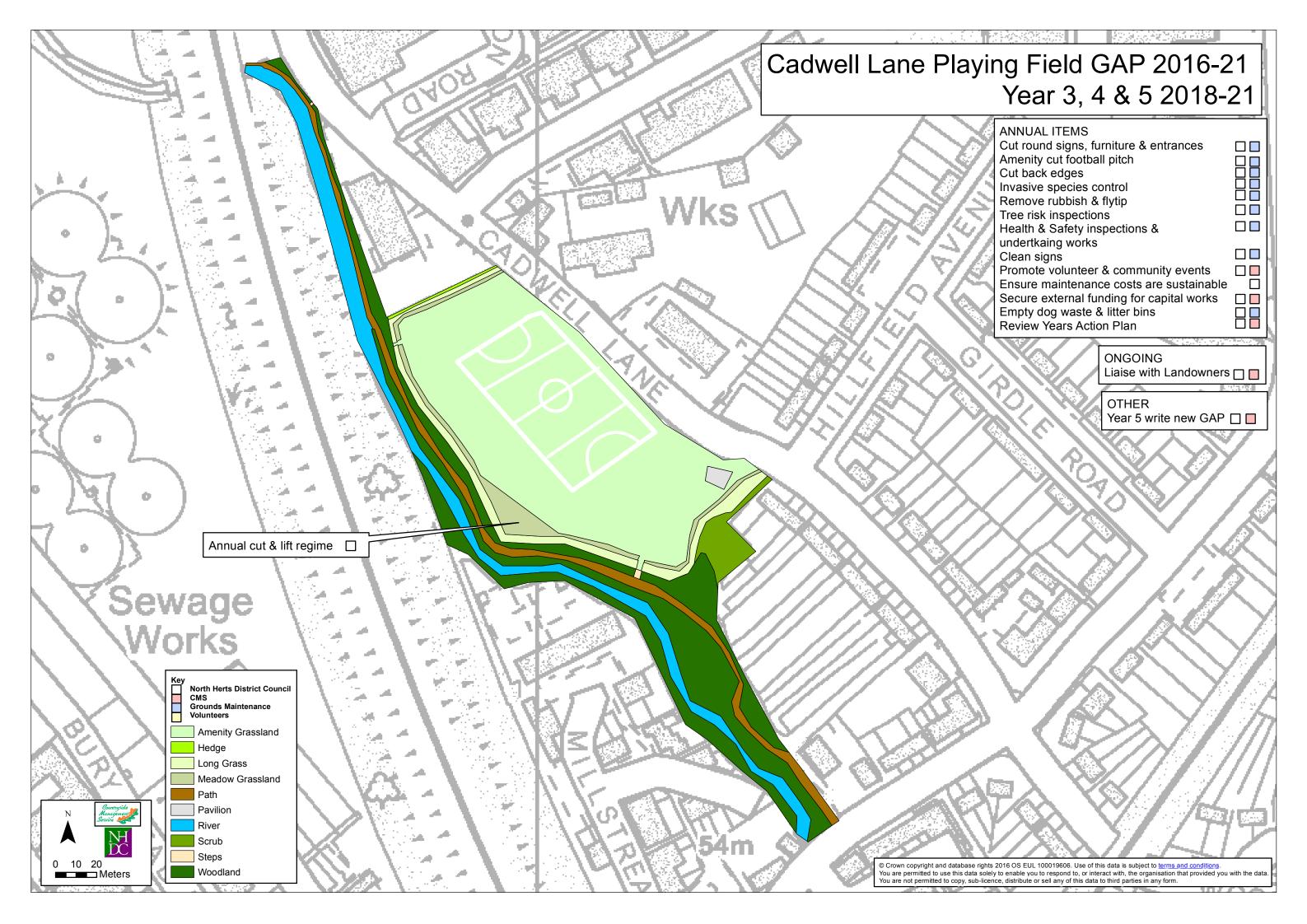
5.3 YEAR 2 ACTION PLAN 2017-18

Action	Obj no.	When	Responsibility	Funding	Estimated Cost (VAT)	Spec ref.	Status Completed/ Comments
Cut wildflower area as amenity cut for first 12 months	E2	Apr, Jun, Aug, Oct	NHDC	NHDC GM Budget	GM Contract		
Push back nettles around the edge of the grassland	E2	Apr, Jun, Aug, Oct	NHDC	NHDC GM Budget	GM Contract		
Liaise with local landowners	E3	Ongoing	NHDC/CMS	N/A			
Review Year 2 Action Plan		Mar 18	NHDC/CMS				



