Sheffield & Rotherham Wildlife Trust

Little egret (right) and cattle egret (left) at Woodhouse Washlands ©John Nicol

Reserve Management Plan

Woodhouse Washlands

2025 - 2035

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For nature, for everyone

Acknowledgements

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Picture credit to Roy Twigg (left: lapwings) & John Nicol (centre: migrant hawker; right: goosanders)


Picture credit to SRWT (left: cattle used for conservation grazing) & Chris Tomson (right:hybrid black poplar)


Picture credit to Sarah Lamb (left: gatekeeper) & John Nicol (right: kestrel)

Table of Contents

Summary

Woodhouse Washlands encompasses 57 hectares of wetland, grassland and scrub, which straddles the River Rother on the boundary between Sheffield and Rotherham at Woodhouse Mill. Owned by the Environment Agency (EA), the reserve has been managed for the purposes of flood amelioration, nature conservation and public recreation by the Sheffield and Rotherham Wildlife Trust (SRWT) since 2016.

Woodhouse Washlands is designated as both a Local Nature Reserve and a Local Wildlife Site under the relevant local plans. It contains many features of biodiversity interest, including its wetland and semi-improved grassland habitats, its population of great crested newts and its invertebrate and bird fauna.

Woodhouse Washlands has long been used as a place for recreation, and has been enjoyed by generations of local people for walking, picnicking and angling. The site contains a comprehensive network of informal paths and a section of the Trans Pennine Trail – a long distance walking and cycling route – crosses the site.

This management plan covers the period April 2025-March 2035, and so is tied to the period covered by the current Higher Level Stewardship (HLS) agreement. Physical works contained in the plan are aimed at retaining a balance of habitats on the site and restoring its features of interest. Works to maintain and improve recreational infrastructure are also included. The ecological monitoring framework (EMF) provides data on key ecological features which will inform future management works.

In addition to these physical works, the Trust engages the public in the management of Woodhouse Washlands through the Reserve User Forum. Information provision to the public is maintained and improved on site and on the Trust's website. A programme of events is held to promote public understanding of its wildlife and history. The opportunity for volunteers to participate in practical work days, volunteer rangering and ecological surveying is also offered.

1. Introduction

Sheffield & Rotherham Wildlife Trust (SRWT) is part of a national association of 46 local Wildlife Trusts, which work with communities throughout the United Kingdom (UK) to protect wildlife in town and country. SRWT aims to promote nature conservation, advance education in environmental matters and improve the quality of life in Sheffield and Rotherham, through the development and promotion of sustainable land management practices, linked directly to both rural and urban regeneration.

1.1 Purposes and formulation of the plan

This management plan has been formulated for the following reasons:

- ➢ To provide comprehensive and cohesive information about the nature reserve in one document, with reference to other documents where necessary.
- ➢ To outline the key long-term aims and the associated objectives that form the framework of management.
- ➢ To outline the rationale for management so as to give a clear and comprehensive explanation of why aspects need management and in what form that management will take place.
- ➢ To provide a key document from which projects are developed and associated funding sought.
- ➢ The plan allows consistency and continuity so that if or when changes of staff take place, or changes in ownership or disposal of the land occurs, then management aims, objectives and prescriptions are continued.

The work programme is set out within this document. However, the nature of work programmes is such that they vary and are modified due to unanticipated changes or developments. Therefore the full annual work programmes are kept and updated electronically at the SRWT offices.

1.2 Structure of the plan

This management plan is divided into sections.

Section 1 gives an overview of the plan.

Section 2 provides a detailed description of the reserve.

Section 3 of the plan gives the Trust's **vision** for the reserve: the condition we are aiming to achieve by 2070.

It then lists the reserve's **features**, the most valued elements of the site for which it is managed.

For each feature, a number of **attributes** and **factors** are then identified. Attributes are measurable qualities of a feature, against which its condition will be monitored in order to judge the effectiveness of management. Factors are anything that has the potential to influence or change a feature, or to affect the way in which it is managed.

Once the attributes and factors affecting a feature have been identified, each feature is then **evaluated**. During evaluation, the current condition of the feature is compared to that contained in the vision, and its performance against

the attributes identified is discussed. The impact of factors – which can be positive or negative – on the feature, or its management, are likewise evaluated.

From this evaluation, **management objectives** are then set.

Section 4 comprises the **work programme** where the management prescriptions for the features are listed.

Section 5 of the plan comprises the **figures**: maps that accompany the text.

Section 6 of the plan are the **appendices**, where supporting information is given.

2. Site description

2.1 General information

Location and extent

Woodhouse Washlands is located on Sheffield's eastern fringe and straddles the River Rother. It covers an area of 57 hectares (140 acres) and is centred on OS Grid Reference SK 438 852 **(Figure 1)**. Approximately 16 hectares of the reserve lies within the Sheffield City Council (SCC) area, with the remaining 41 hectares within the area of Rotherham Metropolitan Borough Council (RMBC).

Landscape value and context

Woodhouse Washlands falls within Natural England's National Character Area (NCA) Profile 38: Nottinghamshire, Derbyshire and Yorkshire Coalfield. This area has seen great change over the past few centuries due to widespread industrialisation and development. A generally low-lying area, with hills and escarpments above wide valleys, the landscape over half of the NCA (64 per cent) is currently designated as greenbelt land. Very little of the NCA is designated for geology or nature conservation, but instead the landscape is dotted with many pockets and patches of habitat where species find refuge.

The Washlands' mosaic of wet and dry grasslands, swamp, wet ditches, ponds and scrub are typical of the landscape which once fringed the River Rother as it passed through its floodplain. Over time, much of this primary habitat has been lost to housing and industrial development (in particular, open casting), giving the local area an urban and industrial character. The area immediately surrounding the Washlands was once worked for minerals or occupied by major industry. As these enterprises have declined, the land they once dominated has opened up, and a new green landscape is developing in which the river and adjacent water bodies are an important feature. Consequently, the Washlands

today now form one of a chain of green sites through which both people and wildlife can move.

The reserve lies at the bottom of a wide valley, with views over adjacent housing and industrial premises. Both a railway line and a major road pass over the site on viaducts. The course of the River Rother has itself been greatly modified as it passes through the Washlands, with the straightening of the river channel during the 1950s, and the installation of a sluice in 1959 to regulate water levels during flooding events (**Figure 2**). It should be noted that the source of the water which characterises this landscape lies outside the NCA, meaning that the area is a key user of ecosystem services provided by surrounding NCAs.

Site ownership and tenure

The Washlands is owned by the Environment Agency and is managed by SRWT under a 25 year lease (1st April 2016 to 31st March 2041).

Designations and policy context

Woodhouse Washlands functions as an EA flood storage area in times of heavy rainfall, when the Woodhouse Mill regulator may be closed to control downstream flows. It is leased to SRWT on a long lease. As such, it is imperative that any future management works comply with the terms of this lease and, in particular, the flood management requirements for the reserve. This includes the exact siting of tree and scrub planting, the disposal of spoil generated by excavations on site, the import of materials onto the Washlands and any works within the river channel. **SRWT will work closely with the EA, seeking opportunities to work together for the mutual benefit of both organisations and the site.**

Woodhouse Washlands supports a population of great crested newts (*Triturus cristatus*). Great crested newts (GCN), their eggs, breeding sites and resting places are all legally protected from disturbance and destruction. A licence from Natural England is required for all activities on site where damage to their habitats (ponds, the land around ponds and hibernacula) cannot be avoided, and mitigation measures may be required.

A similar level of protection is granted to otters (*Lutra lutra*), a species that have now been confirmed to be present in this reserve. Works that would affect breeding or resting places, or operations likely to result in a level of disturbance which might impair their ability to survive, breed and rear young, are required to hold a European Protected Species Mitigation Licence.

Badgers were once present in the reserve, but no recent records exist. Birds protected under the schedule 1 of the Wildlife and Countryside Act 1981 include kingfisher (*Alcedo atthis*), little ringed plover (*Charadrius dubius*) and

mediterranean gull (*Larus melanocephalus*), including the exceptional visit of a spoonbill in 2024.

Woodhouse Washlands nature reserve is split between Sheffield and Rotherham Planning Authorities, with the boundary running along the River Rother. As a result, the land to the west of the river is covered by the **SCC's Local Plan**, while that to the east comes under **RMBC's Local Plan**.

Woodhouse Washlands is designated as a **Local Wildlife Site** (no.33) under the Rotherham Local Plan and as a **Local Nature Reserve** (LNR) and a **Local Wildlife Site** (no. 258) under the Sheffield Plan. As such, it receives protection from development and damage.

'Sheffield's Great Outdoors' strategy sets out the Council's approach to green and open spaces (Green and Open Spaces Strategy 2010-2030). Under this document, SCC recognises the benefits provided by access to high quality green space to the city's population (for health and recreation), to the environment and wildlife and to the local economy. The importance of engaging local people in the design and development of green spaces is also highlighted.

The Trans Pennine Trail (TPT), a long distance path across Northern England, runs through the Rotherham side of the Washlands (**Figure 3**). It forms part of European walking route E8 and is part of the National Cycle Network as Route 62

Woodhouse Washlands is covered by a **Higher Level Stewardship** agreement which sets targets and management prescriptions for the reserve which are reflected in this management plan.

The reserve falls under the **Nitrate Vulnerable Zones**, which are areas designated as being at risk from agricultural nitrate pollution. They include about 55% of land in England. Waters are defined within the Nitrates Directive and Nitrate Regulations as polluted if they:

- contain or could contain, if preventative action is not taken, nitrate concentrations greater than 50 mg/l.
- are eutrophic, or become eutrophic, if preventative action is not taken.

Records of nitrogen input are to be kept by SRWT (grazing, use of fertilisers and storage of manure) and made available if requested by the authorities. (gov.uk)

Adjacent land ownership and use

The land surrounding Woodhouse Washlands is owned, or tenanted by a variety of individuals and organisations. The majority of land is under use either for housing, transport or light industry. Two railway lines and several roads bound or cross the reserve. A map showing the ownership of the reserve's boundaries reflects this pattern of land use and is given in **Figure 4**.

Rother Valley Country Park lies to the south of the reserve, with the Shire Brook Valley to the south-west and Waverley to the north. Linked by Public Rights of Way, the reserve therefore forms a link in a chain of wildlife-rich sites offering good recreational opportunities in the vicinity.

Past, recent and present land use

The place name Woodhouse is derived from the Old English words 'wudu' collection of trees and 'hus' house. The earliest reference to **a mill** at Woodhouse is in around 1200 when it was recorded that Gerard de Furnival gave half the rents of the mill to the monks of Kirkstead Abbey. A mill and dam at Wodehus are also referred to in a document written during the reign of Edward I (1272 – 1307), relating to the conveyance of land and buildings from Jociamus le Scrob to Henry son of William de Wodetorp.

The earliest ordnance survey map of the area, dated 1850, shows a number of elongated rectangular fields which were probably established at the time of enclosure. The absence of field boundaries close to the river suggests that the **ground there was too wet for occupation and cultivation** and it is probable that this seasonal inundation has both given the Washlands their name and caused them to remain undeveloped.

The historic landscape of the area surrounding the Washlands appears to change from agricultural to one increasingly dominated by small-scale industries as one moves through the post-medieval period, with the River Rother itself attracting a succession of water-powered mills, whilst local deposits of coal were also exploited.

The North Midlands Railway line runs along the eastern edge of the nature reserve. Opening in 1840, it linked Derby and Leeds, thus opening up many limestone quarries and coalfields. The **Sheffield to Gainsborough railway line**, which crosses the Washlands on the Beighton Viaduct, was opened in **1849**. At this time Woodhouse was **the hub of two colliery branch lines**: to the west a branch to Orgreave and Treeton Collieries, and, to the east, from Woodhouse East Junction, the Birley Branch, which served the Birley Collieries, belonging to the Sheffield Coal Company.

During this period, the Washlands is likely to have been grazed by cattle (and possibly by sheep) during winter, spring and autumn, with a hay crop being taken in the summer months. Grazing pressure would have been relatively low. During the **post-war period** this pressure increased, and much of the **area was drained and reseeded with higher-yielding grass species**.

Until the late 1950s, the River Rother meandered, south to north, through extensive marshland and flooded on a regular basis (**Figure 2**). In the **1950s**, a **flood alleviation scheme** was put into operation to prevent this flooding and free up land for development. Under this scheme the **river channel was**

straightened where it passes through the reserve and the sides of the channel banked, resulting in a lowering of the water table across the site. However, in the late 1950s it was realised that these measures, which took place not just at the Washlands but on adjacent stretches of the river, were contributing to increased flooding events in downstream Rotherham and Doncaster, and a regulatory sluice was installed to allow managed flooding on the Washlands once more.

In the early **1990s** the route of the A57 was revised, resulting in the construction of the **Beighton flyover** across the southernmost part of the reserve.

During the early 1990s, plans to designate Woodhouse Washlands as an area for nature conservation began to pick up momentum, triggered by possible threats to the site by plans to build additional housing on its western boundary. Modifications to the plan for the housing scheme to decrease its impact were agreed and the reserve was **designated a Local Nature Reserve in 1999**. It was initially managed by Sheffield Wildlife Action Partnership, then later passed into management by the Yorkshire Wildlife Trust. During this period a wide variety of works to benefit wildlife and improve public access were carried out on site, for example the creation of several new ponds (no.s 2, 6 and 7; **Figure 5**) through the Froglife Project, conducted in partnership with the Sheffield City Ecology Unit.

Services

Overhead high voltage transmission lines run northeast-southwest through the centre of the reserve and also across the far south-eastern corner (**Figure 6**). Overhead power lines also run east-west through the centre of the reserve. An underground gas pipe also runs east-west through the centre of the reserve adjacent to these power lines. No water supply pipes run through the reserve but two underground combined sewers run through the northern section, one on each side of the Rother. No fibre optic cables run through the reserve. A number of historic drainage pipes have been found on-site which are not shown in current utilities maps. When old services infrastructure is located, this is included in the most up-to-date services map held by SRWT. Up-to-date versions of utilities maps should be referred to when planning works, as well as on-site checks.

Public Rights of Way

The TPT, a long distance walking/cycle route passes north-south through the eastern half of the reserve. The section running through the Washlands is currently open to walkers and cyclists only.

With the exception of this route, no other statutory public rights of way (PRoW) are present on site, although access is allowed at many points and a network of desire lines is present **(Figure 3).**

The reserve has four main access points:

Furnace Lane, Woodhouse Mill, Sheffield S13 9XB (SK 43153 85514)

Retford Road, Woodhouse Mill, Sheffield S13 9WD (SK 43255 85693)

John Hibbard Avenue, Sheffield S13 9UZ (SK 43484 85000)

Crown Works, Rotherham Road, Swallownest S20 1AH (SK 44570 84277)

The Rotherham PRoW service clear vegetation along c700m of the TPT twice a year. If resources become available, SRWT offers support on this task.

Access protocols

Vehicle access is required for SRWT management purposes, EA access to the flood storage area, grazing management and occasional services checks. All vehicle gates have padlocks which cannot be swapped without notice as several individuals require access at all times.

2.2 Infrastructure

Boundaries and fencing

The reserve's external boundaries and infrastructure are shown in **Figures 4 & 7**. These, together with the access gates, secure the reserve against illegal access by cars, quad bikes and motorcycles.

A network of stock fencing is present within the reserve, and is used to delineate and secure the various habitat compartments on the reserve (**Figure 8**). Following an extensive programme of refurbishment in 2016, the stock fencing will require a complete replacement during the period covered by this plan. A small amount of heavy duty metal fencing was installed to secure the southern boundary of Compartment C and the more accessible boundaries to the railway lines. In 2025, a new fence is planned to be constructed within compartment C.

Footpaths, bridleways and trackways

Woodhouse Washlands contains two surfaced paths, one on each side of the river. To the west this comprises the permissive footpath from Furnace Lane which runs along the reserve boundary adjacent to the John Hibbard estate, known as the "green lane". On the eastern side of the reserve the only surfaced track is the TPT.

Access furniture (waymarker signs, benches, gates, stiles)

The site currently has limited way-marking due to the scarcity of Public Rights of Way. Given that the Trust is now encouraging the use of certain permissive routes to minimise disturbance to wildlife, **the way-marking of these routes would be desirable** and will be carried out in line with the standard SRWT style.

Access onto the reserve for visitors has previously been possible using a variety of squeezes, stiles and gates. During 2016 work was carried out to rationalise access points into compartments A and B and kissing gates installed to allow easier and safer access onto the reserve. Improvements on access to compartment C are due in 2025-26 as part of the Species Survival Fund (read below for more details).

Several field gates are present on site to allow compartments management.

Bridges and bunds

An earth bund runs along the boundary on the western side of the reserve, separating the green lane from Compartment A. This bund was built to screen the housing estates of Kirkstead Gardens and John Hibbard Housing. The bund was planted up with a variety of native tree species at the time it was created, which are now maturing. The presence of dense woodland and scrub has resulted in the obstruction of views over the reserve and has led to the lane becoming unpleasantly enclosed and densely shaded. To counteract this, **the Trust runs a programme of rotational coppicing of the scrub and young trees on the bund,** including a section where the hedge is laid.

A wooden bridge crosses a dry ditch on the eastern side of the reserve along the TPT, adjacent to the southern end of the Geld Wen factory. A second wooden bridge is located on the TPT close to the southern end of the reserve, over a tributary of Beighton Mill Tail Goit. Both are the property and maintenance responsibility of the Rotherham Rights of Way service.

Interpretation structures

Two new interpretation panels were installed adjacent to the Furnace Lane and Retford Road entrances to the reserve in early 2017. Three metalwork sculptures depicting reserve wildlife and two metal wheel seats, representing the reserve's industrial past, are present along the TPT. A decorative metalwork entrance panel designed by local children, is present at the entrance to the John Hibbard housing estate**. All these features will be retained and maintained in good condition**. Two interpretation panels have recently failed and will be re-installed at the southern end of the TPT and the green lane.

2.3 Site safety, security and maintenance

Site safety

SRWT have developed site-specific risk assessments for Woodhouse Washlands which are reviewed on an annual basis. Further risk assessments are prepared for specific tasks and events at the site as necessary. SRWT also manages the reserve in line with its biosecurity, environmental management and Health & Safety policies. These are amended and updated at regular intervals or to reflect legislative changes.

Woodhouse Washlands is **regularly patrolled by SRWT staff and volunteers**. Any problems, such as broken fencing or trees that have fallen across footpaths etc, are logged centrally and addressed as soon as practical. Problems and incidents reported by members of the public are also logged on the spreadsheet and are dealt with as necessary. Any known accidents or incidents that occur on Woodhouse Washlands are recorded on the relevant accident forms.

Tree inspections are carried out in line with the Trust's tree safety policy. Associated remedial work is undertaken as required to ensure public safety, on the recommendation of the surveyor. Dead standing wood is retained where possible for its benefit to wildlife.

Site security

Woodhouse Washlands' boundaries are marked and secured by fencing, the majority of which is the property of neighbouring landowners (**Figure 4**). Access points to the reserve are provided with gates, stiles or squeezes (as appropriate) to allow access by legitimate users of the site whilst excluding entry by motorised vehicles (other than management vehicles).

Litter, cleanliness and vandalism

No litter bins or dog waste bins are present on site, although a bin is available just outside the Furnace Lane entrance. The installation of litter/dog waste bins on site has been discounted due to the cost of collections and to maintain the natural aesthetics of the nature reserve. In addition, the trust promotes the concept of 'leave no trace' and everything that is brought to the site should be taken back home.

A dedicated patrol team visit the site to undertake regular litter picks, particularly after flooding events, and report issues of vandalism. We have a dedicated Land Management Team who visit the site once per month on average.

The site receives a number of daily visitors who are encouraged to report vandalism, fly tipping, graffiti etc to SRWT when it occurs.

2.4 Flood plan

Woodhouse washlands regularly floods and it is designated as a flood storage area during major flooding events. **The entirety of the reserve can be under water during peak flooding events**, with the exception of higher ground in certain areas.

As a result of the flat terrain, the water can travel quickly. For this reason, any activity in this site needs to take into account the water level of the River Rother and the forecast.

Cattle are present on site and there are two areas of higher ground on each side of the river where they could escape to during an emergency. However, these areas are not easily accessible if the flood event is extended in time and cattle require additional food. For this reason, if a long period of flooding is expected, cattle are removed from site to guarantee their safety.

2.5 Recreation

Recreation facilities

Woodhouse Washlands has been designated as a LNR since 1999. The reserve has four main entrances – at Furnace Lane and Retford Road to the north, at John Hibbard Avenue to the west and from Rotherham Road to the south **(Figure 3)**.

SRWT welcomes visitors to Woodhouse Washlands and wishes to ensure that its entrances reflect this. **Work to renovate the Furnace Lane entrance** was carried out in 2016 (now called Green Lane) and improvements to the Retford Road have improved access to the Trans Pennine Trail. New interpretation panels were installed at the entrances to the reserve to inform visitors of the wildlife of the reserve.

Entry to the reserve from the south is officially via the TPT, which enters the site to the east of Rotherham Road through a stretch of land not managed by the Trust. This entrance is somewhat obscure and not clearly signed and is often blighted by litter and fly tipping. In order to minimise handling of grazing field gates, potentially being left open when cattle are present, the Trust promotes access to the reserve via this TPT entrance, rather than through the non-public entrance adjacent to the Crown Works (Violia).

As previously stated, the reserve includes a stretch of the Trans Pennine Trail running from Retford Rd to Rotherham Road (**Figure 3).** This is a Public Right of

Way open to walkers and cyclists that joins Catcliffe to Rother Valley Country Park and onwards to the whole TPT network. Use of this path is likely to increase in the future as people move into the new housing developments at Waverley.

Woodhouse Washlands is one of the few SRWT reserves where the **topography really lends itself to the provision of good wheelchair access.** The paths mentioned above were both installed with this in mind but, over time the condition of the surface of each has deteriorated, becoming narrow and often wet and muddy.

On-street car parking for visitors to Woodhouse Washlands is available at the northern and southern boundaries of the reserve.

The River Rother bisects the site from east to west, and is not bridged within the boundaries of the reserve. In consequence, anyone wishing to visit the entire reserve must exit the reserve and cross the road bridge at the northern end of the site. Circular walks around the separate halves of the reserve are possible using the existing rights of way and the main informal paths (desire lines).

The River Rother running through the centre of the reserve is fished by anglers, who must hold the correct rod licence from the EA, who own the fishing rights for the river. The river is closed to fishing between 15th March and the 15th June each year for the fish spawning season. The oxbow pond on the eastern side of the river has a long history of unofficial fishing, although fishing rights have been retained by the EA.

Recreational use

The main groups using the reserve are local dog walkers, people walking or cycling the TPT and anglers on the river and the oxbow pond. A visitor survey conducted in 2024, showed that visitors to Woodhouse Washlands come mainly from the local area, although the Trans Pennine Trail does bring some longer distance walkers or cyclists onto the site. The majority of visitors arrive on foot as it is their local site.

Both halves of the reserve receive similar volumes of visitor ‘traffic’ and people generally use only one half of the reserve or the other during a single visit. Visitor numbers to both parts of the reserve have increased over the past 20 years, due to additional housing in the area and the construction of the TPT.

Visitors to the reserve enjoy the variety of possible circular walks, following existing desire lines. This is especially the case on the Rotherham side of the reserve where the ground is drier. Visitors to the Sheffield side of the reserve tend to follow major desire lines to avoid wet and muddy areas.

The reserve is frequently used by anglers, most (but not all) of whom fish legally and responsibly. Both SRWT and the EA acknowledge the need to balance the needs of anglers with those of protecting wildlife on the reserve.

Woodhouse Washlands has in the past suffered from misuse by quad bikers and motorcyclists who can cause damage to vegetation and soil erosion and disturb wildlife. Currently the site has secure entrance points to exclude bikes and quads, although fencing is periodically vandalised by those seeking such access.

Barriers to recreation

A number of barriers to positive recreational use of the reserve were identified through a visitor survey, carried out both, in person and with an online version (link advertised on posters across the site) throughout the summer and autumn of 2024. These are below:

Litter/ fly tipping

Levels of littering on Woodhouse Washlands are generally low, due in part to low numbers of visitors compared with other Trust reserves. Litter is generally a problem around the entrance ways, at the oxbow pond and under the A57 flyover. This litter is both unsightly and dangerous to the cattle which graze the reserve and to its wildlife, particularly when it enters the reserve's waterbodies or watercourses.

SRWT policy is not to install litter bins because of the ongoing maintenance and costs of emptying them. Instead, we encourage people to take litter home with them to dispose of it, or to use one of the on-street bins in the vicinity of the reserve.

Dog Fouling

Dog fouling is not a widespread problem on site as the reserve is large. However certain hotspots, such the permissive footpath from Furnace Lane (Green Lane) suffer from significant dog fouling. This spoils the footpath for other users and makes it unsafe for SRWT workers who remove waste from this area before they can undertake maintenance tasks.

Disturbance of wildlife by people and dogs

The reserve is home to a number of bird species whose numbers are declining both nationally and in the Sheffield area. Species such as skylark, which build their nests on the ground are particularly vulnerable to accidental disturbance by people and especially by dogs during the nesting season (March – end July) and repeated disturbance will make these birds abandon their eggs, even if the eggs themselves are not harmed (or even seen) by the interloper.

Disturbance of people and dogs by cattle

Woodhouse Washlands is grazed by cattle between April and October. The cattle help to manage the site by keeping the grass at an optimum sward level for wildflowers and ground-nesting birds, and by preventing colonisation of the site by scrub or invasive species such as Himalayan balsam.

In the 2024 visitor survey, a number of site users commented that the presence of cattle can make them feel uneasy on site. Some would prefer the cattle to be kept separate from the public by fences.

The practice on Woodhouse Washlands has been to select docile, hardy breeds of cattle for grazing the reserve, and not to allow any cows with calves under 6 months of age on site. SRWT works with the grazier annually to manage cattle grazing following comprehensive risk assessments to minimise the risk of negative encounters. SRWT and the grazier monitor the interactions between the site users and the cattle and we take action as it becomes necessary.

Accessibility

The site sits along the river's floodplain, rendering it unpassable at certain times of the year due to flood water or the muddy aftermath. This affects certain paths more than others, however although short in length, the Green Lane remains dry during flood periods.

For wheelchair/powerchair/buggy users, the access is limited to certain routes, which are severely compromised during peak flood events, with the exception of Green Lane. However this route has motorbike barriers installed, which may prevent access to larger wheelchairs.

Visitor numbers

SRWT aims to manage all our nature reserves for people and wildlife and to promote environmental-based recreational activities on our reserves to increase public understanding of, and appreciation for wildlife and wild places. SRWT views Woodhouse Washlands as one of our "flagship" reserves due to its size and high wildlife value. However, due to the sensitivity of its habitats and wildlife, it is not the Trust's intention to promote an increase in visitor numbers to the reserve by, for example, publicising it widely as a recreational destination across the city. Rather, the Trust aims to maintain visitor numbers and provide a good visitor experience for those who do visit. This includes keeping the paths and concessionary paths clear of encroaching vegetation and in good condition.

2.6 Community

Community profile

Woodhouse Washlands nature reserve straddles the Sheffield and Rotherham boundary so falls under two electoral wards - Woodhouse (Sheffield City Council) and Aughton & Swallownest (Rotherham Metropolitan Borough Council). The wards are split by the River Rother which runs through the reserve.

The table below shows Census Data and Community Needs Scores for both wards compared to Sheffield and Rotherham's average.

	Woodhouse	Sheffield's average	Aughton & Swallownest	Rotherham's average
% of population aged 65 and above	20%	17.1%	19.1%	18.9%
% of population aged under 16	18.1%	18%	19.4%	19.6%
Community Needs Index*	88.98	75.49	82.60	82.69

Table 1. Census Data and Community Needs Scores for both wards compared to Sheffield and Rotherham's average

*Measures of deprivation focus on the "presence of bad stuff". The Community Needs Index was created to focus on the "absence of good stuff". A higher score on the Community Needs Index indicates that an area has higher levels of community need (Oxford Consultants for Social Inclusion and Local Trust, 2023). Population statistics taken from Office of National Statistics (2021).

The Community Needs Index covers 3 domains:

- Civic Assets: the presence of key community, civic, educational, and cultural assets.

- Connectedness: assesses the connectivity to essential services, digital infrastructure, isolation, and the strength of the local job market.

- Active and Engaged Community: levels of third-sector civic and community activity and barriers to participation and engagement.

These figures suggest that the presence of a well-managed, easily accessible area of wildlife-rich green space such as Woodhouse Washlands could benefit many of the people who live in the Woodhouse area, by providing a suitable site for tranquillity and exercise and so promoting health and well-being.

The reserve also provides a variety of opportunities for skills development in practical conservation, habitat management and ecological identification. The Trust's land management team, trainees and volunteers work regularly on site. A number of guided walks also provide opportunities for people from the local community and across the city to acquire new knowledge.

Community services

There are a number of **community groups and forums** active within the area around Woodhouse Washlands nature reserve. This includes Beighton Welfare Recreation Ground, Changing Hands CIC, Community Youth Teams, Swallownest Community Centre, St James Church Hall, Tythe-Barn Community Centre, Woodhouse Community Hub & Library, Woodhouse Community Garden Project, and Woodhouse West Working Mens Club. There are local litter picking groups who dedicate their time to improving the local area, including the Sheffield Litter Pickers, Rotherham Litter Pickers and Swallownest Litter Pickers.

Community engagement

SRWT actively encourages people to become involved with, and take action to protect their local green spaces. Woodhouse Washlands benefits from the support of many regular visitors, who are passionate about both public access and the protection of its wildlife. Our visitor survey found that most respondents visited it daily, and many visitors have been coming for over 5 years, indicating a community dedicated to the reserve.

The Trust works closely with the community and interested individuals to deliver the work programme outlined in this plan and communicate its plans to the wider community. SRWT recognises the importance of community involvement in the Woodhouse Washlands nature reserve in both the formulation of the management plan and in its delivery. Active participation is encouraged through events such as guided walks and regular volunteer work days on-site.

The Trust runs regular **Volunteer Work Days** on the reserve, providing an opportunity for members of the public both from the local community and further afield, to participate in the management of the reserve. Volunteer Work Days currently take place on the third Friday of every month.

For further details, please see the Trust's website at
www.wildsheffield.com/whats-on/

SRWT includes Woodhouse Washlands within its **annual events programme**, which delivers a broad range of environmental and heritage activities across all Trust nature reserves. All events will be promoted through posters on site, on the SRWT website and on social media, and through the 'Kingfisher' magazine which goes to SRWT members.

Reserve User Forum meetings, which SRWT runs effectively on many of its other nature reserves, have been introduced at Woodhouse Washlands to allow members of the public the opportunity to discuss the management of the reserve with each other and SRWT. Under this system, the reserve has a spring and an autumn walkabout meeting each year. These meetings are open to all.

Other means of engagement with the community are the **volunteer eco-monitoring teams** that form part of the site ecological monitoring framework, and the reserve mailing list used to inform of any updates or important work carried out in the reserve. A **volunteer ranger programme** has also been established.

2.7 Outdoor learning

Local educational provision

11 schools serve the communities surrounding the reserve. These are Aston Academy, Aston Fence Junior & Infant School, Aston Lodge Primary School, Ballifield Primary School, Becton School, Beighton Nursery and Infant School, Brook House Junior School, Brunswick Community Primary School, Handsworth Grange Community Sports College, Reignhead Primary School and Nursery, Swallownest Primary School, Woodhouse Nursery School, and Woodhouse West Primary School.

Of these, 8 schools – Aston Fence Junior & Infant School, Beighton Nursery and Infant School, Brook House Junior School, Brunswick Community Primary School, Handsworth Grange Community Sports College, Reignhead Primary School and Nursery, Swallownest Primary School and Woodhouse Nursery School – lie within reasonable walking distance of the reserve and could therefore visit it for educational activities without requiring transport.

Outdoor learning

Since 2013 SRWT has been working with primary schools, secondary schools and youth groups across the city and bringing them to Ecclesall and Greno Woods to take part in outdoor learning sessions. Outdoor learning is a key area of development for SRWT. The Trust provides environmental education sessions which support the National Curriculum, as well as accredited/non-accredited training to support young people and adults to develop life skills, and gain skills and experience in the environmental sector. We also provide learning opportunities for all the family.

The size, location and variety of habitats within Woodhouse Washlands provide many opportunities for outdoor learning not available on other Trust reserves. For example, its high quality wetland and grassland habitats are ideal for comparative habitat surveys. The reserve's topography makes it easily accessible and its open vistas make it possible to supervise a class of thirty easily. Coach drop offs can be safely accomplished at both Furnace Lane and Rotherham Road.

Conversely, the reserve also has a number of drawbacks as a site for outdoor learning. These include the presence of a number of sensitive habitats and

species, the presence of cattle for part of the year and a lack of basic facilities such as shelter and toilets.

In 2014, the Trust put together a business case which identified key sites for developing outdoor learning sessions. Woodhouse Washlands is not currently a priority for the development of outdoor learning provision, but may become so in the future, at which point the drawbacks listed above would need to be considered in detail and mitigated in some way. The reserve's location in the southeast of the city would make it a natural third outdoor learning site to complement facilities available to the north and west.

In 2019, the **pond dipping platform was repaired**, adding value to the outdoor learning offer of the reserve. However, the recent improvements made to the Shire Brook Valley visitor centre have made this site a preferred location for outdoor learning as there are toilets and livestock is locked in fields away from their pond dipping facilities.

2.8 Economic context

Funding schemes, income and grants

Grant funding

Woodhouse Washlands is primarily funded through receipt of a **Higher Level Stewardship** grant which brings in annual payments in return for the environmentally sustainable management of the grassland. Additional to this income, grants from the Landfill Tax scheme, Lotteries and private institutions are applied for to fund management and improvement works.

The reserve forms part of the area covered by the **River Rother Restoration Project,** a partnership between SRWT and the EA, intended to restore river habitats and floodplain wetlands along the River Rother, and attracts EA funding through this partnership. More recently, a partnership with Sheffield City Council has brought funds to improve the nature reserve's habitats and species. This project is funded by the Government's **Species Survival Fund** (Species Stacking the Shire Brook Valley). The fund was developed by Defra and its Arm's-Length Bodies. It is being delivered by The National Lottery Heritage Fund in partnership with Natural England and the Environment Agency.

Farming

Woodhouse Washlands holds little potential for productive land use other than that associated with grazing livestock, which are viewed primarily as a management tool rather than a source of income. The Washlands are let for cattle grazing, although the income generated is small, reflecting the low grazing levels.

Membership recruitment

Woodhouse Washlands is a large and locally well-known nature reserve. As such, it has the potential to raise the Trust's profile and to showcase its work. Positive management of the reserve could help to support the Trust membership, which is vital to its work, demonstrating a level public support for its work, as well as providing a campaigning resource and a source of funding.

Wildlife Trust membership across Sheffield and Rotherham is steadily increasing, and a proactive approach has been adopted by the Trust to ensure that the trend continues. Our work at Woodhouse Washlands, if perceived positively by members and the public, can support membership recruitment locally and across Sheffield and into Rotherham, where the Trust is less well known. Conversely, any negative publicity or public perception about management of the reserve could hinder the same. Consequently, the work carried out at the Washlands must not only be of the highest standard, but must be communicated well to the general public.

Employment

Woodhouse Washlands currently provides employment or part-employment to four people directly (through the Trust), and also contributes indirectly to many others, such as the grazier and local suppliers. The capacity to increase employment opportunities is not great, rather the challenge will be to sustain the current level of activity as the number of people employed depends directly on the revenue available to carry out work on site.

Marketing and Communications

The aim of SRWT marketing activities is to encourage more people to visit wildlife sites and green spaces regularly, for leisure, interest, exercise, health and wellbeing. Consequently, at Woodhouse Washlands the Trust will work to raise public awareness of the reserve's fauna, flora and archaeology, and increase understanding of and support for management works.

At the current time, welcome signage, in the form of the Trust's standard wooden 'Welcome to Woodhouse Washlands' signs, is present at all main entrances to the reserve. In addition, the Trust will utilise the opportunities offered by events and guided walks to raise its profile and bring the Washlands to a new audience.

News and articles about the reserve are printed in the Trust's 'Kingfisher' magazine, which is sent out to members three times a year. News releases are sent to the Sheffield Star, the Sheffield Tribune and the Sheffield Telegraph to mark key events.

Woodhouse Washlands has a page on the SRWT website. This gives general information about the reserve and access to electronic documents.

https://www.wildsheffield.com/reserves/woodhouse-washlands/. The events programme for the Washlands is also advertised on the Trust website. SRWT uses social media and a reserve Mailing List to circulate regular updates about reserve management and to advertise events.

2.9 Environmental information

Topography

The reserve is situated immediately east of Woodhouse Mill at an elevation of between 30 and 40m AOD (height above ordnance datum) and within the floodplain of the River Rother. The reserve is largely flat, with the majority of ground lying at between 32m and 34m AOD but some slightly lower-lying areas are present immediately to the west of the River Rother, at the far southern end of the reserve and adjacent to the Jeld-Wen factory (west and south). An area of higher ground (to 46m) is present at the western extent of the reserve adjacent to the railway line (**Figure 9**).

Geology and pedology

The solid geology of Woodhouse Washlands nature reserve lies within the Middle Coal Measures of the Upper Carboniferous Westphalian B series and is characterised by a series of mudstones and coarse sandstones. The High Hazles Coal Seam also outcrops within the nature reserve. Strata are dissected by a north-east to south-westerly orientated fault line, which intersects with the Spa Fault at Aston (**Figure 10**).

These deposits are overlain with alluvium across much of the reserve. The upper sections comprise a clayey loam which is sandy in places. The lower levels comprise gravels.

A soil survey, taken in 1993 in the area north of the viaduct, suggested that open-cast mining may have occurred on site during the post-war period, however, this has never been corroborated.

On the north-eastern section of the reserve, the boundary bank and adjacent area comprises an artificial deposit including rubble and wood chippings, resulting from the demolition of the previous sewage works and (historic) tipping from the nearby factory. Also historically, the working colliery (Woodhouse Mill) has affected soils to the far north west. One historical landfill site, which accepted non-biodegradable wastes, was registered adjacent to the former railway viaduct in the south of the site.

Engineers from Alfred MacAlpine plc who worked on the construction of the A57 flyover indicated that the footings for the flyover were filled with a foundation of furnace rubble during construction.

A series of soil test pits was dug across the central area of the reserve in 2016, as part of the 'Habitat Creation Feasibility Study' carried out by ECUS Environmental Consultants. Analysis of the soils collected from these pits showed a variety of soil types: made ground of sand, clinker and ash, sandy topsoils and silts with gravel or peat. These topsoils were generally between 0.1 and 0.4m in depth and were underlain with natural subsoils of peat, soft silty clay or sand and gravel.

Chemical analysis of the topsoils from the soil pits showed **widespread contamination of the soils** by heavy metals, hydrocarbons and polychlorinated biphenyls (PCBs). These may derive from contaminated river silts deposited on site during previous flood events or by the historic landfill of factory waste. Of these contaminants, only two are present at levels high enough to pose a potential risk to human health: lead and PCBs.

Hydrology

Woodhouse Washlands is a locally wet site drained by the River Rother. It supports a number of natural wetland features such as swamps, as well as artificially created ponds and ditches (**Figure 5**).

The River Rother bisects the reserve, flowing from south to north between raised banks. The flow regime is heavily influenced by 3 regulators (at Rother Valley Country Park, Woodhouse Mill and Canklow) which are used to control water levels during periods of high rainfall and is also modified by multiple storage and abstraction points in northeast Derbyshire, Chesterfield, Bolsover and Clowne.

Since 1960 **the reserve has been flooded or partially flooded several times**, with the most recent flood events occurring in 2007, 2023 and 2024. Although several areas up and downstream flooded too, it is unclear if the October 2024 full flood event was directly linked to a temporary fault in the Woodhouse Mill regulator gate (managed by the Environment Agency). The fault is now partially fixed and at the moment of writing this plan, the EA continues working to find a permanent solution.

The canalisation of the river channel in the late 1950s made a substantive and permanent change to the hydrology of the Washlands, lowering the water table and changing the site from one supplied by water directly from river (fluvial) inundation to one primary supplied by rainfall, supplemented by groundwater flow to the valley bottom. Direct inflows are limited to drains located at several points, such as at compartment A1, the factory sites to the east and north, and Beighton Mill Tail Goit. Simple modelling of the reserve's water balance shows that it is in deficit between mid-February and mid-October each year i.e. the reserve loses more water than it gains during these times.

Climate

Data is available for the thirty-year average (1991-2020) from www.metoffice.gov.uk/research/climate/maps-and-data/uk-climate-averages

Location	Average temperature (°C)		Mean Annual Rainfall (mm)	Mean Annual Sunshine (hours)	Mean monthly wind speed at 10m (knots)
	Max	Min			
Average data (1991-2020)	13.71	6.92	831.55	1485.15	6.89
Variation to average data (1981-2010)	+0.31	+0.29	-3.04	+40.21	+0.6

Table 2. Local climate table at Sheffield Station (131m above mean sea level)

Climate change models predict that the Yorkshire and Humber area will become warmer and drier as the century progresses. In particular, it is predicted that rainfall will become more seasonal (heavier rainfall in winter, lighter in summer) and also that extreme weather events will become more common. The Washlands' role as an area capable of absorbing and storing excess water is therefore likely to become highly significant.

2.10 Site archaeology

Very few archaeological features pre-dating the post-medieval period (pre-1485) have been recorded on Woodhouse Washlands. The site's history of **repeated flooding** with associated deposition of silt and alluvium, river straightening and drainage works are likely to have **obscured many archaeological features**.

One of the biggest changes to Woodhouse Washlands took place in the 1950's when the River Rother which had previously meandered across the site was canalised into one deeper, faster flowing water course. When the canalisation took place, the workers discovered a **woolly mammoth tooth** which was taken to Weston Park museum in Sheffield. This represents the oldest archaeological find on site to date.

Two archaeological surveys of Woodhouse Washlands were carried out in 2004. These surveys identified 37 archaeological sites within the boundaries of the nature reserve. Most of the features on site are post-medieval (c.1500-c.1800) or industrial (c.1800- c.2000) in nature. There is **evidence for coal mining, sites of previous mills and small scale industrial buildings**.

One feature thought to date from the medieval period (c.800 - c.1500) is an area of ridge and furrow south of the Beighton Viaduct. This site has suffered from some disturbance and can only be clearly seen in low light conditions.

The **Bell Pit** sited near to the permissive path on the western reserve boundary is a significant feature. Bell Pits were formed when people dug for coal from ground level and are typical of early mining attempts. There is evidence for coal mining in Woodhouse from 1700 and the Bell Pit could be linked to these earlier times.

Overall the archaeological features found on Woodhouse Washlands were considered to be of low archaeological significance. Most were dated within the last 200 years and included mine workings, dismantled tram lines and old field boundaries. Current site management practices will not affect the features but the Trust will consult with an archaeologist before undertaking any significant ground works in their vicinity.

2.11 Biodiversity

Biodiversity Action Plans (BAP)

The reserve is covered by a number of different Biodiversity Action Plans (BAPs) and supports a number of priority habitats and species, as summarized in the table below:

UK BAP Priorities	
Habitats	**Species (short and medium list only)**
Rivers and streams Lowland meadows Floodplain grazing marsh Ponds	**Great crested newt** (*Triturus cristatus*) **Water vole** (*Arvicola amphibius*): may now be locally extinct **Brown hare** (*Lepus europaeus*) **Song thrush** (*Turdus philomelos*) **Skylark** (*Alauda arvensis*) **Otter** (*Lutra lutra*)

Rotherham BAP Priorities (2012)	
Habitats	**Species**
Grassland (lowland meadows) Wetlands (ponds, floodplain grazing marsh) Hedgerows	**Great crested newt** (*Triturus cristatus*) **Skylark** (*Alauda arvensis*) Grey partridge (*Perdix perdix*) Soprano pipistrelle (*Pipistrellus pygmaeus*)
Sheffield BAP Priorities (2012)	
Habitats	**Species**
Grassland (semi-improved grasslands, floodplain grazing marsh) Wetlands (ponds)	**Great crested newt** (*Triturus cristatus*) Grass snake (*Natrix natrix*) Lapwing (*Vanellus vanellus*) Snipe (*Gallinago gallinago*) Sand martin (*Riparia riparia*) Kingfisher (*Alcedo atthis*) Barn owl (*Tyto alba*) **Water vole** (*Arvicola amphibius*) - may now be locally extinct **Brown hare** (*Lepus europaeus*) Harvest mouse (*Micromys minutus*)

Table 3a/3b: BAP Priority habitats and species

Species highlighted in **bold** are on the UK short list of globally threatened and declining species, and are therefore afforded the highest priority.

Species-rich grasslands and floodplain grazing marsh have been defined as priority habitats in the UK Biodiversity Action Plan and the Sheffield and Rotherham Local BAPs. The reserve contains areas of both these habitats, which support the following Red Data Book plant species: common meadow rue (*Thalictrum flavum*), greater burnet (*Sanguisorba officinalis*), amphibious bistort (*Persicaria amphibia*), celery-leaved buttercup (*Ranunculus sceleratus*), southern marsh orchid (*Dactylorhiza praetermissa*), common reed (*Phragmites australis*) and water figwort (*Scrophularia auriculata*).

A number of Local Red Data Book (LRDB) invertebrate species have also been recorded.

14 bird species that have been red-listed as Birds of Conservation Concern by the British Trust for Ornithology, have been recorded as being present on site. These are discussed further in section 'birds' below.

2.12 Habitats

Woodhouse Washlands nature reserve forms one part of a chain of remnant and secondary wetland sites set in an industrial landscape along the River Rother. These include Treeton Dyke, Waverley and Catcliffe Flash to the north, Rother Valley Country Park to the south and Shire Brook Valley LNR to the west. Together, these support a wide variety of species-rich habitats.

When classified using the Joint Nature Conservation Committee (JNCC) guidelines for Phase One Habitat surveys, Woodhouse Washlands contains a variety of natural and semi-natural habitats, including neutral grasslands, marshy grassland, swamp, marginal vegetation and scrub (**Figure 11**). These are described below.

Grasslands

Changes in water level, waste tipping and overgrazing by sheep in the period prior to it being designated as a LNR have impoverished the sward at Woodhouse Washlands in past years. Nonetheless, the reserve's grazing marsh and hay meadow grasslands represent a scarce and shrinking resource both nationally and locally. These habitats still support a good range of plants, including a number of locally scarce species such as celery-leaved buttercup, common meadow rue, great burnet, amphibious bistort, water figwort, southern marsh orchid and common reed – all species listed in the 1991 Sheffield Red Data book plants list.

Work to counteract the impoverishment of the reserve's grasslands has been taking place since its designation as a LNR in 1999, with a reversion to cattle grazing and the adoption of a conservation grazing regime. Additional work to control injurious weeds such as creeping thistle and common ragwort has taken place sporadically over this period but both species are locally abundant to date, partly as a result of overgrazing.