5.4 YEAR 3, 4 & 5 ACTION PLANS 2018-21

Action	Obj no.	When	Responsibility	Funding	Estimated	Spec	Status
					Cost (VAT)	ref.	Completed/
							Comments
Liaise with local landowners	E3	Ongoing	NHDC/CMS	N/A			
Put the wildflower area into an annual cut & lift regime	E2	Late Aug	NHDC	NHDC GM	GM		
				Budget	Contract		
Review Year 3 Action Plan		Mar 19	NHDC/CMS				
Review Year 4 Action Plan		Mar 20	NHDC/CMS				
Review Year 5 Action Plan and consult & write new plan		Apr 21	NHDC/CMS				



6.0 SPECIFICATION

6.1 WILDFLOWER MARGIN

The margins will be cut and cleared, the ground will then be chain harrowed in autumn to break up the sward and create a suitable habitat for sowing wildflower seeds. The area will be broadcast sown with a native perennial wildflower mix (for example Emorsgate Seeds EM3 – Special General Purpose Meadow Mixture sown at 4g/m²), then rolled to aid germination. For the first 12 months the area needs to be cut as amenity grassland, once established the meadow will be managed by a cut and lift regime to help encourage the diversity of wildflowers.

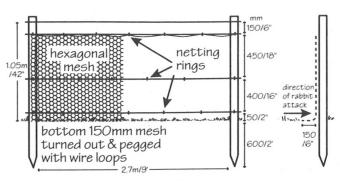
6.2 HEDGE PLANTING

The existing hedgerow will be coppiced by contractors while retaining some of the more mature trees as standards. These can be lifted to allow light into the hedgerow.

Volunteers will plant a new hedgerow approximately 55m, with two rows of plants between the coppiced hedge plants. New planting should use native species ideally provenance 402 (405 or 406 acceptable), plants should be spaced in a staggered double row with 4 to 6 plants per metre – with species mix with 75% hawthorn and 25% field maple, new plants to be protected using clear spiral guards and canes – see hedge planting guidance notes below.

For added protection if required, the volunteers can erect a fence around the hedgerow at least half a metre away from the nearest plant. For the fencing use rabbit netting (hexagonal mesh) height 1050mm, 31mm mesh, wire gauge 18, 150mm to be turned out at bottom and pegged down with wire loops (see diagram below). Stakes round 1.7m x 63mm diameter at about 2.7m apart, straining posts round 2.1m x 125mm diameter up to 150m or on corners, struts round 2.1m x 100mm diameter. Four lines of wire 4mm mild steel, fixed at 50mm, 450mm, 900mm (top of mesh) and 1.05m from ground level, stapled to posts using 40mm staples and fasten the mesh to the wire using netting rings (pig rings).

RABBIT FENCING mild steel line wires with hexagonal mesh



straining posts up to 150m apart



Hedge Planting

Guidance Notes

Hertfordshire Countryside Management Service

For further information on this or any matter concerned with countryside conservation contact the CMS office.

Phone 01992 588433 northeast.cms@hertfordshire.gov.uk

or browse the web site at www.hertslink.org/cms/ Planting a new hedge is a long term commitment and should be considered carefully. This leaflet aims to out line the main points that will ensure success.

Site Preparation

To aid establishment the site should be prepared prior to planting. Plough, rotovate or dig a strip 60cm wide by 30cm deep and create a weed free strip about 1m wide, either by cultivation or herbicide.

Plant Selection

Bare root transplants of 30cm to 60cm should be used, of a species mix which matches surrounding hedges. For further advice on suitable species contact your local CMS officer.

As a basic guide the species mix should be predominantly hawthorn. You may use blackthorn but be aware that it suckers vigorously and you may therefore wish to leave it out. To this a small proportion of shrubs indicative of the local area could be included, but when doing this avoid regular spacing as this may create a striped unnatural effect.

Planting Out

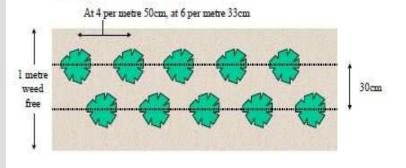
Plant as soon as possible after obtaining the plants. All roots should be protected while exposed to prevent drying out or frost damage. This includes during planting out when a slight breeze can soon dry the roots.

Plant during the Winter, or ideally late Autumn or early Spring to avoid heavy frosts, but while the soil is moist.

If the ground is very soft or has been cultivated then slot planting maybe an option otherwise pit planting is better.

The plants should be spaced in a staggered double row with 4 to 6 plants per metre.