Grassland is the dominant habitat type present on the reserve. The grasslands of Woodhouse Washlands fall into three categories: large expanses of semi-improved neutral grassland to the south-east and north-west of the reserve, areas of poor semi-improved grassland to the north and south west and areas of mosaic of floodplain grazing marsh which dominate to the east of the reserve, but fragments of which appear wherever groundwater is high.

Historically, much of Woodhouse Washlands would have been classed as floodplain grazing marsh. This habitat is one where the water table is permanently close to the soil surface or which is subject to periodic inundation when adjacent water bodies overflow. The habitat is characterised by the interlinking of marshy grassland and wet ditch communities and is often grazed by cattle. Although areas of the Washlands still fit these criteria, the canalisation of the river channel and the bunding of its banks have resulted in an ecosystem

where the majority of the hydrological input comes from pluvial sources and inundation is rare. As a result, the area of the Washlands covered by this habitat has contracted, giving way to drier grassland communities, the most botanically diverse of which are managed as hay meadows.

The reserve's grasslands are described below, according to their management regime i.e. as grazing pasture or hay meadows (**Figure 12**) but it should be noted that floodplain grazing marsh occurs within both these categories.

Grazing pasture

Currently, 24.5 hectares of the reserve's grasslands are managed as traditional grazing pasture (compartments A and B). This means that they are grazed between April and October each year to produce a sward height of 5-15cm by the end of the growing season. Cattle are used to graze the reserve, previously with a grazing regime of up to two livestock units per hectare per annum. The reserve's pastures have previously been grazed extensively i.e. the cattle were free to roam across compartments A (except A1) and B, crossing the River Rother as they chose. However, additional fencing in compartment B means that, from 2017 onwards, greater control of pasture areas in compartments B1, B2, B3 and B4 are possible.

The reserve's pastures comprise a mosaic of semi-improved, poor semi-improved and marshy grassland. In drier areas the sward comprises abundant Yorkshire fog (*Holcus lanatus*) and common bent *(Agrostis capillaris)*, frequent crested dog's tail *(Cynosurus cristatus)*, common ragwort *(Jacobaea vulgaris)*, creeping thistle *(Cirsium arvense)*, white clover (*Trifolium repens*) and ribwort plantain *(Plantago lanceolata)*, and occasional meadow vetchling (*Lathyrus pratensis),* common bird's-foot-trefoil (*Lotus corniculatus*), meadow buttercup *(Ranunculus acris)*, common sorrel *(Rumex acetosa)*, curled dock *(Rumex crispus)*, common nettle *(Urtica dioica)*, meadow foxtail *(Alopecurus pratensis),* false oat-grass (*Arrenatherum elatius*), cock's-foot *(Dactylis glomerata)*, perennial rye-grass (*Lolium perenne*), timothy *(Phleum pratense)* and rough meadow grass (*Poa trivialis*).

The grassland is a mosaic, patchy and transitional, with some areas quite diverse, almost to the point of being unimproved and in other places (usually the flatter areas) the sward becoming so dominated by only two or three species that it is classified as poor semi-improved grassland. In richer areas, patches of creeping cinquefoil (*Potentilla reptans*), cut-leaved cranesbill (*Geranium dissectum*) and silverweed (*Potentilla anserina*) have been recorded. Species such as common knapweed (*Centaurea nigra*), lesser stitchwort *(Stellaria graminea)* and yarrow (*Achillea millefolium*), which indicate old grassland, are present infrequently across the reserve.

There are several areas of floodplain grazing marsh throughout the pastures, forming wherever the water table is high or the ground low, e.g. scrapes and

ditches and around ponds. All have similar characteristics and are dominated by rush species.

This grassland is dominated by rushes, with abundant soft rush *(Juncus effusus)* and frequent hard rush (*J.inflexus*). There are also frequent clumps of false fox sedge *(Carex otrubae)*. Other grasses, rushes and sedges include occasional areas of marsh foxtail (*Alopecurus geniculatus*), tufted hair grass *(Deschampsia cespitosa)* and floating sweet grass *(Glyceria fluitans)*, with rare patches of common spike rush *(Eleocharis palustris)*, sharp-flowered rush *(Juncus acutiflorus)* and locally abundant patches of marsh horsetail *(Equisetum palustre)*.

Herbs that are scattered throughout this grassland include occasional great willowherb *(Epilobium hirsutum)*, creeping buttercup, clustered dock *(Rumex conglomeratus)*, water figwort and marsh ragwort *(Jacobaea aquatica)*, with a good mix of other species found more rarely, including locally abundant patches of meadowsweet *(Filipendula ulmaria)*, amphibious bistort, lesser water parsnip *(Berula erecta)*, and celery-leaved buttercup. One notable species is common meadow rue which is present but rare; this is a Sheffield Red Data Book species.

Compartments B1 and B2 were seeded with green hay in 2016, to improve their botanical diversity. From 2017, these compartments are **managed under an autumn grazing regime**, whereby the compartments will be closed to cattle grazing during the growing season (April – August), then opened for late grazing once the seed has dropped in September.

Compartments B3 and B4 are likewise closed to cattle grazing (and the public) during April and early May **to allow ground nesting birds to establish their territories**. This closure is maintained in B4 until the end of nesting season (end of July). In B3, until sward height reaches 40cm, after which it is opened and closed as necessary to maintain a length of 30-40cm throughout the bird breeding season (until end July). From August, B3 and B4 remain open and subject to grazing to produce a sward height of between 10 and 15cm by the end of the growing season.

Hay meadows

15.2 hectares of the reserve's grasslands are managed as hay meadows (compartments C, C2 and C3). This means that the grass within them is subject to up to 6 weeks of spring grazing before being closed to cattle, with the sward then being allowed to grow until early August, after which the hay crop is cut and removed and the area opened up to aftermath grazing to produce a sward height of between 10 and 15cm by the end of the growing season.

The hay meadow in compartment C2 is fairly homogeneous, and supports a diverse assemblage of species. The dominant grass species is Yorkshire fog,

abundant over most of the habitat with frequent crested dog's-tail, occasional common bent, false oat-grass, meadow foxtail, cock's-foot, red fescue and rough meadow grass. In terms of herbs, there is abundant meadow buttercup throughout, with frequent common sorrel and occasional common mouse ear (*Cerastium fontanum*), hogweed (*Heracleum sphondylium*), ribwort plantain, creeping buttercup (*R. repens*), lesser trefoil and red and white clovers. There are infrequent amounts of a diverse range of meadow plants including yarrow, common cat's-ear, meadow vetchling, ox-eye daisy (mostly around the edges), common bird's-foot-trefoil, lesser stitchwort and a range of vetch species. Pignut *(Conopodium majus)* and wild carrot *(Daucus carota)* are present but local.

Orchids are scattered throughout the hay meadows at the far southern end of the reserve. The majority are southern marsh orchids, although a number of hybrid individuals have also been noted.

Areas of marshy grassland are present within the reserve's hay meadows, again forming where the water level is high. These are very similar in species composition to those described above.

Wetland, ponds, ditches and marginal vegetation

In addition to the grazing marsh described above, Woodhouse Washlands contains a number of wetland habitats including swamps, scrapes and ponds. These make an important contribution to the reserve's ecological diversity, providing a feeding and breeding ground for many invertebrate and amphibian species, and thus insectivorous birds and mammals.

Three areas of bulrush (*Typha latifolia*) dominated swamp are present on the reserve. The largest of these lies in compartment A1, adjacent to the western boundary of the reserve and has formed where surface water drainage from the nearby housing estate is piped into the site. The nature of the terrain prevented detailed survey of its species composition, however, meadowsweet, water figwort and greater willowherb were recorded. Along the western edge of the swamp is an area with a mix of aquatic marginal plants, including frequent reed canary-grass (*Phalaris arundinacea*) and occasional branched bur-reed (*Sparganium erectum*), floating sweet grass and marsh ragwort are present.

The swamp within the hay meadow at the southern end of the reserve (compartment C1) is also dominated by bulrush, with large stands of soft and hard rush and reed canary grass.

Two small wet scrapes were created in compartment B4 during 2016. These scrapes aim to provide bands of damp, vegetation-free soils in which wading species can feed, but these have been found to only hold water in winter and early spring.

In addition to the areas of swamp, the reserve contains a number of bodies of freshwater (**Figure 5**). The largest of these is the oxbow pond to the north which is regularly fished. The others comprise a number of small ponds and ditches, the majority of which are concentrated to the west of the River Rother.

These ponds are very varied in age, character and vegetation type. They range in depth from approximately half a metre to over a metre, some are scarcely vegetated, whilst others support varied aquatic and marginal plant communities. One - known as the dipping pond - is dominated by water soldier (*Stratiotes aloides*), a red data book species in the east of England but here, introduced. Others support extensive colonies of duckweed and marginal species such as branched bur-reed, soft rush, water plantain (*Alisma plantago-aquatica*), gypsywort (*Lycopus europaeus*) and water figwort.

An invasive non-native species, the New Zealand pygmyweed or Australian swamp stonecrop (*Crassula helmsii*) was recorded in Pond 4 (cow pond) in early 2017. From now on, it will be referred to as just crassula. Efforts to eradicate it have failed. In 2024, the invasive species was found in Pond 5 (Top pond).

Lying adjacent to the eastern boundary of compartment C is Beighton Mill Tail Goit, a winding watercourse with abundant hawthorn and frequent goat willow (*Salix capraea*), crack willow (*Salix fragilis*) and bramble (*Rubus fruticosus*) forming scattered scrub on the banks. The channel is variously wide with slow moving/still water, or deep but choked with marginal aquatic vegetation such as reed canary grass, bulrush and yellow flag iris (*Iris pseudacorus*). The invasive non-native species Himalayan balsam (*Impatiens glandulifera*) is found scattered along the goit.

The reserve's ditches are botanically very varied. Where they retain water throughout the year they support a diverse flora but the majority are wet only seasonally and dominated by *Juncus* species.

Watercourses

The River Rother bisects the reserve, with 1.85km of river length existing within it. Water depth is typically no more than a metre, and in places considerably less, although it can rise to a depth of several meters during flood events. The river bed is largely muddy, but riffles where it passes over rocks and gravel are present in places. Aquatic vegetation is occasional within the channel.

In 2015, water quality as the river passes through the reserve was assessed as moderate (ecological status: moderate, chemical status: good, overall status: moderate) by the EA, under the Water Framework Directive criteria by which English rivers are surveyed.

The river's banks are steep as a result of the canalisation process, and rise far above normal water levels. They are densely vegetated with stands of marginal

and tall ruderals, including Himalayan balsam, which is abundant. Trees and scrub are common on the upper banks and immediately adjacent to the river banks along its length. The reserve's cattle are able to ford the river at several points where they have created muddy wades. A formal crossing with a stony river bed was improved in 2019/20, with scrub being planted and fenced off to reduce the river bank poaching.

Periodic inundation from the River Rother during flood events is a threat to the reserve's most low-lying ponds. Such inundation can seriously damage the biodiversity value of these ponds because the incoming water carries a heavy (and often contaminated) silt load which can smother plants and animals directly, or indirectly by triggering eutrophication. Additionally, incoming river water can wash away plant and animal life, and also introduce fish which prey on newt larvae and other invertebrates, thereby lowering the biodiversity value of the pond.

The feasibility of creating larger bodies of water on the eastern half of the reserve have been considered but discounted. The soil contamination and profile on the reserve are such that creating a water body could risk mobilizing contaminants within the groundwater, potentially leading to their release into the river channel.

Canalisation of the river channel during the 1950s led to a loss of biodiversity, both in the channel itself and on the adjacent Washlands, as the seasonal pattern of inundation was disrupted and the water level on site lowered. As part of the Rotherham Rivers Restoration project, the SRWT worked with the EA to investigate the feasibility of a re-meandering scheme or other measures to increase the diversity of the river channel. In 2022, a 2-phase restoration project was completed, forming in-channel habitat features called berms and restoring damaged river banks.

Given the importance of bankside trees for sheltering fish as perching posts for birds such as kingfisher, SRWT worked with the EA to review the protocols for managing bankside vegetation, with a view to increasing the bankside tree resource. Unfortunately, due to its primary role as a flood storage area and its proximity to the flood gate, restrictions limit the vegetation allowed along the riverbank and within the river area.

Hedges, trees and scrub

Trees and scrub form a minor but important component of the reserve's vegetation. The majority of scrub is concentrated on the eastern and western boundaries, and along the river channel. Extensive scrub habitat is also present

on the sides of the road and railway embankments on the periphery of the reserve. A number of significant mature trees are also present on site, some of them pollarded.

Hedgerows are found in various locations across the site (**Figure 13**). A permissive footpath runs along the edge of the reserve's western boundary, from which access onto the reserve can be gained. Towards the north of this path is a species-rich hedge which was planted during the 1990s. The established hedges in the reserve were laid in the period of 2008 to 2011, in 2016 and in 2025. The hedge contains a good mixture of native species including hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), hazel (*Corylus avellana*), dog rose (*Rosa canina* agg.) and guelder rose (*Viburnum opulus*). To the south, this hedgerow grades into a dense belt of scrub planted on the reserve's western bund. This comprises mature goat willow (*Salix caprea*), field maple (*Acer campestre*) and occasional aspen (*Populus tremula*) and ash (*Fraxinus excelsior*), as well as dense blackthorn.

A second hedgerow forms part of the southern boundary of Compartment A. It is composed of abundant hawthorn and hazel with locally abundant bramble and occasional dog rose. There are scattered herbs at the base of the hedgerow which are a continuation of the meadow area, including small quantities of common centaury (*Centaureum erythreae*), common cat's-ear, meadow vetchling, ox-eye daisy, autumn hawkbit (*Scorzoneroides autumnalis*) and common knapweed. The presence of hops (*Humulus lupulus*) in this hedgerow is also notable. This hedgerow too was laid in 2016 and 2025.

As above, recently re-laid hedgerows (2025) run along the northern boundary of Compartment B1 and southern boundary of C2. These contain mature and over-mature hawthorn and elder (*Sambucus nigra*) and the gaps were replanted with a mix of native broadleaved species in 2016.

A mosaic of dense hawthorn scrub and neutral grassland covers the reserve's eastern embankment leading up to the railway line. In the south-east corner of the site, the bank leading up to the A57 flyover is covered in dense scrub and trees. A mixture of species uncommon on site, are present, suggesting that this area was originally planted. Species present include occasional hawthorn, alder (*Alnus glutinosa*), damson (*Prunus domestica*), field maple (*Acer campestre*), dogwood (*Cornus sanguinea*), spindle (*Euonymous europaeus*), holly (*Ilex aquifolium*) and apple (*Malus domestica*).

Few mature trees are present on the reserve. Those of note include a number of veteran crack willow which were pollarded in 2016 in compartment C, and a mature hybrid black poplar (*Populus x canadensis*) adjacent to the dipping pond in compartment A.

Bare ground

Areas of bare ground are present on the reserve, due either to poaching by cattle, or over-shading by trees or recent site works. Small areas of bare ground are desirable for many types of wildlife. Seeds require them to germinate, whilst many invertebrates will use them for basking or ovipositing and others require them for mineral licks. Soft, invertebrate-rich mud provides a vital feeding resource for birds such as snipe and lapwing. However, large expanses of bare ground are not desirable in the long term. Where these are caused by poaching e.g. as in compartment B2 in winter 2016, these indicate over-grazing and should be avoided. Consequently, care must be taken to ensure that the cattle-grazing season is strictly adhered to, with **cattle removed from site promptly at the end of October**, or earlier if feed becomes sparse or conditions are particularly wet. The seeding of bare earth with a suitable meadow mixture or green hay is also considered where necessary.

2.13 Species

Fungi

Little is known about the reserve's fungal communities, and consequently their significance on a local or regional level. The records held are the result of casual recording rather than systematic survey. Casual records suggest that parts of the site support a number of waxcap species.

Invertebrates

In contrast with its fungi, the reserve's invertebrate fauna has been well-recorded. However, Woodhouse Washlands is an extremely rich site in terms of invertebrate diversity and more study will be required to gather a full and comprehensive species list.

The range of habitats present on site provide food and shelter for a wide variety of invertebrates, from those like *Phalangium opilio* (a harvestman), which are nationally widespread to a number of regionally rare species like the clifden nonpareil (*Catocala fraxini*), found for the first time in 2025. Its wetland habitats support the greatest diversity of species, including many that are wholly or partially aquatic.

During the 2022 monitoring surveys, 15 species dragonfly and damselfly have been recorded on the reserve, including the emperor dragonfly (*Anax imperator*), the emerald damselfly (*Lestes sponsa*), the banded demoiselle (*Calopteryx splendens*) and the broad-bodied chaser (*Libellula depressa*). A good range of other aquatic invertebrates including water beetle species such as *Helophorus aequalis* and *H. brevipalpis,* pond skaters, the water boatmen *Hesperocorixa linnei, H. sahlbergi* and *Callicorixa praeusta,* the diving beetles *Hyphydrus*

ovatus and *H. riparius,* water snails, leeches, water stick insect (*Ranatra linearis*), and water scorpion (*Nepa cinerea)* have also been recorded in the past.

The reserve supports a vast array of Diptera (flies), including species such as *Ptychoptera albimana* and the hoverflies *Platycheirus rosarum* and *P. granditarsus,* typical of wet areas and marshy grassland. The reserve is the only UK site where the big-headed fly *Pipunculus lichwardi* has been recorded, and the rare long-legged fly *Nempatopproctus distendens* is also present. A range of species more typical of dry grasslands, including the peacock (*Aglais io*), orange tip (*Anthocharis cardamines*), small tortoiseshell (*Aglais urticae*) and meadow brown (*Maniola jurtina*) butterflies have also been recorded. An initial moth survey in 2016 recorded 15 species in a short time, including the wetland species *Agapeta hamana* and the water veneer (*Acentria ephemerella*), suggesting the reserve supports a rich lepidopteron fauna that warrants further investigation. A survey in 2022 in two ponds recorded 16 species.

The reserve's invertebrate fauna is a key indicator of its importance for biodiversity. Additionally, the profusion of invertebrates form an important part of the food chain, without which many other species of conservation importance such as wading birds, great crested newts and bats could not be sustained. Maintaining its range of habitats, particularly its wetland and grazing marsh, in a condition friendly to invertebrates is of vital importance, meaning that any management that decreases the net amount of water held on site, overgrazing and the use of pesticides needs to be avoided where possible.

Further recording, particularly of groups and taxa for which there exist few records, is also recommended if funding becomes available.

Fish

2017 EA data shows 14 species of fish recorded in the River Rother in Woodhouse Washlands, with large numbers of gudgeon (*Gobio gobio*), minnow (*Phoxinus phoxinus*) and chub (*Leuciscus cephalus*). The records include grayling (*Thymallus thymallus*), brown trout (*Salmo trutta*), bullhead (*Cottus gobio*) and dace (*Leuciscus leuciscus*). Three-spined stickleback (*Gasterosteus aculeatus*) are recorded in the river and in several ponds.

Amphibian and reptiles

Woodhouse Washlands support a number of amphibians and reptiles, namely common frog (*Rana temporaria*), common toad (*Bufo bufo*), smooth newt (*Lissotriton vulgaris*), great crested newt and grass snake.

The reserve's amphibian populations are concentrated around the ponds, which are used for breeding during the spring, thereafter dispersing into the adjacent grassland and woodland for the rest of the year. Not all ponds are used for breeding. Those which contain little or no vegetation, have turbid waters or which support a large stickleback population are largely shunned. Amphibian numbers generally appear to be higher on the western half of the reserve than

the east, probably due to the greater amount of breeding habitat present. The size and speed of flow of the River Rother means it is likely to prove a barrier to the movement of amphibians across the reserve and is itself unsuitable for amphibian breeding. Thus, the amphibian populations on the eastern and western halves of the reserve should be considered as being distinct (although the transfer of individuals during flood events remains a possibility).

The great crested newt population in Woodhouse Washlands is surveyed every 3 years as part of the ecological monitoring framework. Results from eDNA testing in 2022 show that great crested newt were wholly absent from the eastern half of the Washlands, although there is anecdotal evidence of their presence in the oxbow in previous years, with the latest report made in 2024 by the EA during works on the wall by the flood gate. On the western half of the reserve, great crested newt breeding was confirmed in six ponds, as eggs were found to be present. A negative correlation between the presence of fish and newts was found.

Grass snake is periodically recorded on the reserve. These reptiles prey on amphibians and additionally require access to basking spots, dry areas with shelter for hibernation and mounds of rotting vegetation for breeding.

All ponds are closed to the general public, some locked under padlock, except by prior arrangement for biological recording, land management or pond dipping events and outdoor learning.

Birds

The variety of habitats on the reserve, its position in the Rotherham Rivers Living Landscape area and its relatively large size all make Woodhouse Washlands a high quality site, which supports a varied avifauna. The habitats can be described in three broad categories: grassland, wetland and scrub, each of which plays an important role for specific species, although many species require a number of specific habitats in close proximity for feeding, breeding and nesting.

95 species of bird have been recorded on Woodhouse Washlands. Of these 34 species were recorded as breeding on site during 2016, although the survey technique used may mean that this list may not be exhaustive. 18 of the species recorded are red listed on the British Trust for Ornithology's Birds of Conservation Concern, meaning that they are experiencing widespread population declines in the UK. A further 24 are amber listed under the same system. These species are shown in the table below, updated with the recent breeding success of lapwing in 2024:

Table 4a/4b. Birds of Conservation Concern (version 5) recorded on Woodhouse Washlands

Red listed

Common name	Latin name	Status on site	Common name	Latin name	Status on site
Corn bunting	*Miliaria calandra*	H	Mistle thrush	*Turdus viscivorous*	RB
Curlew	*Numenius arquata*	R	Skylark	*Alauda arvensis*	RB
Goldeneye	*Bucephala clangula*	R	Starling	*Sturnus vulgaris*	R
Grey partridge	*Perdix perdix*	R	Swift	*Apus apus*	R
House martin	*Delichon urbicum*	R	Whinchat	*Saxicola rubetra*	H
House sparrow	*Passer domesticus*	R	Willow tit	*Poecile montanus*	R
Kittiwake	*Rissa tridactyla*	H	Woodcock	*Scolopax rusticola*	R
Lapwing	*Vanellus vanellus*	RB	Yellowhammer	*Emberiza citrinella*	R
Linnet	*Carduelis cannabina*	R	Yellow wagtail	*Motacilla flava*	R
Merlin	*Falco columbarius*	H			

Amber listed

Common name	Latin name	Status on site	Common name	Latin name	Status on site
Black-headed gull	*Chroicocephalus ridibundus*	R	Meadow pipit	*Anthus pratensis*	RB
Barnacle goose	*Branta leucopsis*	R	Redshank	*Tringa totanus*	R
Bullfinch	*Pyrrhula pyrrhula*	R	Reed bunting	*Emberiza schoeniclus*	RB
Common sandpiper	*Actitis hypoleucos*	H	Short-eared owl	*Asio flammeus*	H
Dunnock	*Prunella modularis*	RB	Snipe	*Gallinago gallinago*	R, HB
Gadwall	*Anas strepera*	R	Song thrush	*Turdus philomelos*	RB
Greylag goose	*Anser anser*	RB	Stock dove	*Columba oenas*	RB
Grey wagtail	*Motacila cinerea*	RB	Teal	*Anas crecca*	R
Greenshank	*Tringa nebularia*	R	Whooper swan	*Cygnus cygnus*	R
Green sandpiper	Tringa ochropus	R	Wigeon	*Anas penelope*	R
Lesser black-backed gull	*Larus fuscus*	H	Willow warbler	*Phylloscopus trochilus*	RB
Kestrel	*Falco tinnunculus*	R			

H = historic (pre 2006) records only **HB =** known to have once bred on site

R = recent records of site use (post 2005) **RB =** known to have bred on site since 2005

As can be seen from the tables above, three red listed and eight amber listed species are known to breed on the reserve. Another twelve red listed and eleven amber listed species feed there but are not recorded as breeding in recent times, although at least one of these (snipe) has bred there in the past.

For species historically reported as breeding pre 2006, the likelihood of breeding recurring in the future varies from species to species. For example, whinchat has undergone a very large decline in the lowlands to the east of Sheffield and is now virtually absent, so breeding may be very unlikely, especially as this species appears to be semi-colonial. The potential for encouraging snipe to breed again seems much greater, as it still occurs in winter and should hopefully benefit from wetland habitat improvements.

Grassland Birds

The reserve's grasslands are home to a number of ground-nesting species, including lapwing, snipe, skylark and meadow pipit. Of these, skylark and meadow pipit both breed regularly on the reserve today, whereas lapwing was considered a historical breeder until it bred for the first time in 2024. Ground nesting birds are especially vulnerable to disturbance during the breeding season, and egg predation by predators such as badgers, foxes, corvids, cats or hedgehogs can significantly increase failure rates when breeding populations are small.

As a result of disturbance being detrimental to skylark breeding opportunities, the Trust decided to fence off a large field for skylark breeding, where access is restricted until August. The latest data from the ecological monitoring framework shows that in 2023, this field, compartment B4, hosted 4 skylark territories.

Wetland Bird Assemblage

The reserve's wetlands (and also its grasslands) support a large variety and biomass of invertebrates, which in turn allow it to support a number of insectivorous or omnivorous bird species. For some, such as **swallow** (*Hirundo rustica*), **house martin, teal, and gadwall, the reserve forms a suitable feeding habitat, but does not contain the correct habitat for nesting**. Others, such as grey wagtail and reed bunting breed on site. For yet others –snipe and jack snipe– the reserve proves attractive for feeding but does not currently provide conditions suitable for breeding.

The creation of new scrapes and extension of wetland areas on the reserve is beneficial to snipe, as well as other species such as redshank, greenshank and green sandpiper, which favour such areas in which to feed. Likewise, any decrease in disturbance by humans and dogs will benefit this ground-nesting species.

As well as species that require wet grassland and swamp, the reserve supports a number of birds of open and flowing water, including mute swan, teal, gadwall, kingfisher and greylag goose.

Birds of Woodland, Scrub and Hedge Habitat

The reserve's wooded, scrub and hedgerow habitats contain those species typical of many wooded sites across the Sheffield area, and additionally support a number of species which, due to severely declining populations, are no longer typical elsewhere. Wren (*Troglodytes troglodytes*), robin (*Erithacus rubecula*), blackcap (*Sylvia atricapilla*), blackbird (*Turdus merula*), wood pigeon (*Columba palumbus*), chaffinch (*Fringilla coelebs*) and several tit species (family *Paridae*) commonly breed on the reserve. In addition, the Red and Amber listed species **song thrush, mistle thrush, dunnock and willow warbler** are resident or migratory breeders, whilst yellowhammer and linnet are present only as vagrants.

Birds of prey

A number of birds of prey have been recorded on or over-flying the reserve. Most important of these in conservation terms are kestrel and barn owl, which have been recorded on the reserve and which breed here or in the vicinity.

A kestrel box was installed on a willow tree in the SE of the site in 2016. An owl box is also present, however the tree where it was installed has recently failed. A new location is being prepared as this management plan is being written.

Mammals

The reserve supports a diverse mammal fauna, including several species of conservation concern.

This is an important site for common pipistrelle (*Pipistrellus pipistrellus*) and noctule bats (*Nyctalus noctula*). In addition, we have reports of soprano pipistrelle (*Pipistrellus pygmaeus*) and Natterer's bat (*Myotis nattereri*).

A **badger** (*Meles meles*) sett was present on site and badger used to roam widely across the area. However, badgers seem to have vacated the sett after a large flooding event. Details of sett location are lodged with Sheffield and Rotherham Wildlife Trust. Badgers are constantly under threat from badger baiters, consequently sett protection measures have been undertaken by the local badger group. Liaison, advice and protection measures will be continued with the local badger group as required.

Brown hare (*Lepus europaeus*) is present but rare on the Washlands. Rabbits (*Oryctolagus cuniculus*) are widespread, whilst their natural predators weasel (*Mustela nivalis*) and fox (*Vulpes vulpes*) are both regularly recorded. Field vole (*Microtus agrestis*) are also present on banks and areas of dry grassland. A recent record of roe deer (*Capreolus capreolus*) on site has also been received.

Common hedgehog (*Erinaceus europaeus*) is often spotted on the reserve.

Harvest mouse is present both on the Washlands and on other adjacent sites such as Beighton Marsh. At Woodhouse Washlands they are strongly associated with swamp habitats and areas of bramble but may also be present in wet ditches. Whilst 41 harvest mouse nests were recorded on the reserve in 2022, compared to 27 in 2019, their distribution has become more confined to fenced off areas. The combination of flooding, a large number of dogs off-lead, and a greater dominance of shorter grasses with a lack of adequately long vegetation suitable for breeding outside of fenced areas, is believed to be responsible for the redistribution of nests. Recent records of nests also show a small number of nests in the western wetlands of the reserve.

A population of **water vole** was present on Woodhouse Washlands and on a number of other sites along the Rother prior to the 2007 flood. However, the extent of flooding resulted in the destruction of many of these populations and the species has not been recorded on the reserve or on other adjacent sites since that time, with only sporadic, unconfirmed records.

Otter has recently been recorded in Woodhouse Washlands. The population increase, nationally and regionally, has finally reached this part of the River Rother.

2.14 Surveying and monitoring

The Trust started an ecological monitoring framework in 2019, a programme of recurring surveys (every 3 or 6 years) that monitor the ecological condition of certain features of the site. This is a great tool to monitor changes in those features. At Woodhouse Washlands, **the EMF focuses the efforts of the volunteer surveyors** and sometimes, external contractors, **in monitoring the population of harvest mouse, great crested newt, wading birds, skylark and *Odonata*.**

Additional ecological surveys are carried out when funding becomes available. For example, as part of the Species Survival Fund project, between 2024 and 2026, a number of surveys will be conducted in Woodhouse Washlands (habitat survey, bird breeding data collection, bats, invertebrates, reptiles, harvest mice, great crested newts, and otter & water vole signs).

Visitor surveys were carried out in 2024 to gather information from our visitors and to inform this management plan.

3. Reserve vision and features of interest

3.1 Vision statement

Our vision for Woodhouse Washlands by 2070 is:

A mosaic of wet and dry grassland, ditches, ponds, hedgerows and scrub, Woodhouse Washlands provides a diverse array of wildlife-rich habitats. The River Rother running through its centre has been restored to a more naturalistic state providing benefits for biodiversity and also to communities downstream.

The nature reserve supports a spectacular range of wildlife including over 60 bird species, harvest mice, great crested newts and grass snakes.

Sympathetic management through conservation grazing maintains the grassland and wetland in good ecological condition.

The Trans Pennine Trail runs along the edge of the site providing multi-user access, while more sensitive areas of the site remain restricted.

Well-behaved dogs are welcome on the site; with responsible dog owners keeping them under control, picking up after them and removing their waste from the reserve.

3.2 Feature 1: Grassland habitats

Objective: To conserve and enhance the reserve's grassland habitats

Attributes

Attributes are the characteristics, qualities or properties of a feature which are inherent to, and inseparable from, the feature. Indicators of the general condition of the feature. (*Management Planning for Nature Conservation. Mike Alexander)*

Attribute	**Performance Indicator**	**Monitoring**
Species composition	A diverse ground flora is recorded - At least 2 positive indicators occurring frequently (40-60% of squares) across each area - At least 2 positive indicators occurring occasionally (20-40% of squares) across each area - Negative indicators occurring no more than occasionally across each area A diverse grassland bird & invertebrate communities are recorded. This bird list includes grasshopper warbler *(Locustella naevia)*, house martin, kestrel, meadow pipit, skylark, snipe, starling, swift and wood pigeon. We don't have a comprehensive species list for grassland invertebrates. We propose to survey the following groups to understand diversity: bees and wasps, beetles, grasshoppers and crickets, moths and butterflies & flies. A diverse waxcap fungi community is recorded Casual records suggest that parts of the site support a number of waxcap species. We propose a comprehensive survey is carried out. At least 1 known area of harvest mouse activity recorded Invasive/encroaching vegetation such as common ragwort, creeping thistle, scrub and Himalayan balsam are controlled Invasive or dangerous species such as Japanese knotweed and giant hogweed are eradicated	Bird territory mapping Harvest mice monitoring Wildlife records Casual observation

Vegetation structure	Bare ground should occur not more than rarely Sward height should adapt to individual field objectives: Harvest mice: -Vegetation in C1 consisting of rank grasses, rushes and/or brambles should exceed >50cm in height -Areas surrounding C1, vegetation consisting of rank grasses, rushes and/or bramble >30cm tall, ditches, field margins, hedgerows and/or scrub Wading birds: -Vegetation in comp A1 & C1 to be undisturbed from March to September to allow wading bird feeding and breeding Invertebrates: -Vegetation in comp B1 & B2 to be undisturbed from March to September to allow invertebrates full life cycle -Grazing from September to end of October Hay meadows: -Vegetation in comp C and C2 to be undisturbed from March until the hay cut in August, with the exception of hand pulling of ragwort -Aftermath grazing until the end of October	Bird territory mapping Harvest mice monitoring Casual observation

Table 5a. Positive indicators			
Alopecurus pratensis	Meadow foxtail	*Lathyrus pratensis*	Meadow vetchling
Anthoxanthum odoratum	Sweet Vernal-grass	*Leucanthemum vulgare*	Oxeye daisy
Centaurea nigra	Common knapweed	*Lotus corniculatus*	Common bird's-foot-trefoil
Conopodium majus	Pignut	*Lotus pedunculatus*	Greater bird's-foot-trefoil
Cynosurus cristatus	Crested dog's-tail	*Ranunculus acris*	Meadow buttercup
Dactylorhiza praetermissa	Southern marsh orchid	*Sanguisorba officinalis*	Great Burnet
Table 5b. Negative indicators			
Cirsium arvense	Creeping thistle	*Rumex crispus*	Curled dock
Cirsium vulgare	Spear thistle	*Rumex obtusifolius*	Broad-leaved dock
Jacobaea vulgaris	Common ragwort	*Urtica dioica*	Common nettle
Lolium perenne	Perennial Rye-grass		Scrub

Table 5a/5b. Positive and negative ground flora indicators

Factors

A factor is anything that has the potential to influence or change a feature, or to affect the way in which a feature is managed. (*Management Planning for Nature Conservation. Mike Alexander)*

Factor	Rationale	Management required (yes/no/monitor)	Technical Indicator of Control	Monitoring
Cutting & grazing regime	Vegetation sward at the end of the growing season is to be kept short to minimise the amount of nutrients coming back into the soil Hay meadows to be cut, dried and collected in August, with aftermath grazing Pastures to be grazed at different times of the season in accordance to the objective species they are hosting (nesting birds or invertebrates)	Yes	Vegetation sward is between 5-10 cm in November except in fields which require longer grass for specific target species	Bird territory mapping (EMF) Casual observation
Invasive species	Brambles are present in the grassland, in particular along the field edges. Common ragwort and thistles are also present across the site. In the hay meadows, years of uprooting management has rendered ragwort sparse and scattered Unmanaged, these species will displace the species-rich grassland. Hay meadows require ragwort free crops for livestock safety when hay is dry	yes	Populations of these species remain sparse and scattered across the grassland areas	Casual observation Ranger patrol
Shading	Many of the flowering species found in the grasslands are shade intolerant and will be lost if a canopy is allowed to develop. The formation of a canopy will also lead to soil enrichment which again will lead to the loss of these species through competition with shade-tolerant, vigorous bracken and bramble	Yes	39.7 ha of open grasslands	Casual observation
Nutrient enrichment	Tree leaves and dog fouling increase the nutrients on the soil, changing the conditions for wildflowers to develop Leaf input is controlled (see 'shading' above) and dog owners are encouraged to dispose of pet waste properly	Yes	39.7 ha of open grasslands Dog fouling is anecdotal	Casual observation

Factor	Rationale	Management required (yes/no/monitor)	Technical Indicator of Control	Monitoring
Hydrology & Flooding	Large flooding events have become more frequent in recent years, altering the conditions for the development of grasslands (from wetness to soil nutrient enrichment) The grasslands species are tolerant to wet conditions, but it is unclear if this tolerance would be sustained in the future if flooding events increase in frequency (see 'climate change' below). Reseeding with waterlog tolerant species may be required	Yes, Monitor	Bare ground is kept within HLS requirements	Casual observation
Climate change	Global temperatures are predicted to continue rising over the course of the century. Although the exact effect on the climate of the UK is not known, it is thought that the result is likely to include an increase in climatic variability, with extremes in temperature, wind speed and rainfall becoming more common. Plants that are sensitive to humidity levels would be adversely affected by periods of drought or under water conditions	No, Monitor	N/A	Casual observation

Evaluation

Sward height varies across the reserve, particularly in its pastures, due to the extensive nature of the grazing regime. A varied sward height is desirable in ecological terms, with different lengths providing niches suitable for different species. In general, a short sward length is desirable across the majority of the reserve, providing a suitable habitat for ground-nesting birds, waxcap fungi and many species of plant, mixed with a longer sward providing alternative habitat in areas that are seasonally or permanently ungrazed.

Floodplain grazing marsh and hay meadows are habitats of both national and local conservation significance and their presence on Woodhouse Washlands are key to the reserve's designation as a LNR. Both are human-made habitats and, as such, require active management - through grazing and cutting - to maintain them. Without such management these habitats would, in time, be colonised by scrub and gradually revert to woodland through a process of natural succession.

At Woodhouse Washlands, mechanical cutting is rejected as a suitable management technique for all areas outside the hay meadows due cost and practicality. Additionally, a programme of cutting would fail to provide additional benefits such as poaching, dunging and seed dispersal and would result in a less subtly varied and rich habitat mosaic. Consequently, **conservation grazing with cattle, supplemented by the manual control of scrub and injurious weed species will be used across the reserve's pastures, with grazing of meadow areas following an August hay cut in the hay meadows**. Sheep grazing is rejected as a suitable management technique due to their tendency to selectively graze out herbaceous species from the sward and due to the number of dogs using the reserve. In addition, the wet ground conditions of the site could negatively affect the sheep's welfare e.g. footrot.

The grazing regime has been adapted to individual field objectives, modifying cattle and visitor access at different times of the year to benefit the target species. Fields where the target species are birds (skylarks or waders) are kept undisturbed throughout the bird nesting season. Fields where the target species are invertebrates are kept undisturbed until late summer to allow species to develop full life cycles. Finally, fields where the target habitat is a wildflower meadow to be used as a hay crop, are kept undisturbed until the hay cut in August.

Field compartment (Figures 8)	**Management objective/ Target species**	**Field compartment (Figures 8)**	**Management objective/ Target species**
A	Pasture grassland, wading birds	B4	Skylarks, wading birds
A1	Marshy grassland, wading birds	C	Hay meadow, harvest mice, skylarks
B	Pasture grassland	C1	Harvest mice
B1	Invertebrates	C2	Hay meadow, harvest mice
B2	Invertebrates	C3	Hay meadow
B3	Ground nesting birds		

Table 5: Field objectives

In the southern section of the reserve, there has been an increase in the distribution of **false oat-grass** (*Arrenatherum elatius*), which can be a competitor for other grasses and flowering plants. This plant provides a dense thatch beneficial to species such as field voles (*Microtus agrestis*) and it provides good edge/rough grassland habitat. The reduced diversity can be countered by the diversity promoted in the main areas that are cut/grazed. However, control of the spread may be required if it starts competing with other meadow species or it spreads to large areas of the site. Grazing is an effective tool to keep false oat-grass under control. When grazing is not possible during the growing season as it happens in the hay meadow fields, manual cutting early in the summer is recommended if control is required.

The reserve's grasslands, wetlands and woodlands, are vulnerable to invasion from Japanese knotweed (*Fallopia japonica*) and Himalayan balsam, both of which occur extensively along the banks of the Rother. Occasionally, giant hogweed (*Heracleum mantegazzianum*) is also found. These non-native species colonise damp ground and outcompete much of the native ground flora in wet areas, which are some of the most botanically diverse on the reserve. Himalayan balsam is capable of rapid colonization, although, being palatable to cattle, it is effectively kept in check by grazing.

In order to protect these habitats from damage, SRWT will carry out **regular monitoring to detect any incursion of these invasive non-native species into the reserve's ditches or wetland habitats**. Himalayan balsam and Japanese knotweed will be tolerated in the river channel but will be eradicated elsewhere on the reserve.

Some grassland areas are not included in the grazing compartments and mechanical means are needed to maintain them. These areas are the **scallop along the Green Lane** and the **two grasslands adjacent to the TPT in compartment C**. Scrub and brambles are growing in these areas and a rotational cut & collect regime is required to maintain the grassland in these small areas.

Bramble encroachment along the edges of fields needs to be managed to comply with HLS agreement. Where cattle grazing is not keeping scrub under control, mechanical means will be used.

Trees overhanging the meadows can create shading of the vegetation and when leaves fall in the autumn, increase in the nutrient levels of the soil, promoting less desirable meadow species such as nettles. On the other hand, field marginal vegetation is an important habitat for wildlife and the shading effect of trees is required by livestock for heat shelter. These trees will be monitored and cut back on a rotational schedule as required.

Harvest mouse is one of the target species in the nature reserve. It has suffered a 71% decline nationally over 18 years. A frequenter of field margins, wet habitats and hedgerows, it is vulnerable to the impacts of landscape change, and habitat loss and fragmentation. They are extremely active climbers and feed in the stalk zone of tall grass and reeds.

In accordance with the HLS requirements, the eastern and northern edges of compartment C will be managed in accordance to harvest mice preferred habitat, which includes bramble and longer vegetation along the perimeters of the fields.

As part of the Species Survival Fund, a new fence will be constructed in compartment C, which will reduce disturbance to wildlife from cattle, people and dogs and which is expected to promote the expansion of the population of harvest mice, skylarks and other ground nesting birds.

The core mice nesting field is C1, but nests distribution within this compartment shows that barely any nests are found in the area dominated by very dense willow herbs. It is recommended that these sections are targeted for cutting to open up space for nests. This compartment is extremely wet and the nesting season of birds and mice restricts the timing for this work. Although the ideal time to ensure minimal disturbance to mice is December to March, the wetness of this compartment would make it dangerous for the people doing the work if the temperature is too low. As the work is focused in denser areas where it is known that mice are not nesting, the work can be carried out from October when temperatures are milder.

Both **kestrel and barn owl** feed on small mammals, particularly mice and voles, suggesting that the reserve supports healthy populations of these creatures. The two predators are able to coexist despite sharing a food source as one is diurnal and the other nocturnal.

Barn owl numbers have fallen drastically in the Sheffield area, with a decline of 64% between 1975 and 2008. This is a greater rate of decline than has been seen nationally. The reason for this decline is not clear, but is thought to relate to decreases in prey numbers caused by changes in farmland management. Barn owls are also vulnerable to poisoning from rodenticides and from collisions with vehicles when hunting adjacent to roads.

Kestrel numbers have decreased slightly in the Sheffield area, with a decline of 8.7% between 1975 and 2008. This rate of decline is less than has been seen nationally and the post-2005 population decline highlighted by the Breeding Bird Survey report does not seem to have been reflected locally.

Hedgehog was once a common species, now under threat from habitat fragmentation and loss and increasing intensification of the agricultural landscape. Consequently, the Washlands provide a valuable habitat for this species in the Woodhouse area.

Our ecological monitoring programme helps us assess key bird species, however it doesn't include a comprehensive bird species list. During the period of this management plan, funds will be sought for additional surveys.

As mentioned above, the primary role of Woodhouse Washlands is to be a flood storage area. This means that the flood defence banks (along Furnace Lane and Retford Road) are solely maintained by the EA. This includes regular grass mowing and tree removal. In addition, any significant changes to the nature reserve need to be approved by the EA (flood risk activity permit).

Management objectives

Objective 1: To conserve and enhance the reserve's grassland habitats

1.1 To maintain grasslands in favourable condition

1.2 To maintain grasslands that host harvest mice and diverse bird & invertebrate communities

3.3 Feature 2: Skylarks

Objective: To conserve, protect and increase the reserve's community of skylarks

Attributes

Attributes are the characteristics, qualities or properties of a feature which are inherent to, and inseparable from, the feature. Indicators of the general condition of the feature. (*Management Planning for Nature Conservation. Mike Alexander)*

Attribute	**Performance Indicator**	**Monitoring**
Species composition	Presence of ≥5 territories at one time, between April – August	Bird territory mapping
Vegetation structure	Sward height of 15-50cm between March – August Scrub should occur not more than rarely, especially at the centre of the compartments	Bird territory mapping Casual observation

Factors

A factor is anything that has the potential to influence or change a feature, or to affect the way in which a feature is managed. (*Management Planning for Nature Conservation. Mike Alexander)*

Factor	**Rationale**	**Management required (yes/no/monitor)**	**Technical Indicator of Control**	**Monitoring**
Cutting & grazing regime	Vegetation sward to be kept in accordance to skylark habitat requirements	Yes	Vegetation sward is 15-50 cm between April - August	Bird territory mapping (EMF) Casual observation
Disturbance	Disturbance of nesting sites, nests or chicks can severely impact the breeding success of skylarks. Graze fields outside bird nesting season to ensure disturbance is kept to a minimum. This includes access to the general public	Yes	1st March to 31st July, fields B3, B4 & C are shut to minimise disturbance from livestock, general public and their dogs	Ranger patrol
Predation (corvids, gulls, etc.)	Predators could reduce breeding success	Yes, Monitor	Number of skylark territories is ≥5 at one time	Bird territory mapping (EMF)

Factor	Rationale	Management required (yes/no/monitor)	Technical Indicator of Control	Monitoring
Scrub	Tall scrub can negatively impact skylark breeding success as it increases predator presence. Control of developing scrub in the fields is essential to promote skylark breeding habitat	Yes	Fields B3, B4 & C are open grasslands	Bird territory mapping (EMF) Casual observation
Hydrology & Flooding	Large flooding events have become more frequent in recent years, altering the conditions for the development of grasslands (from wetness to soil nutrient enrichment) and in turn, the habitat for skylarks and lapwings. Although unusual, flooding could occur during bird nesting season, affecting breeding success. On the opposite side of the spectrum, low soil moisture affects the supply of invertebrate prey	Yes, Monitor	Flood alerts & warnings not active during bird nesting season	Casual observation
Climate change	Global temperatures are predicted to continue rising over the course of the century. Although the exact effect on the climate of the UK is not known, it is thought that the result is likely to include an increase in climatic variability, with extremes in temperature, wind speed and rainfall becoming more common. Breeding success could be adversely affected by periods of drought or flooding.	No, Monitor	N/A	Casual observation

Evaluation

The UK **skylark** population fell by 54% between 1970 and 2001 due largely to changes in farming practise, although the species has fared better in the Sheffield area where it has declined only by 13% since 1975. The selection of nesting sites by skylark is heavily influenced by both sward length and disturbance. Skylarks nest on the ground, in vegetation that is 15–50 cm high and open enough to give easy access to the ground. Therefore, **control of scrub in compartments B4, B3 and C is required to ensure the meadows are kept open.** Currently, scrub is being controlled by grazing in comp B4 and by the annual hay cut in comp C. The amount of scrub in B3 is significant and cannot be

managed with grazing alone. Manual control is required to reduce the scrub levels, including along the edge of the field, on the hillside.