Planting Layout



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Protection

Wild animals such as rabbits, voles or deer can decimate a newly planted hedge so protection of new plants is essential, Individual guards are generally the easiest way though fencing maybe an option.

Types of Guards

Spiral guards – These expand with the growing plant and protect from browsing animals. Clear guards are generally preferable.

Plastic mesh guards – These can be used where branching is a problem such as with holly.

Tree shelters—While protecting the plant these also aid the trees early development by providing a sheltered environment, but will restrict lateral growth.

Guards should be removed once the plants are well established, say in 3 to 5 years, though caution may be needed where large numbers of rabbits are present.

Domestic Animals

Cattle, sheep and horses may all browse and damage new hedge plants. If they are present then a fence will be required. This should be at least 1m from the hedge and ideally 2m to allow maintenance and prevention of browsing.

Weed Problems

This is perhaps the most important operation when establishing a new hedge and is often over looked. The main way in which weeds harm new trees is by competing for water and nutrients from the soil. Certain weeds can also smother new plants depriving them of light.

Weed competition not only reduces the survival rate of a new planting, it also dramatically reduces their subsequent growth rate. This can mean the difference between a first year growth rate of 30-40cm and a first year growth rate of just 1-2cm. In extreme cases plants may even experience first year die back. This is more common where standard sized trees are planted.

Weed Control

To prevent weed competition an area 1 metre across should be cleared of vegetation in line with the new hedge. This will require maintenance for the first three years or until the plants become established.

A variety of methods can be used to control weeds as detailed:

Cutting – This will help to control some plants such as nettles and brambles, but will invigorate many others such as grasses and rosette forming herbs, stimulating greater root growth and competition. Where these weeds predominate cutting will be counter productive.

Hoeing – Can be effective but is labour intensive, and great care will be needed around newly established plants in order to not excessively disturb their roots or damage the bark.

Herbicide – This is cheaper than most alternatives, but requires specialist knowledge and equipment. Advice can only be given by a suitably qualified practitioner.

Mulch mats – These are effective but may occasionally harbour small mammals and invertebrate pests.

Organic mulch – An environmental alternative which suppresses weeds before rotting into the soil. The following can be used: wood chips, bark, coconut fibre, grass cuttings, well rotted horse manure or farm yard manure. A layer about 4" deep will be required to be effective. Some light weeding and topping up of the layer will be needed in following years.

Losses

If all the precautions listed on this sheet are followed then losses should be minimal, however during extreme weather losses maybe unavoidable and should be replaced the following year.

Hedge Profiles

An early trim at the end of the first growing season will help to produce a thicker hedge. After this the aim should be to produce a hedge 2 metres tall by about 1.5 metres wide, with an A-shaped profile. If a more vertical profile is needed then chamfered top comers will help to produce a similar effect.

Hedgerow Trees

If hedgerow trees are to be included these should be spaced at least 30m apart to prevent them overshadowing the hedge. To establish trees, they can be planted in the line of the new hedge along with the hedge plants, but use tree shelters to allow their identification during maintenance.

Planting Checklist

- 3 Ground preparation
- 3 Plant selection and species
- 3 Time of year
- 3 Pest protection
- 3 Weed control



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6.3 IN-CHANNEL STRUCTURES

A variety of in-channel structures are to be used in the river at Cadwell Lane Playing Field to improve the water flow, quality and habitats for plants, invertebrates and fish. Excess material from the tree works can be used to create single and double log deflectors and brash build outs. See examples below of structures at Walsworth Common, Hitchin.

Chestnut stakes 4' 6" (approximately 140cm) will be used to hold the structures in place by being driven into the bed and will be attached using approximately 2mm gauge linewire PVC coated. Galvanised staples 40mm and 25mm will be required for securing the wire and wood.

The structures will influence the flow of water in different ways depending on the type of structure and its location. Brash build-outs will force water from one bank into the channel and toward the opposing bank, creating a current of high energy water that will scour the bed and provide for clean gravels. It will also create an area of slack, lower energy water immediately downstream of the deflector and on the same side of the channel, in which, over time, sediment will deposit, gradually forming a silt berm. In time, wetland vegetation will also start to colonise the deflectors and silt berms.

V-shaped log deflectors will be positioned so that they point upstream and are designed in such a way as to concentrate the flow of water in the stream towards the centre of the channel creating an area of scour which over time and under the right conditions will erode deeper pools on the downstream of the structure.

A variety of in-river structures installed on the River Purwell at Walsworth Common, upstream of Cadwell Lane Playing Field.