Compartment **B3 has a high distribution of scrub**, which is expected to be addressed in 2025/26 due to funding from the Species Survival Fund. Once scrub is removed, a programme of regrowth control is required. To promote skylark habitat, it is recommended that the central area of the field, south of the ditch, it's prioritised for scrub control. Then expand to other areas such as the north-western gate and mount. It is hoped that these changes to the habitat will increase the nesting success of skylark, however it is unclear how much disturbance is generated by the adjacent railway and the close electricity pylons are likely to attract predators. Adding a **wire net** on the 3 gates to this compartment will also be beneficial to reduce predator access. The habitat north of the ditch is wetter, which is more desirable for birds like snipe, however the vegetation is too short for them.

Skylarks need to make two or three nesting attempts between April and August to sustain the population, therefore requiring meadows that are not cut before late May, with subsequent cuts *at least* seven weeks apart. The grazing regime will reflect these requirements.

Skylarks also favour mid-field areas in which to nest and feed to avoid predators. Nesting skylarks are vulnerable to disturbance and will abandon nests where this occurs regularly. Disturbance will occur if one of their natural predators approaches the nest but can also occur if people, dogs and grazing animals come too close. On the Washlands, disturbance from dogs and cattle is thought to be a particular problem, as these animals range across the large grassland areas of compartments A and B. Although the management of comp C is primarily focused on promoting lowland floodplain hay meadows, it is anticipated that the new fence around the field will reduce disturbance, and the taller vegetation on the margins could promote breeding of skylarks in this area of the reserve.

Lapwings are birds of farmland and open countryside, and feed mainly on earthworms, leatherjackets (cranefly larvae) and other insects and their larvae. They generally feed where they can find lots of these, such as in grazed pasture and especially on wet grassland.

The UK population of lapwing fell by at least 40% between 1970 and 1998, a decline largely caused by the loss of mixed farming and spring cropping, and the intensification of grassland management. These declines have been mirrored by a 22% decline in the Sheffield area between 1975 and 2008, with the species being particularly badly affected by changing farming practices along the moorland fringe.

Records for lapwing on the reserve suggest it appears to be almost exclusively a wintering species here. With the first lapwing chick recorded in 2024 after many years not breeding. In order to support breeding pairs of lapwing, the reserve must provide areas of short grassland with a low stocking rate for nesting from mid-March to June, and abundant soil and ground invertebrates throughout the year. The second of these conditions is easily managed, hence individuals being regularly sighted here.

Unfortunately, the sward requirements of skylark and lapwing are not compatible, with skylark preferring a longer sward than lapwing will tolerate. For that reason, lapwing are less likely to utilise compartments B3 and B4 for breeding purposes, despite its lack of disturbance, although they may utilise the scrapes within the area to feed. That said, lapwing have bred in compartment B4. It is thought that the wetter conditions in 2024 (several storms and the damaged flood gate keeping water levels higher than usual) have increased the amount of feeding ground and reduced the sward height due to the suppression of grass as a result of being underwater for long periods of time. This new area of shorter sward will be monitored and mechanically maintained if required, carefully balancing the habitat needs for both lapwing and skylarks.

Management objectives

Objective 2: To conserve, protect and increase the reserve's community of skylarks

2.1 To maintain grasslands compatible with skylark habitat requirements

2.2 To increase skylark habitat

2.3 To promote feeding grounds by increasing wetness of the site, carefully balancing habitat needs of skylark and wading birds

3.4 Feature 3: Wetland habitats

Objective: To conserve and enhance the reserve's wetlands

Attributes

Attribute	**Performance Indicator**	**Monitoring**
Vegetation structure	Vegetation is present inside the water as well as on the margins of the ponds and ditches 8 ponds with Habitat Suitability Index (HSI) score of ≥0.7	*Odonata* & GCN Monitoring (EMF) GCN Monitoring (EMF)
Species composition	Presence of ≥15 *Odonata* species (adults) ≥ Medium population size class of great crested newts (11 to 100 individuals) A diverse bird community is recorded Presence/absence of breeding pairs of lapwing and snipe Invasive species controlled A diverse ground flora is recorded	*Odonata* Monitoring (EMF) GCN Monitoring (EMF) Casual observation Wildlife records
Water retention	Ponds retain water all year round (at least 9 out of 10 years) Wet ditches retain water all year round and only dry during exceptionally dry periods	*Odonata* & GCN Monitoring (EMF) Casual observation
Open water	Open water is present in all water bodies	*Odonata* & GCN Monitoring (EMF) Casual observation

Factors

Factor	Rationale	Management required (yes/no/monitor)	Technical Indicator of Control	Monitoring
Invasive non-native species	The regular flooding nature of the site increases the risk of invasive non-native species (INNS). These include Himalayan balsam, giant hogweed, Japanese knotweed and *Crassula helmsii*, all present on site	Yes	INNS are located and eradicated	Ranger patrol
Invasive native species	A number of native plants have an invasive nature that needs to be monitored. Known species that grow in and around ponds are water soldier (*Stratiotes aloides*), willow herbs, ragwort, brambles and scrub	Yes	Species are controlled when posing a threat to other habitats	Ranger patrol
Shading	Ponds and wet ditches become shaded by scrub and brambles	Yes	HSI assessment scoring shows habitat is suitable for GCN	*Odonata* & GCN Monitoring (EMF) Casual observation
Grazing regime	Ponds not fenced off to cattle see a lack of vegetation around and inside due to heavy grazing. Ponds fenced off to cattle see an increase in vegetation around the ponds	Yes	Excess and lack of vegetation controlled by rotational cutting or by fencing	Ranger patrol
Litter	Flooding events can deposit litter in and around ponds and wet ditches. Litter is unsightly and dangerous to wildlife	Yes	Litter is regularly removed	Ranger patrol
Flooding	Flooding events can disturb the pond's condition. It could wash away species and bring new ones, deposit silt or bring freshwater	No, Monitor	After flooding checks are required to highlight any changes to the ponds & ditches condition	Ranger patrol
Fish	Flooding events lead to an increased number of fish in ponds. Fish prey on newts' eggs, decreasing their population	No, Monitor	Sustained population of GCN	GCN Monitoring (EMF) Casual observation

Evaluation

The reserve's wetland habitats are in mixed condition, but are variously vulnerable to damage from cattle, drying up, succession, periodic inundation and inappropriate recreational access.

The Trust's objective is to conserve, protect and extend the reserve's wetland and riverine communities. To achieve this, the SRWT will actively manage these wetland features to maximise their benefit to biodiversity. As with the reserve's grazing marsh, its ponds are one of its most biodiverse and ecologically important habitats. They are home to many of its rarer plant species and provide a breeding ground for great crested newts. In addition, they provide a vital habitat for many of the reserve's invertebrate species and its amphibian population, which in turn support grass snakes. It should be noted that all ponds where great crested newts are recorded as breeding are protected by law.

The protection and preservation of the amphibian and reptile population is a prime conservation priority for this reserve. This will require the **careful management of the reserve's ponds to provide suitable breeding habitat, management of surrounding areas to provide additional feeding areas and shelter, and the provision and protection of suitable hibernation areas (hibernacula) for overwintering**. In particular, ponds must be kept free of pollutants and disturbance and be managed so that areas of open water remain (newts require some visibility for mating displays).

Management will involve ensuring that all ponds hold water throughout the summer for at least nine years out of ten (occasional drying of small ponds can prove beneficial to biodiversity by keeping them free of fish).

Ponds will be kept **free from cattle disturbance** since they increase turbidity and can result in excess nutrients (in the form of faeces and urine) entering the water. As an exception, pond 9 (B3 North) and pond 10 (B3 South) are kept unfenced as they are cattle's water source.

Currently, the pond 8 (oxbow) has a dilapidated fence and cattle access this area. Pond 7 (high pond) is also open to cattle at the moment. It is expected that both **fences will be repaired/built** in 2025 as part of the Species Survival Fund. In addition, pond 7 will be **dug deeper** as currently it is too shallow and dries in the summer. Pond 6 (dry pond) has been identified, as the name suggests, as a pond that dries in the summer. The vegetation in this pond is very scarce and it affects its ability to host great crested newts and other wildlife. During the period of this plan, this **pond will be made watertight** by using bentonite clay.

Ponds (and other wetland habitats) are particularly vulnerable to ecological succession, a process by which increasing volumes of vegetation transform open water to dry land over time). To counter succession two options are

available: the periodic removal of excess vegetation to retain open water, or the intermittent creation of new ponds to replace the old.

During the course of this management plan, SRWT will favour the former approach in ponds where great crested newt are not present, managing each pond to **retain both open water in its centre and an ecotone of marginal and marshy vegetation at the edge**. Where GCN are present, ponds will not be managed in this way as newt larvae may be present in ponds all year round.

Fencing the ponds has many benefits, but one of the disadvantages is that cattle cannot graze the vegetation around the ponds, allowing scrub and very tall vegetation to establish, shading the ponds. Allowing occasional access to cattle would be the ideal solution, but because we know at least 2 ponds are infected by the **invasive non-native species** *Crassula helmsii* (New Zealand pygmyweed or Australian swamp stonecrop), the risk of spreading this plant to other ponds is too great. For this reason, mechanical means will be used instead to **control scrub and tall vegetation developing inside the fenced areas around ponds.** Vegetation control around ponds will benefit the *Odonata* communities by maintaining a varied plant community with access to sunlight, where damselflies and dragonflies can feed and breed.

Crassula is a greatly invasive plant, not native to the UK, that creates a mat covering the whole of the pond and its surroundings. This plant has been identified in two ponds at Woodhouse Washlands, in pond 4 (cow pond) and in pond 5 (top pond). Eradication is very difficult and for years, several attempts have failed in pond 4. For this reason, pond 4 will be in-filled with soil. This obviously will destroy precious habitat, so the SRWT will build 2 new ponds in the vicinity to mitigate the loss of habitat. Pond 5 has a smaller area of spread and the use of herbicide will be required as this plant is notoriously hard to eradicate. At the time of writing this plan, a permit to pursue eradication is being applied for.

Amphibian diseases such as red leg, and catastrophic events such as inundation during flood events, can threaten the entire amphibian population of a single pond, whilst the introduction of fish or invasive weeds such as New Zealand pigmyweed can severely affect the breeding success of frogs and newts. Measures to safeguard ponds from the accidental transfer of diseases and invasive plant species is essential, therefore, **biosecurity** measures are of extreme importance when working in this reserve.

In 2019, three new ponds were built in compartment A, which were colonised by great crested newts in the first breeding season. **At least 2 new ponds will be created** to provide new breeding habitat in higher ground of compartment A. As flooding events are becoming more regular in recent years, we will aim to build

breeding ponds in areas less likely to flood. This poses a problem, because these safer areas are on higher ground, where water supply is more limited.

To supplement the reserve's existing wetland resource and help mitigate against the possible loss or degradation of some ponds during flood events, SRWT will investigate the **feasibility of the creation of additional ponds or wet ditches within compartment C and compartment A** during the period covered by this plan, which will require soil testing due to the known soil pollution in other areas of the site. It is estimated that 0.4 ha of wetland could be created or improved in compartment A and 0.6 ha in compartment C, however a feasibility study is necessary to confirm these estimates.

We aspire to have breeding populations of **water vole back at Woodhouse Washlands** (they were lost in 2007). It is known that mink predation is an important factor in their decline. Currently, there are mink control programmes happening at national level, and it is likely that mink control will be rolled out in our region. The creation and improvement of wetland habitats across the site to improve habitat for water voles will allow the site to be ready for this species to come back and thrive. Moreover, the main advantage of creating habitat for this particular species is that wetlands benefit a number of other target species such as wading birds or harvest mice.

Snipe breed in wet flushes on moorland, damp pasture and at the edges of watercourses, favouring wet areas with tussocky vegetation 10-30 cm tall for breeding between April and July. They require soft, damp soil which they probe for earthworms, leatherjackets, beetles and caterpillars. Young chicks are generally fed on earthworms collected by the parents around the nesting site.

In the UK, snipe has declined in range by 19% between 1970 and 1990 largely due to the drainage of grassland and moorland. In the Sheffield area the species has fared far worse, declining by 44% between 1975 and 2008, with eastern lowland areas including the Rother Valley being particularly badly affected. Snipe is historically recorded as breeding on Woodhouse Washlands, but breeding has not been recorded here for many years. It is likely that the lowering of the water table with its associated habitat changes has rendered much of the site unsuitable, although the changes in habitat management outlined elsewhere in this report may increase suitability in the future.

Current records show that snipe is present in compartment A during the winter, but habitat is not optimal for the breeding season. Historical records of breeding snipe suggest that improvements in the wetlands of compartment C could see this species coming back to Woodhouse Washlands.

Teal are dabbling ducks, feeding on seeds and small invertebrates. This species is one that overwinters in lowlands such as the Rother Valley, preferring upland

areas with oligotrophic waters in which to breed. Although this species has seen a 57% decline in the Sheffield area between 1975 and 2008, this is the result of declines in breeding rather than overwintering habitat and so are not relevant to the management of this reserve.

Gadwall and greylag goose are new species to the Sheffield area. Present along Rother Valley they breed in water bodies larger than those found on the reserve.

Kingfisher is a protected species under the Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), which means it is an offence to intentionally/ recklessly disturb them at or near their nest and intentionally/ recklessly disturb the dependent young. Numbers of kingfishers are stable in the Sheffield area, having benefited from improvements in water quality in Sheffield's main rivers (including the Rother). SRWT encourages scrub and tree development on the river banks to perpetuate the presence of suitable breeding habitat for this species on the reserve.

The **Beighton Mill Tail Goit will be restored** through scrub removal and reprofiling if required. Where opportunities arise, ditch restoration will be designed to support water vole habitat needs, with the goal of re-establishing this species within the nature reserve if the population recovers in the region.

Further restoration of the River Rother is not planned for the period of this management plan. However, SRWT works closely with the Environment Agency and work will be considered should any funding become available, including naturalisation of the river edges with large woody debris to improve fish protection areas and water flow variation within the channel.

Management objectives

Objective 3: To conserve and enhance the reserve's wetlands

3.1 To maintain ponds and wet ditches in favourable condition

3.2 To increase the wetland habitats of the reserve

3.5 Feature 4: Hedgerows, scrub & mature trees

Objective: To retain hedgerows, scrub & mature trees in favourable condition

Attributes

Attribute	**Performance Indicator**	**Monitoring**
Vegetation structure	1190m of hedgerows are managed in the reserve (laid or coppiced) Hedgerow and scrub areas contain deadwood and a mixture of tall (standards) and short trees. Shrub species should have a diverse age and height structure, with no more than 50% of the scrub to be mature or over mature. The amount of scrub on site to be kept within the HLS management prescriptions Hedgerow is wide and has no gaps Dense vegetation is growing at the base of a hedge There is a margin between the base of the hedge and the mowed area to limit root disturbance	Casual observation
Species composition	Diverse shrub species, with at least 7 native species A diverse woodland and scrub bird community is recorded Invasive species controlled A diverse ground flora is recorded Mature trees are retained and encouraged to veteran stage	Casual observation Wildlife records

Factors

Factor	Rationale	Management required (yes/no/monitor)	Technical Indicator of Control	Monitoring
Shading	Shading can thin the vegetation at the base of hedgerows, reducing the effectiveness of these wildlife corridors. Grazing and agricultural pesticides also affect the base of hedgerows, but this is not expected to happen at this reserve	Yes	Base of hedgerow is dense	Casual observation
Antisocial behaviour	Fly tipping and vandalism (e.g. fires or damage to trees) are common occurrences and management needs to be adaptive e.g. piled deadwood can only occur in inaccessible areas. This will affect the amount of deadwood in the reserve	Yes	Reduction in reports of fly tipping or vandalism	Casual observation Incident reports
Proximity to housing	Trees may need to be felled or cut back to maintain the safety of the adjacent housing. This will affect the amount of standing dead wood available in the reserve	N/A	N/A	N/A
Tree disease	Many species of native broadleaved trees are vulnerable to pathogens, several of which are active in the area. Species known to be at imminent risk – ash – are present on the reserve in small numbers.	No, Monitor	Persistence of at least 5 native broadleaved species present on the reserve	Casual observation Tree safety surveys
Climate change	Global temperatures are predicted to continue rising over the course of the century. Although the exact effect on the climate of the UK is not known, it is thought that the result is likely to include an increase in climatic variability, with extreme temperatures, wind speeds and rainfall becoming more common. Consequently, increasing the reserve's resilience to drought, fire events and gales should be a priority when management decisions are made. Long-term changes in climate may also affect the species which the reserve is able to support long-term and future species conservation plans will need to take this into account	No, Monitor	N/A	Casual observation

Evaluation

Scrub currently comprises a limited but important component of the reserve's vegetation, providing a valuable habitat for a number of invertebrate and bird species, which require scrub habitat for food and shelter. **Coppicing areas of this scrub on a rotational basis** will help to further diversify the height and density of this habitat on the reserve, as well as allowing the establishment of ground flora in some places and providing an ecotone between areas of scrub and the surrounding grassland.

Trees and shrubs alter the soil in which they grow, both by cycling nutrients from deeper down the soil profile and by increasing nutrients within the soil, resulting in raised soil pH and nutrient levels. These changes in turn make conditions more suitable for fast-growing species such as bramble and willowherb, which can then outcompete meadow species, a change that is exacerbated by increased shading. An increase in the overall proportion of scrub and trees on the reserve is therefore not considered desirable. However, the benefits (both aesthetic and ecological) of scrub belts on the reserve margins, or along the River Rother are recognised. In addition, with warming climates, it is important to consider the thermal regulation advantages that scrub provides to a wide range of wildlife. **Scrub management will not therefore aim to eradicate all the scrub on the reserve but will instead aim to maintain existing areas in good condition in line with the HLS agreement and prevent encroachment into grassland and wetland areas.**

Scrub in compartment C1 is a vital refuge for harvest mice during large flooding events. Harvest mice are good swimmers and excellent climbers. Water can reach up to 2m in the southern side of the reserve. It is important to maintain levels of thin scrub at a height between 1.5 to 2.5 metres in the vicinity of their nesting area to ensure refuge areas. **Scrub in this compartment will be regularly coppiced in rotation to allow continued thin willow shoots that harvest mice can easily climb,** ensuring HLS requirement of less than 5% scrub cover is maintained.

In the pastures and hay meadows the spread of scrub and/or trees is kept in check by grazing and mowing of young seedlings. Where blackthorn is suckering into the grassland of compartment A and B3 however, some manual control may be required.

The reserve's population of **veteran willow trees** is an important ecological and historical feature. However, even with **periodic management in the form of pollarding**, these trees are vulnerable to the effects of age and decay which will ultimately result in their loss. Monitoring of willow stock across the reserve is required to ensure future veteran willows. If this monitoring highlights a lack of new willows, it will be proposed that cuttings of these trees be taken and planted adjacent to the old and protected from cattle, to form a new generation of willows in this area.

The most notable mature tree in the reserve is in compartment A, the hybrid black poplar. A recent tree safety survey recommended fencing around the base of this wonderful tree to protect the root plate from soil compaction by cattle and visitors. In 2024, remains of a fire were found at the base of the tree, damaging the bark. A new **fence will be installed to protect this tree** as it's not only a historic landmark, it is also a habitat in itself. It is important to bear in mind that cattle are using the base of this tree to shelter from the sun, and the concessionary access route also passes under the tree. The fence will allow pedestrians to continue having a circular route and nearby small scrub will have the crown lifted so that cattle will be able to shelter underneath.

Native black poplars are declining in the UK, in particular female trees. During the period of this management plan, SRWT will investigate the possibility of planting various male and female wild black poplars across the reserve.

Hedgerows provide an important habitat for many species, such as harvest mouse, and support wildlife in a way that fences cannot. A well-managed hedgerow is dense and without gaps, and may contain a number of standard trees. **The reserve's existing hedgerows will be managed** as necessary to ensure they are in good ecological condition. **Figure 13** shows the distribution of linear scrub and managed hedgerows in the reserve, subdivided into hedgerows laid and hedgerows coppiced on a rotational programme.

The reserve's wooded, scrub and hedgerow habitats host a diverse bird community. The UK yellowhammer population fell by 54% between 1970 and 1998, with the Sheffield area suffering a 26% decline since 1975. The main factor in this decline is low overwinter survival, probably because of decreasing availability of seed food sources on farmland. Yellowhammers nest on or close to the ground in ditch vegetation or at the base of short, thick hedgerows and scrub. Adults feed mainly on seeds throughout the year, and seek places where they can find lots of seed food. However, yellowhammer chicks depend largely on insects for food and adult birds also feed on insects in the breeding season.

Superficially Woodhouse Washlands would appear to provide a good breeding habitat for yellowhammer. It may be that a lack of arable farmland in the vicinity makes the reserve less desirable for overwintering and therefore breeding, or it may be that yellowhammer do actually breed on the reserve but have remained undetected by previous transect surveys.

Linnet also frequents woodland edge habitats and scrub habitats, utilizing mixed grassland as a feeding ground. This species is a seed eater, and is particularly dependent on the seeds of “weeds” such as thistle (Cirsium spp.), common sorrel and docks (Rumex spp.), favouring dense, thorny scrub and hedgerows in which to breed.

Linnet numbers have declined substantially over the past few decades, with a 57% nationwide decline between 1970 and 2008. In the Sheffield area the species has also declined, but less severely (13% between 1975 and 2008). This decline is linked to agricultural intensification and, in particular, the conversion of traditionally-managed hay meadows to silage.

Management objectives

Objective 4: To retain hedgerows, scrub & mature trees in favourable condition

4.1 To maintain the reserve’s existing scrub habitat in favourable condition

4.2 To maintain the reserve’s mature trees and hedgerows in favourable condition

3.6 Feature 5: Public access

Objective: reserve is safe, welcoming, tranquil and well-maintained

Attributes

Attribute	Performance Indicator	Monitoring
Path network	Footpaths and permissive footpaths maintained in line with SRWT standards Trans Pennine Trail (TPT) is accessible on foot and to users of wheeled aids	Ranger patrols
Cleanliness	Reserve has low levels of litter and dog waste Fly tipping on reserve is occasional and cleared promptly	Ranger patrols
Safety	≥ 90% of visitors feel that the reserve is safe and well-cared for	Feedback from visitor surveys / incident reports

Factors

Factor	Rationale	Management required (yes/no/monitor)	Technical Indicator of Control	Monitoring
Antisocial behaviour	Vandalism of artificial structures (fences, benches…) or natural assets (planted trees) are occasional occurrences Fly tipping of small items is a regular occurrence Dog fouling is very common, in particular along Green Lane	Yes	Vandalism reports cease and fly tipping and dog fouling drops to average levels	Ranger patrols Incident reports
Flooding	Access is compromised during long periods of rain Litter is deposited on site after flooding events, in particular along the river bank (difficult access for clean up)	Yes, monitor	Litter found after flooding is minimal	Ranger patrols EA flood warning/alert email
Incursion by off-road motor vehicles	Motorbikes occasionally ride through the reserve, causing ground and unsurfaced paths erosion, becoming dangerous to other reserve users	Yes	No motorbikes reported on the reserve	Ranger patrols Incident reports
Climate change	Increasing incidents of high rainfall are increasing erosion of the track network. Network must be protected by increasing its water-shedding capabilities	Yes	Track surfacing remains adequate for recreational usage	Ranger patrols

Evaluation

SRWT aims to keep in touch with reserve visitors by displaying contact details on signage across the site, with use of a reserve mailing list and the organisation of a nature reserve User Forum twice a year to inform about the work being done on site and any other highlights.

A visitor survey carried out during 2024 collated feedback to support the writing of this management plan. The chance to see wildlife was the aspect of the reserve our visitors enjoyed the most, as well as how quiet and peaceful it was when walking on the easy flat paths. On the other hand, respondents commented on how much they dislike the cows, mentioning that they can be scary. Other comments mention the amount of dog mess and litter in the trees.

No litter bins or dog waste bins are present on site, although a bin is available just outside the Furnace Lane entrance. The installation of litter/dog waste bins on site has been discounted due to the cost of collections and to maintain the natural aesthetics of the nature reserve. In addition, the trust promotes the concept of 'leave no trace' where everything that is brought to the site should be taken back home.

Regular litter picking sessions are held on site, in particular after flooding events to remove litter brought to site by the river. It's important to clean up litter to protect wildlife, cattle and to improve the visitor's experience. Litter sometimes becomes entangled in the trees along the river bank. Most of the time it is very dangerous to remove from the banks and specialist equipment is required to do so. The Environment Agency has a programme of maintenance where litter, in particular larger items are removed due to the risk they pose to the flood gate downstream.

Green Lane is known to be a problematic area with large amounts of **dog fouling**. SRWT will improve signage and visitor education to highlight the importance of picking up dog muck. A bin is found at the entrance of the reserve on Furnace Lane.

In the southern compartment, SRWT will promote access to the nature reserve through the Trans Pennine Trail. The access from Rotherham Road is concealed and most visitors use the vehicle access, which doesn't provide comfortable access. The Trust will work with Rotherham PRoW unit, RMBC waste services and the owner of this land to improve the appearance of this entrance, to signpost visitors along it and to keep the path clear of vegetation. Moreover, the trust will install 3 kissing gates to upgrade the current stiles and squeezes.

This nature reserve only has one statutory right of way, the TPT which is maintained by the Rotherham Rights of Way service, although SRWT helps with **occasional sessions to cut back overhanging vegetation** and to improve the path surface. All the other paths are concessionary, provided by the Trust to promote people's access and enjoyment of nature. Paths will be maintained, vegetation overhanging cut back and surface improved where possible. Given that the Trust is now encouraging the use of certain permissive routes to minimise disturbance to wildlife, **the way-marking of these routes will be carried out** in line with the standard SRWT style.

Green Lane is under a **rotational coppicing regime** which will maintain the scrub levels on the area, increase sunlight in the lane, promoting a more diverse habitat, and it will improve the visitor's experience by adding views into the nature reserve without the need to access the wetter areas, which also helps wildlife by reducing disturbance. In addition, a more open Green Lane will feel safer and at the same time allowing machinery access for essential work when required.

Woodhouse Washlands benefits from flat surfaces that allow **wheelchair/powerchair access**. SRWT will work to complete a circular route for powerchair and buggy users in the northeast of the reserve, which includes sections of the TPT. However, this route will be at the mercy of the more frequent flooding events, which will increase wetness in areas of the route, but luckily technology is improving and powered wheelchairs seem to be very robust.

Bench provision in the nature reserve is limited because of the restrictions required by the flood defence banks, which prevents infrastructure from being installed near the river. Currently, most of the seating areas are concentrated in the north-eastern section of the reserve, near the TPT. Provision of benches will be extended during this management plan to include the southern and eastern areas of the reserve. The exact location will need to bear in mind accessibility along with wildlife protection, as benches will bring greater noise disturbance and potentially littering.

Repair to signage, way-markers and other **infrastructure** will be carried out as soon as possible after reporting. Where possible, access to illegal off-road vehicles such as motorbikes or quad bikes will be deterred by installation of appropriate barriers. Two interpretation panels have recently failed and will be re-installed at the southern end of the TPT and the green lane.

To ensure the safety of our visitors, **tree inspections** are carried out in line with the Trust's tree safety policy.

Pond 1 (**dipping pond**) is highly underutilised for **education purposes**. Efforts to promote its use by local schools and community groups will be increased.

Cattle were highlighted in the visitor surveys as one of the main factors of discontent. Conservation grazing is a very valuable tool for maintaining grasslands and for creating diverse grass swards, very beneficial for different species. In addition, Himalayan balsam is very palatable and cattle are effectively controlling its spread at Woodhouse Washlands. To promote access to the reserve, the TPT is fenced off to cattle, allowing visitors to enjoy nature without having to come into contact with the animals. On the Sheffield side of the reserve, we have improved the surface of Green Lane and rotational hedge laying and coppicing programmes are in place to improve views into the reserve from a track where cattle cannot access.

To limit the disturbance caused to wildlife, **dogs should be kept on leads or under close control during the breeding birds season (1st March to 31st July), and at all times in the vicinity of cattle.** SRWT uses clear on site signage at the main entrances to encourage this positive behaviour from dog owners and to explain the reasons we are requesting this.

Management objectives

Objective 5: reserve is safe, welcoming, tranquil and well-maintained

5.1 Maintain and improve access to the reserve, while preventing additional disturbance to wildlife

5.2 Discourage negative and damaging use of the site

5.3 Improve cleanliness and welcoming & educational aspect of the reserve

4. Work programme

Feature	Objective number	Objective with prescriptions	25/ 26	26/ 27	27/ 28	28/ 29	29/ 30	30/ 31	31/ 32	32/ 33	33/ 34	34/ 35
Grassland communities	**1.1**	**To maintain grasslands in favourable condition**										
	1.1.1	Graze the reserve's pastures (comp A, B) at a stocking density in line with the HLS agreement	X	X	X	X	X	X	X	X	X	X
	1.1.2	Manage comp C, C2 and C3 as hay meadows & aftermath grazing in line with the HLS agreement	X	X	X	X	X	X	X	X	X	X
	1.1.3	Manage comp B1, B2, A1 and C1 as autumn grazing in line with the HLS agreement	X	X	X	X	X	X	X	X	X	X
	1.1.4	Manage comp B3 and B4 as after nesting season grazing for breeding skylark and wader birds	X	X	X	X	X	X	X	X	X	X
	1.1.5	Manage cattle grazing following comprehensive risk assessments to minimise the risk of negative encounters	X	X	X	X	X	X	X	X	X	X
	1.1.6	Carry out annual fence line checks & fence repairs as required	X	X	X	X	X	X	X	X	X	X
	1.1.7	Cut back vegetation overhanging the meadows as needed, allowing field margin vegetation and shade shelter for cattle but in compliance with HLS requirements	X			X			X			X

Feature	Objective number	Objective with prescriptions	25/ 26	26/ 27	27/ 28	28/ 29	29/ 30	30/ 31	31/ 32	32/ 33	33/ 34	34/ 35
	1.1.8	Control bramble encroachment on the field margins	X		X			X			X	
	1.1.9	Control the spread of ragwort, creeping thistle and other undesirable species across the reserve as required in order to meet HLS prescription	X	X	X	X	X	X	X	X	X	X
	1.1.10	Remove all ragwort present in hay meadows for livestock safety	X	X	X	X	X	X	X	X	X	X
	1.1.11	Monitor the site to detect INNS and manage accordingly	X	X	X	X	X	X	X	X	X	X
	1.1.12	Control developing scrub in grasslands, including the strip between the TPT and B4 Cross reference with 4.1.1 to 4.1.9	X	X	X	X	X	X	X	X	X	X
	1.1.13	If flooding becomes more frequent, reseeding with waterlog-tolerant species as required					X					X
	1.1.14	Monitor spread of false oat-grass and control if required		X		X		X		X		X
	1.1.15	Seek funding to survey the fungal community of the site			X							
	1.2	**To maintain grasslands that host harvest mice and diverse bird and invertebrate communities**										

Feature	Objective number	Objective with prescriptions	25/ 26	26/ 27	27/ 28	28/ 29	29/ 30	30/ 31	31/ 32	32/ 33	33/ 34	34/ 35
	1.2.1	Display dog owner's responsible behaviour signage at reserve entrances, especially during the bird breeding season Cross reference with 5.2	X	X	X	X	X	X	X	X	X	X
	1.2.2	Late summer rotational cut & collect vegetation on the Green Lane scallop to control scrub development	X		X		X		X		X	
	1.2.3	Late summer rotational cut & collect vegetation on the two grasslands adjacent to Beighton Mill Tail Goit and the TPT in comp. C to control scrub development	X			X			X			X
	1.2.4	Open & close compartments across the site as required by the grazing regime	X	X	X	X	X	X	X	X	X	X
	1.2.5	After the conservation grazing season, close all compartments across the site to minimise disturbance of overwintering wildlife	X	X	X	X	X	X	X	X	X	X
	1.2.6	Eastern and northern edges of compartment C to be managed in accordance to harvest mice preferred habitat Cross reference with 4.1.7					X					X
	1.2.7	Construction of new fence in comp C Cross reference with 2.2.1	X									
	1.2.8	Monitor nesting success of snipe and lapwing as part of the ecological monitoring framework			X			X			X	

Feature	Objective number	Objective with prescriptions	25/ 26	26/ 27	27/ 28	28/ 29	29/ 30	30/ 31	31/ 32	32/ 33	33/ 34	34/ 35
	1.2.9	Monitor population of harvest mice as part of the ecological monitoring framework	X			X			X			X
	1.2.10	Cut of denser patches of willow herbs in C1 to increase nesting habitat for harvest mice (Oct to Feb)		X		X		X		X		X
	1.2.11	Seek funds for bird species list surveys to complement the EMF					X					X
	1.2.12	Seek funding to survey site's invertebrates (bees and wasps, beetles, grasshoppers and crickets, moths and butterflies & flies)			X							
Skylarks	**2.1**	**To maintain grasslands compatible with skylark habitat requirements**										
	2.1.1	Manage field gates in compartments B3, B4 and C to promote skylark habitat Cross reference 1.1.2 and 1.1.4	X	X	X	X	X	X	X	X	X	X
	2.1.2	Monitor vegetation structure and nesting success of skylark as part of the ecological monitoring framework and implement recommendations as required	X		X	X		X	X		X	X
	2.1.3	Monitor sward height near scrapes in B4 and consider adjusting for lapwing breeding needs, but taking into consideration the incompatible requirements by skylark	X			X			X			

Feature	Objective number	Objective with prescriptions	25/ 26	26/ 27	27/ 28	28/ 29	29/ 30	30/ 31	31/ 32	32/ 33	33/ 34	34/ 35
	2.1.4	Scrub control as required to maintain open fields for skylarks Cross reference with 4.1.3, 4.1.4, 1.1.2 and 1.1.4	X	X	X	X	X	X	X	X	X	X
	2.2	**To increase skylark habitat**										
	2.2.1	New fence installation in comp C Cross reference with 1.2.7	X									
	2.2.2	Scrub control in comp B3 by mechanical means Cross reference with 4.1.3	X									
	2.2.3	Cover gates to comp B3 with wire netting to restrict predator access	X									
	2.3	**To promote feeding grounds by increasing wetness of the site, carefully balancing habitat needs of skylark and wading birds**										
	2.3.1	Feasibility study for the creation of ponds/ditches in comp C Cross reference with 3.2.1					X					
Wetland habitats	**3.1**	**To maintain ponds and wet ditches in favourable condition**										
	3.1.1	Replacement of fence around pond 8 (oxbow)	X									
	3.1.2	Restoration of pond 7 (high pond) by deepening and fencing	X									

Feature	Objective number	Objective with prescriptions	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35
	3.1.3	Use bentonite clay to allow pond 6 (dry pond) to hold water. If natural colonisation doesn't occur, introduce suitable marginal and emergent species from adjacent ponds	X			X						
	3.1.4	Dredge pond 1 (dipping pond) to remove 80% of existing water soldier colony		X		X		X		X		X
	3.1.5	Dredge vegetation from ponds as advised by the habitat suitability index for great crested newts. Avoid dredging ponds with confirmed breeding GCN. Current HSI data highlights pond 3 and 1 as the higher priority	X		X		X		X		X	
	3.1.6	Rotational vegetation clearance around ponds in fenced areas	X	X	X	X	X	X	X	X	X	X
	3.1.7	Build at least 2 ponds outside flood zone to act as suitable habitat for GCN breeding	X									
	3.1.8	Use soil from pond creation to fill in pond 4 (cow pond), with a large crassula infestation	X									
	3.1.9	Eradicate crassula from pond 5	X	X	X	X	X	X	X	X	X	X
	3.1.10	Monitor all ponds and ditches for presence of crassula and other INNS and control as required	X	X	X	X	X	X	X	X	X	X
	3.1.11	Monitor the reserve for the spread of Himalayan balsam, Japanese knotweed or giant hogweed, and control as required	X	X	X	X	X	X	X	X	X	X

Feature	Objective number	Objective with prescriptions	25/ 26	26/ 27	27/ 28	28/ 29	29/ 30	30/ 31	31/ 32	32/ 33	33/ 34	34/ 35
	3.1.12	Manage the periphery of the pond 8 (oxbow) to remove litter and discarded angling tackle	X	X	X	X	X	X	X	X	X	X
	3.1.13	Monitor ponds health through *Odonata* counts, GCN counts and HSI assessments (ecological monitoring framework) and casual observation	X	X	X	X	X	X	X	X	X	X
	3.1.14	Scrub control in Beighton Mill Tail Goit and reprofiling if required Cross reference with 4.1.6				X				X		
	3.1.15	Manage edges of scrapes and wet ditches to ensure bare ground is retained	X			X			X			X
	3.1.16	Monitor GCN and *Odonata* populations as part of the ecological monitoring framework	X			X			X			X
	3.2	**To increase the wetland habitats of the reserve**										
	3.2.1	Feasibility study for the creation of ponds/ditches in comp C and comp A Cross reference with 2.3.1					X					
Hedgerows, scrub & mature trees	**4.1**	**To maintain the reserve's existing scrub habitat in favourable condition**										
	4.1.1	Control the spread of blackthorn into comp A			X			X			X	
	4.1.2	Coppice hedgerow in a rotational basis along the reserve side of Green Lane Cross reference with 4.1.8 and 5.3.9	X	X	X	X	X	X	X	X	X	X

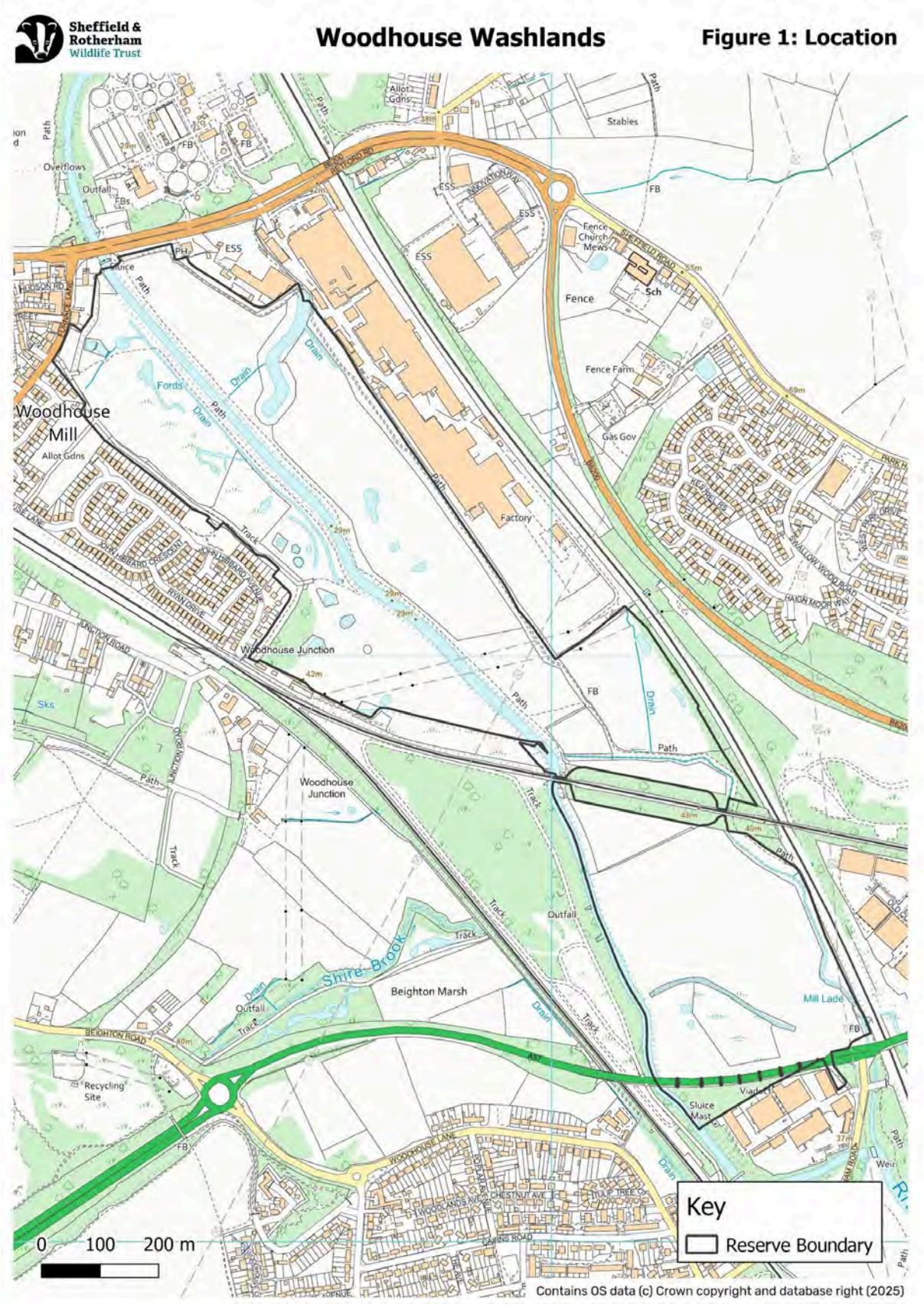
Feature	Objective number	Objective with prescriptions	25/ 26	26/ 27	27/ 28	28/ 29	29/ 30	30/ 31	31/ 32	32/ 33	33/ 34	34/ 35
	4.1.3	Control scrub in compartment B3 (main field) Cross reference with 2.2.2	X			X	X		X	X		X
	4.1.4	Create and maintain scalloped clearings within dense scrub in B3 (hillside) Cross reference with 2.1.4	X	X			X			X		
	4.1.5	Manage scrub at southern end of comp C in line with HLS	X	X			X			X		
	4.1.6	Scrub control as required in wet ditches across the reserve Cross reference with 3.1.15	X	X	X	X	X	X	X	X	X	X
	4.1.7	Coppicing areas of scrub in comp C1 to maintain continued thin willow shoots that harvest mice can easily climb during flooding events Cross reference with 1.2.6		X			X			X		
	4.1.8	Manage Green Lane as a woodland ride Cross reference with 4.1.2	X	X	X	X	X	X	X	X	X	X
	4.2	**To maintain the reserve's mature trees and hedgerows in favourable condition**										
	4.2.1	Hedge laying hedgerows across the reserve. Include gapping as necessary Cross reference with 5.3.9						X	X			
	4.2.2	Install a fence around poplar in comp A to protect from soil compaction	X									

Feature	Objective number	Objective with prescriptions	25/ 26	26/ 27	27/ 28	28/ 29	29/ 30	30/ 31	31/ 32	32/ 33	33/ 34	34/ 35
	4.2.3	Lift crown of scrub growing near mature poplar to provide alternative shading spot for cattle	X	X							X	
	4.2.4	Reduce denser scrub growing along the River Rother	X				X				X	
	4.2.5	Reduce denser scrub growing in SW and NE of comp A	X			X				X		
	4.2.6	Pollard mature willows in the reserve			X							X
	4.2.7	Monitor pollards and new willows stock. If necessary, plant cuttings of veteran willows adjacent to the old				X						
	4.2.8	Investigate the possibility of planting various male and female black poplar trees across the reserve			X							
Public access	**5.1**	**Maintain and improve access to the reserve, while preventing additional disturbance to wildlife**										
	5.1.1	Repair and replace fences and gates as required	X	X	X	X	X	X	X	X	X	X
	5.1.2	Maintain interpretative features as required	X	X	X	X	X	X	X	X	X	X
	5.1.3	Complete visitor surveys					X					X
	5.1.4	If resources become available, support RMBC with the maintenance of TPT's overhanging vegetation as it passes through the reserve	X	X	X	X	X	X	X	X	X	X
	5.1.5	Keep concessionary paths clear of encroaching vegetation	X	X	X	X	X	X	X	X	X	X

Feature	Objective number	Objective with prescriptions	25/ 26	26/ 27	27/ 28	28/ 29	29/ 30	30/ 31	31/ 32	32/ 33	33/ 34	34/ 35
	5.1.6	Provision of benches in Green Lane and TPT (comp. C), avoiding noise disturbance to wildlife				X					X	
	5.1.7	Installation of 3 kissing gates to replace two stiles and one squeeze to improve accessibility	X									
	5.1.8	Implementation of a wheelchair accessible circular route in comp. B			X							
	5.1.9	Work with Rotherham PRoW unit, RMBC waste services and the owner of this land to improve the appearance of Rotherham Road entrance	X	X	X	X	X	X	X	X	X	X
	5.1.10	Tree inspections in line with the Trust's tree safety policy	X	X	X	X	X	X	X	X	X	X
	5.2	**Discourage negative and damaging use of the site**										
	5.2.1	Consult with an archaeologist before undertaking any significant ground works in the vicinity of archaeological features	X	X	X	X	X	X	X	X	X	X
	5.2.2	Discourage dog fouling on the reserve	X	X	X	X	X	X	X	X	X	X
	5.3	**Improve cleanliness and welcoming & educational aspect of the reserve**										
	5.3.1	Regular litter picking across the site, particularly after flooding events	X	X	X	X	X	X	X	X	X	X
	5.3.2	Improve and promote use of the official entrance at Rotherham Road	X	X	X	X	X	X	X	X	X	X

Feature	Objective number	Objective with prescriptions	25/ 26	26/ 27	27/ 28	28/ 29	29/ 30	30/ 31	31/ 32	32/ 33	33/ 34	34/ 35
	5.3.3	Waymark main desire lines in compartments A and C to promote use of these routes to visitors	X									
	5.3.4	Monitor the interactions between the site visitors and the cattle and modify risk assessment as necessary	X	X	X	X	X	X	X	X	X	X
	5.3.5	Deliver User Forum meetings	X	X	X	X	X	X	X	X	X	X
	5.3.6	Run regular Volunteer Work Days on the reserve	X	X	X	X	X	X	X	X	X	X
	5.3.7	Include Woodhouse Washlands within the Trust's annual events programme, and deliver environmental and heritage activities e.g. guided walks on the reserve	X	X	X	X	X	X	X	X	X	X
	5.3.8	Promote use of pond dipping platform by schools and community groups	X	X	X	X	X	X	X	X	X	X
	5.3.9	Improve views into the reserve along Green Lane with a rotational programme of hedge laying and coppicing Cross reference with 4.1.2 and 4.2.1	X	X	X	X	X	X	X	X	X	X

5. Figures


Sheffield & Rotherham Wildlife Trust
Woodhouse Washlands
Figure 1: Location
Woodhouse Mill
Woodhouse Junction
Beighton Marsh
Shire Brook
Mill Lade
Outfall
Drain
Path
Track
Fords
Factory
Fence
Stables
Allot Gdns
Recycling Site
Sluice
Sluice Mast
Viaduct
Key
Reserve Boundary
0 100 200 m
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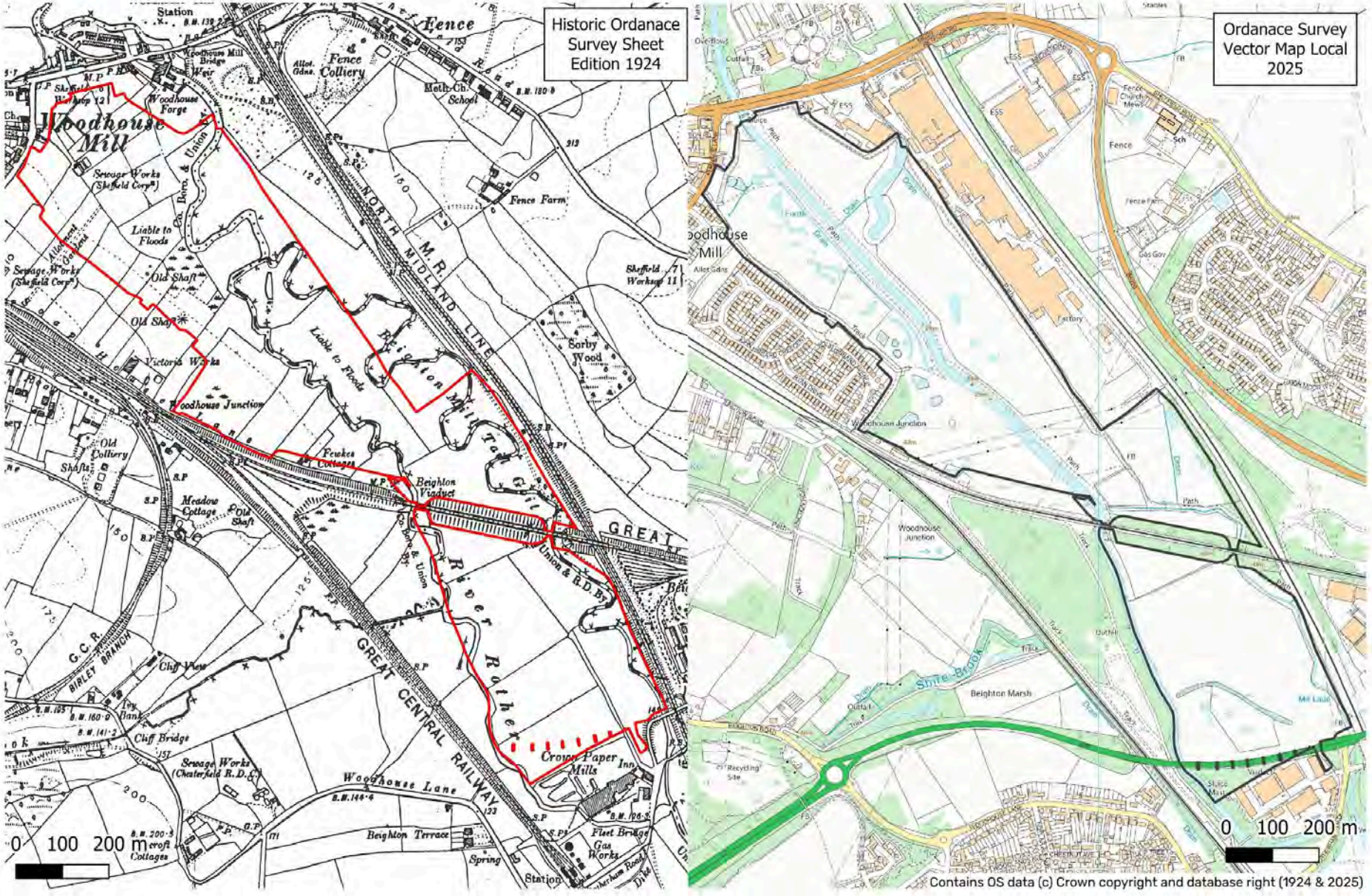
Woodhouse Washlands

Figure 2: River Rother Historic/Current



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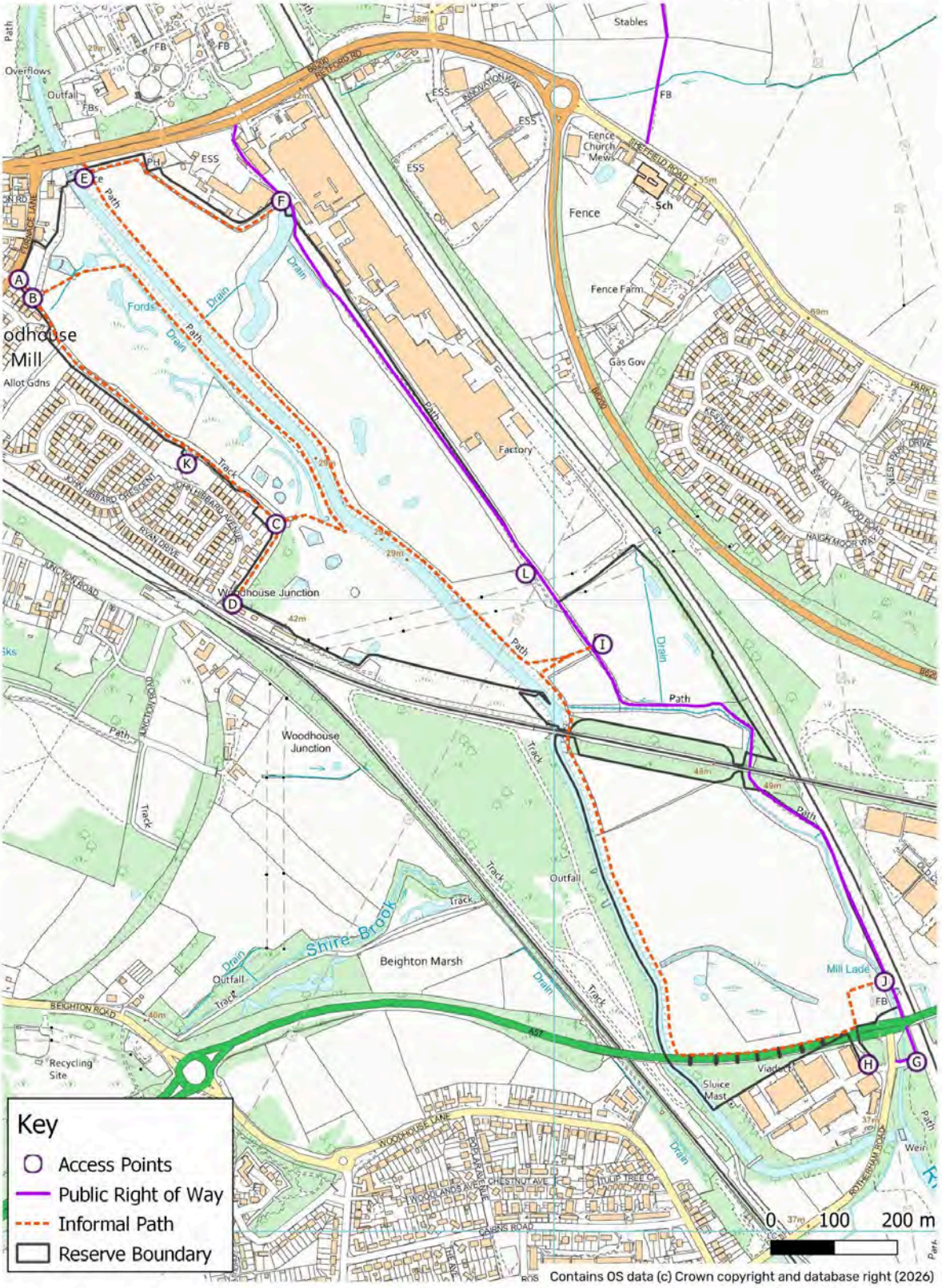
Woodhouse Washlands

Figure 3: Access Network



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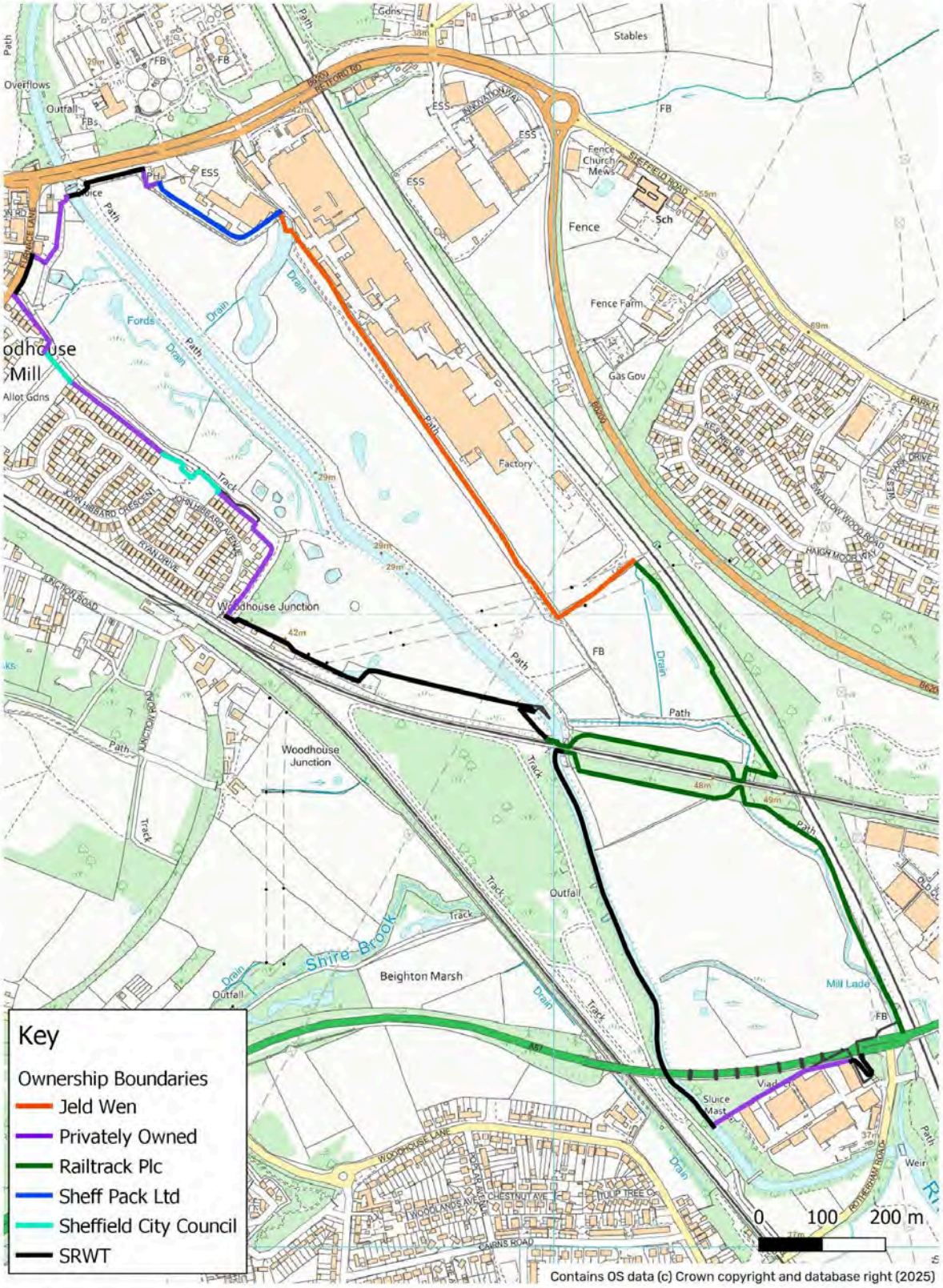
Woodhouse Washlands

Figure 4: Boundary Ownership



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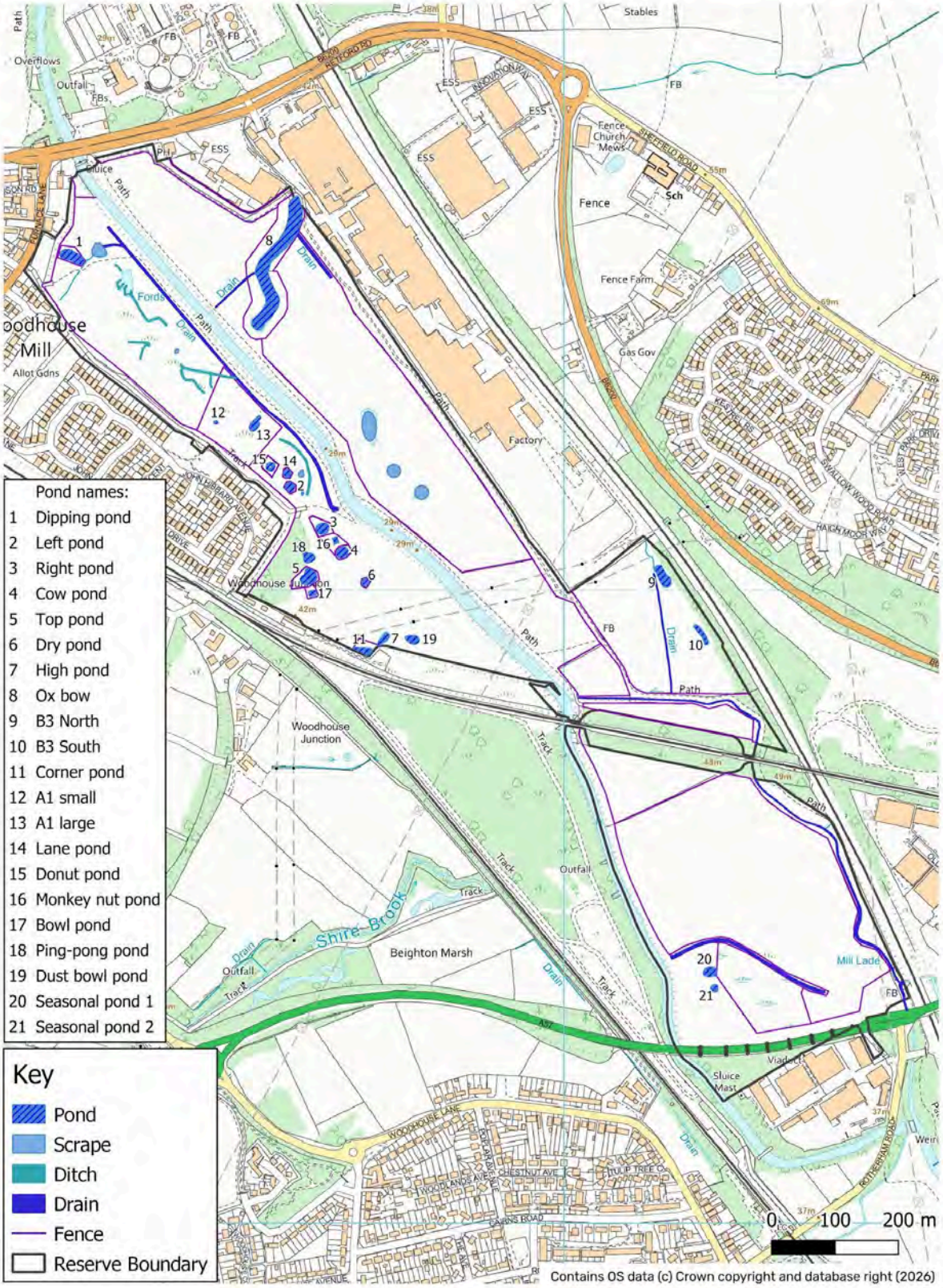
Woodhouse Washlands

Figure 5: Hydrology



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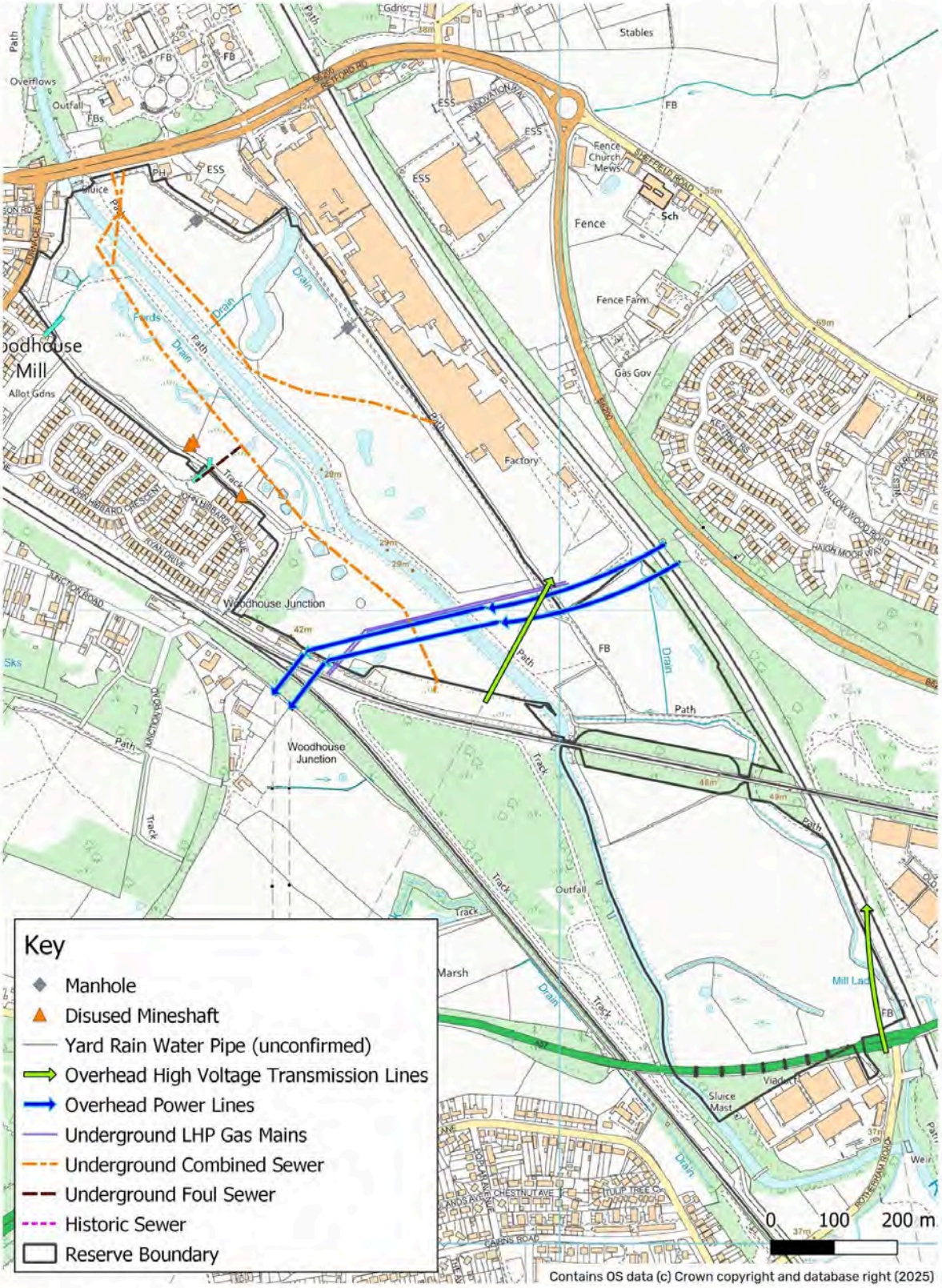
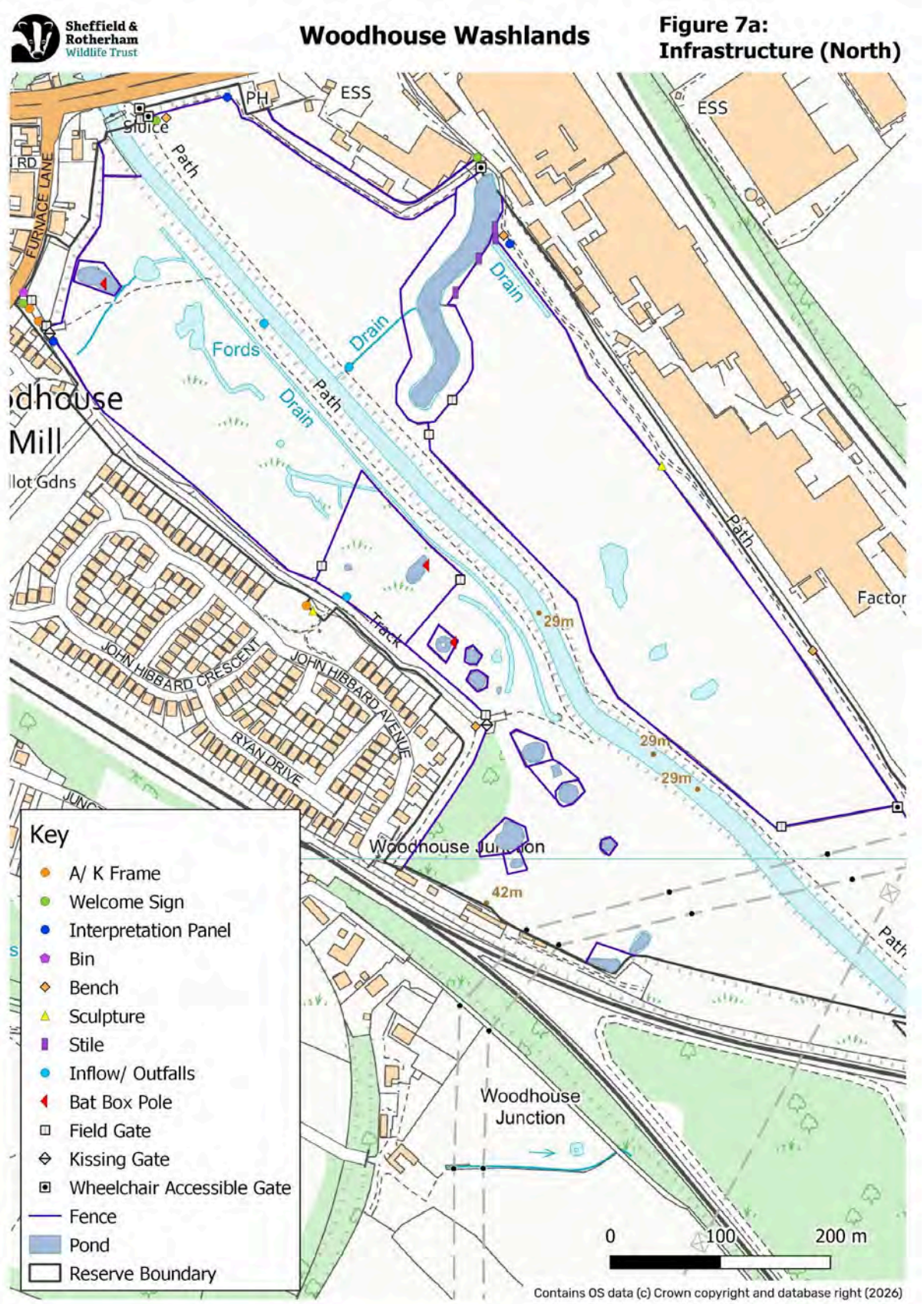
Woodhouse Washlands

Figure 6: Services

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Woodhouse Washlands
Figure 7a: Infrastructure (North)
PH
ESS
ESS
Sluice
Path
FURNACE LANE
Drain
Drain
Fords
Drain
Path
Path
Track
29m
29m
29m
42m
JOHN HIBBARD CRESCENT
JOHN HIBBARD AVENUE
RYAN DRIVE
Woodhouse Junction
Woodhouse Junction
Factor
Path
Key
A/ K Frame
Welcome Sign
Interpretation Panel
Bin
Bench
Sculpture
Stile
Inflow/ Outfalls
Bat Box Pole
Field Gate
Kissing Gate
Wheelchair Accessible Gate
Fence
Pond
Reserve Boundary
0
100
200 m
Contains OS data (c) Crown copyright and database right (2026)

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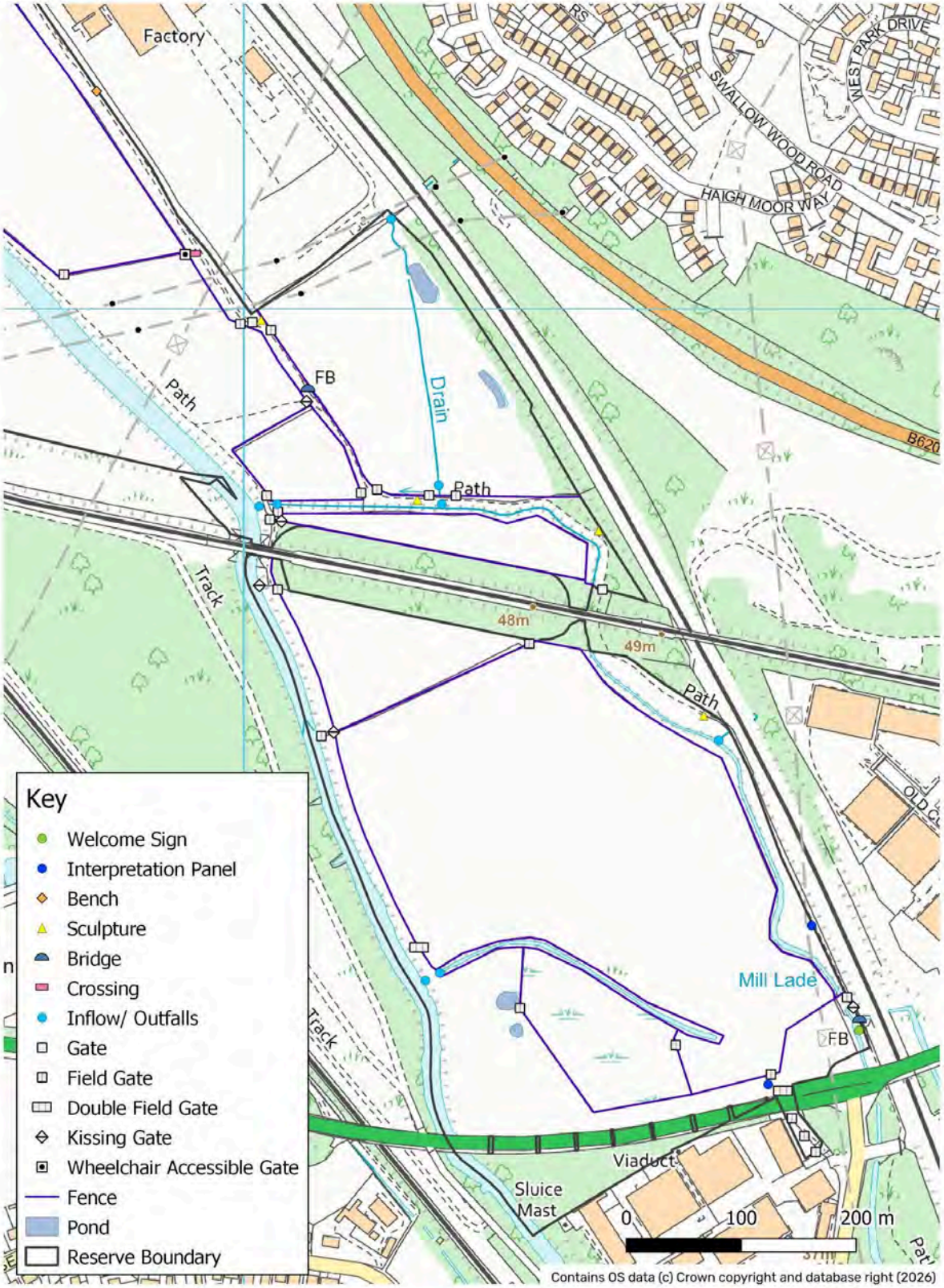
Woodhouse Washlands

Figure 7b: Infrastructure (South)



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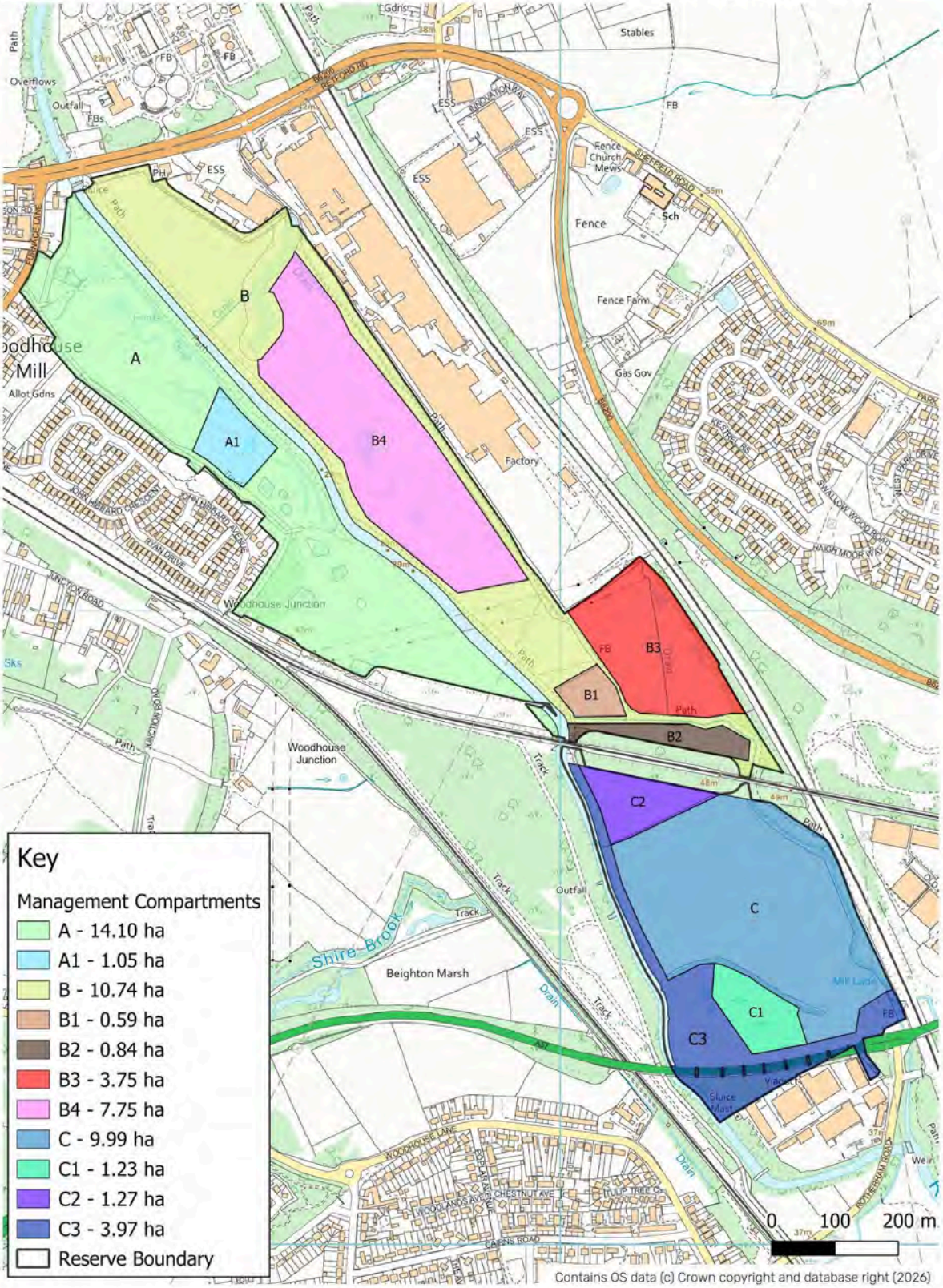
Woodhouse Washlands

Figure 8: Management Compartments



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Woodhouse Washlands **Figure 9: Topography**

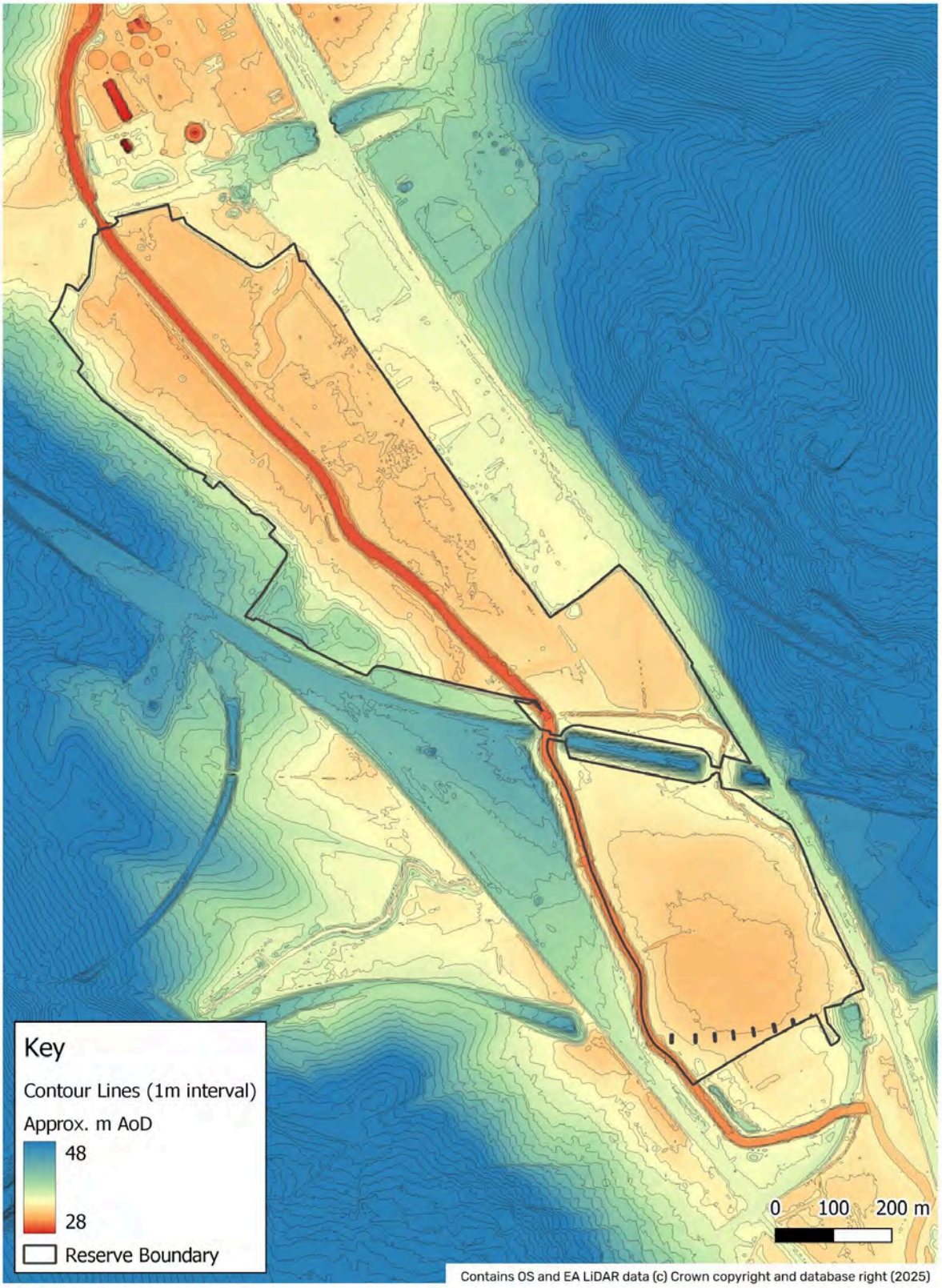

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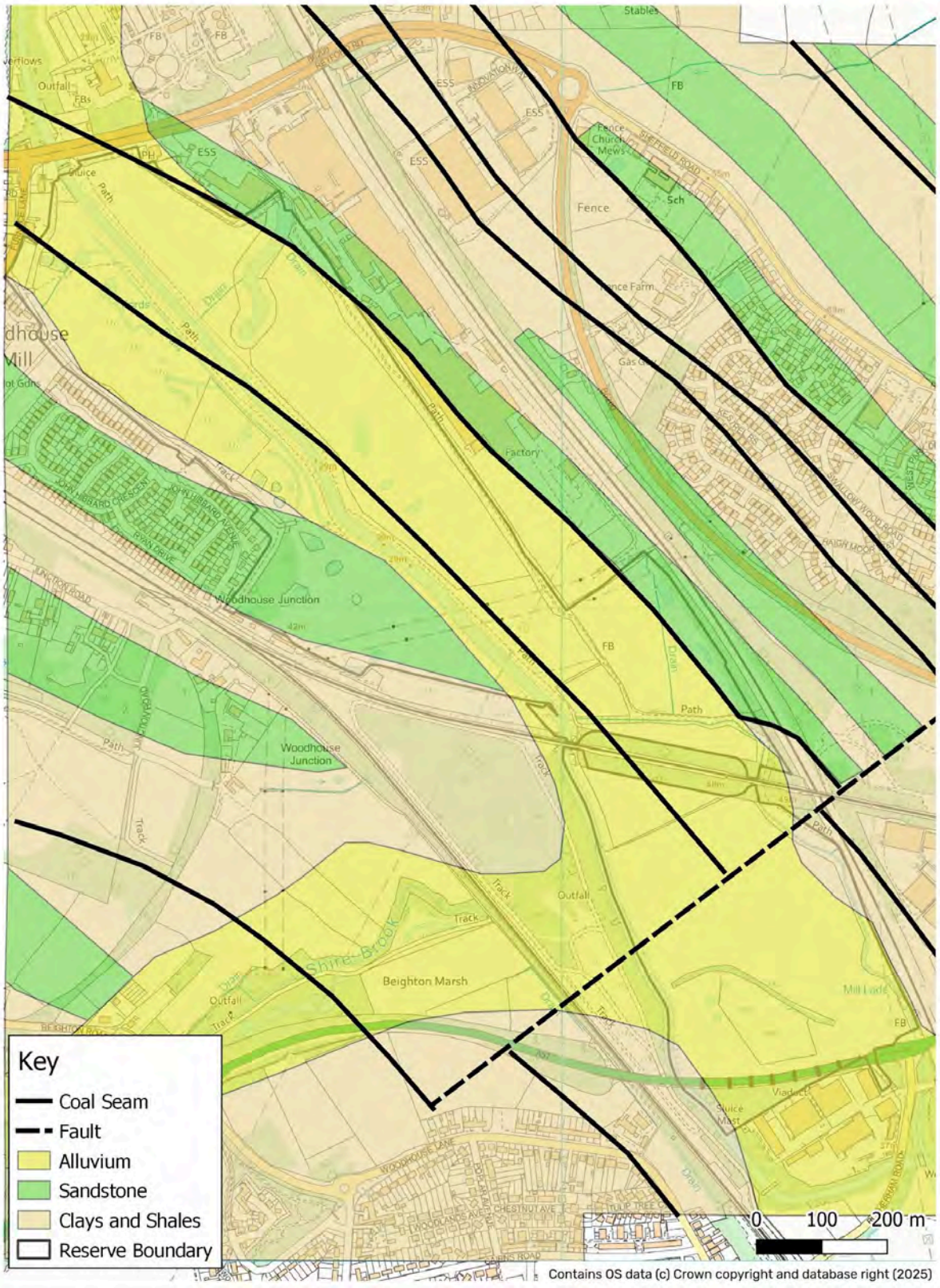
Figure 10: Geology



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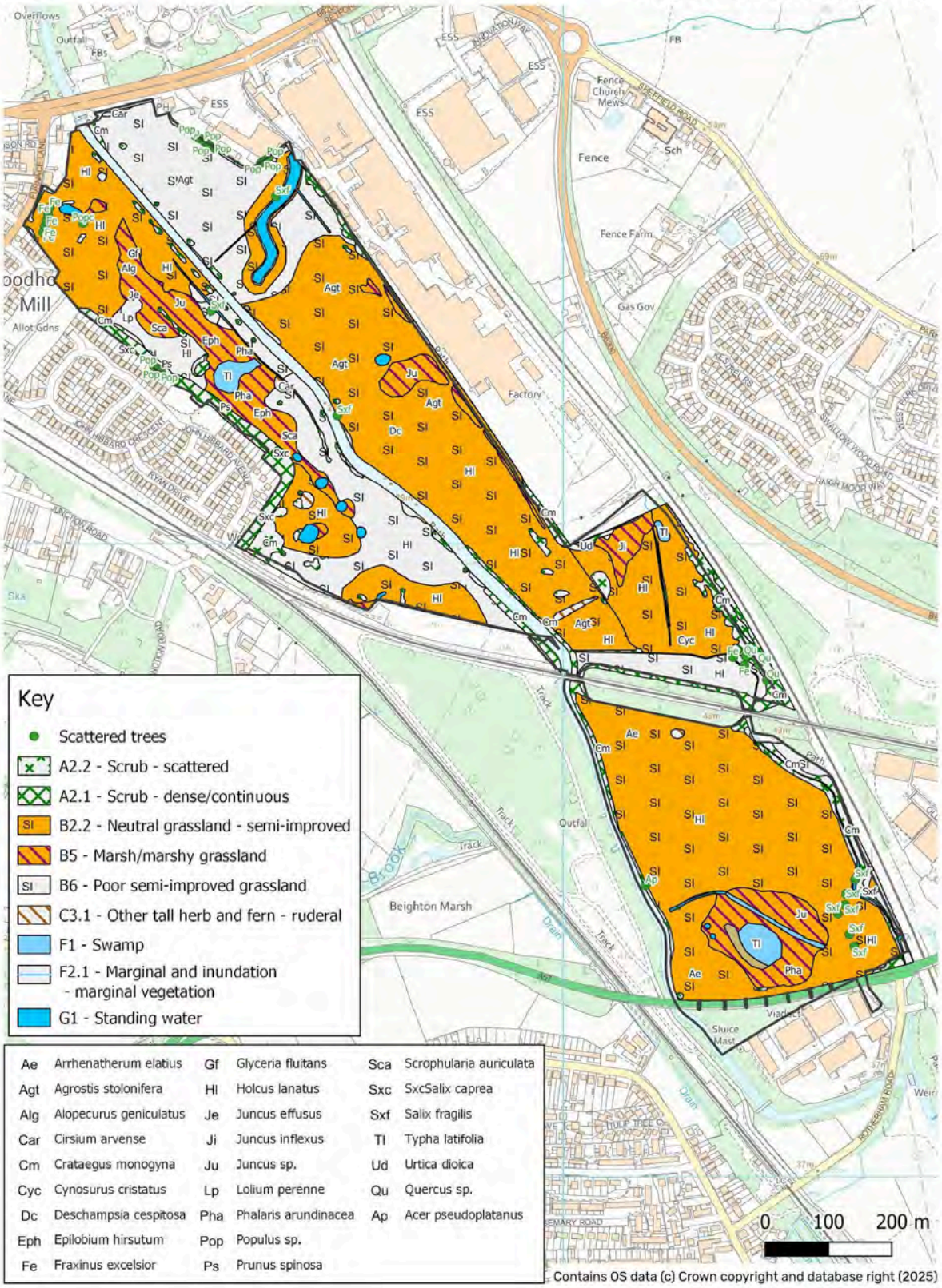
Woodhouse Washlands

Figure 11: Phase 1 Vegetation Survey (2016)



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Woodhouse Washlands

Figure 12: Grassland Management

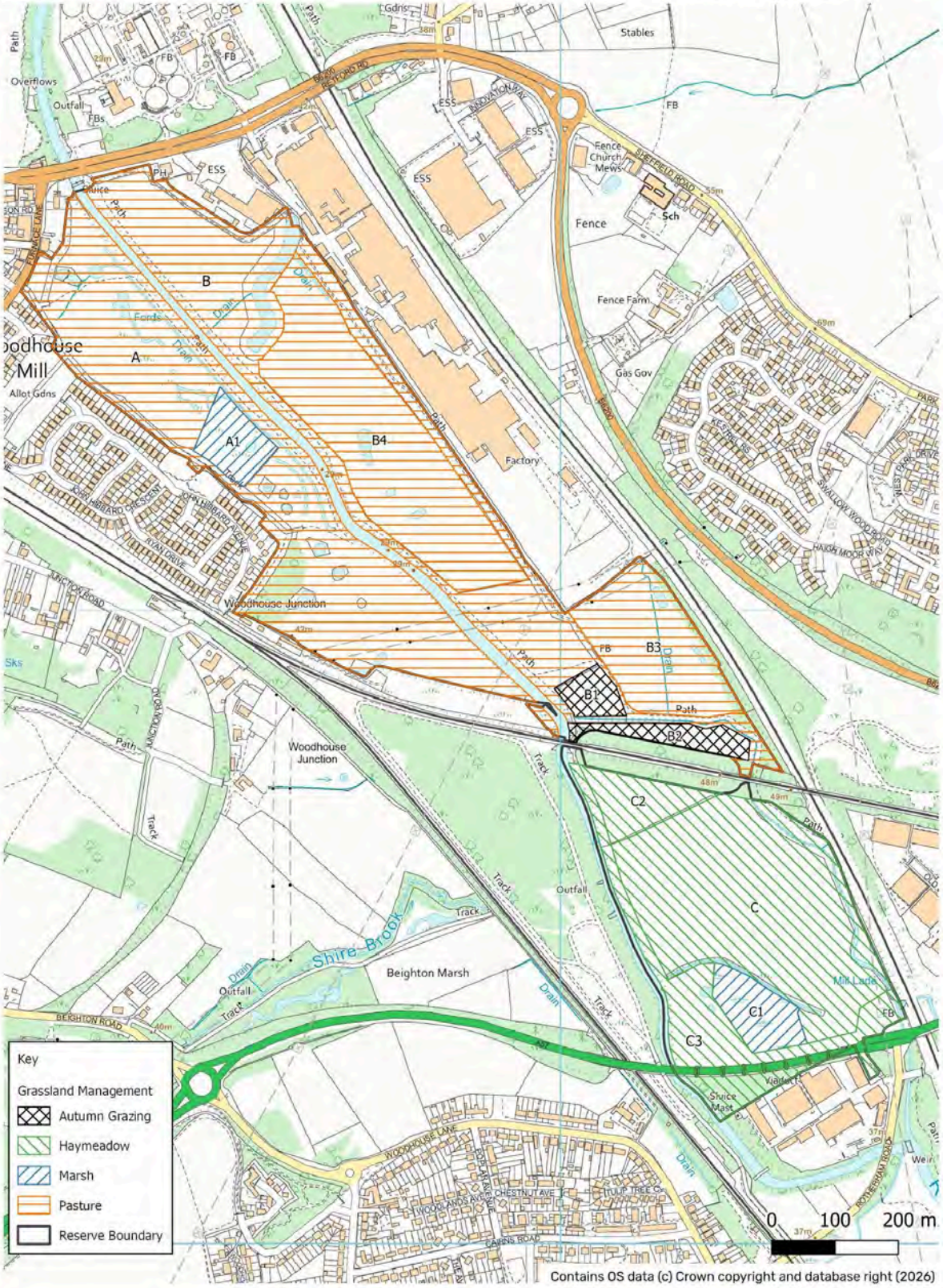

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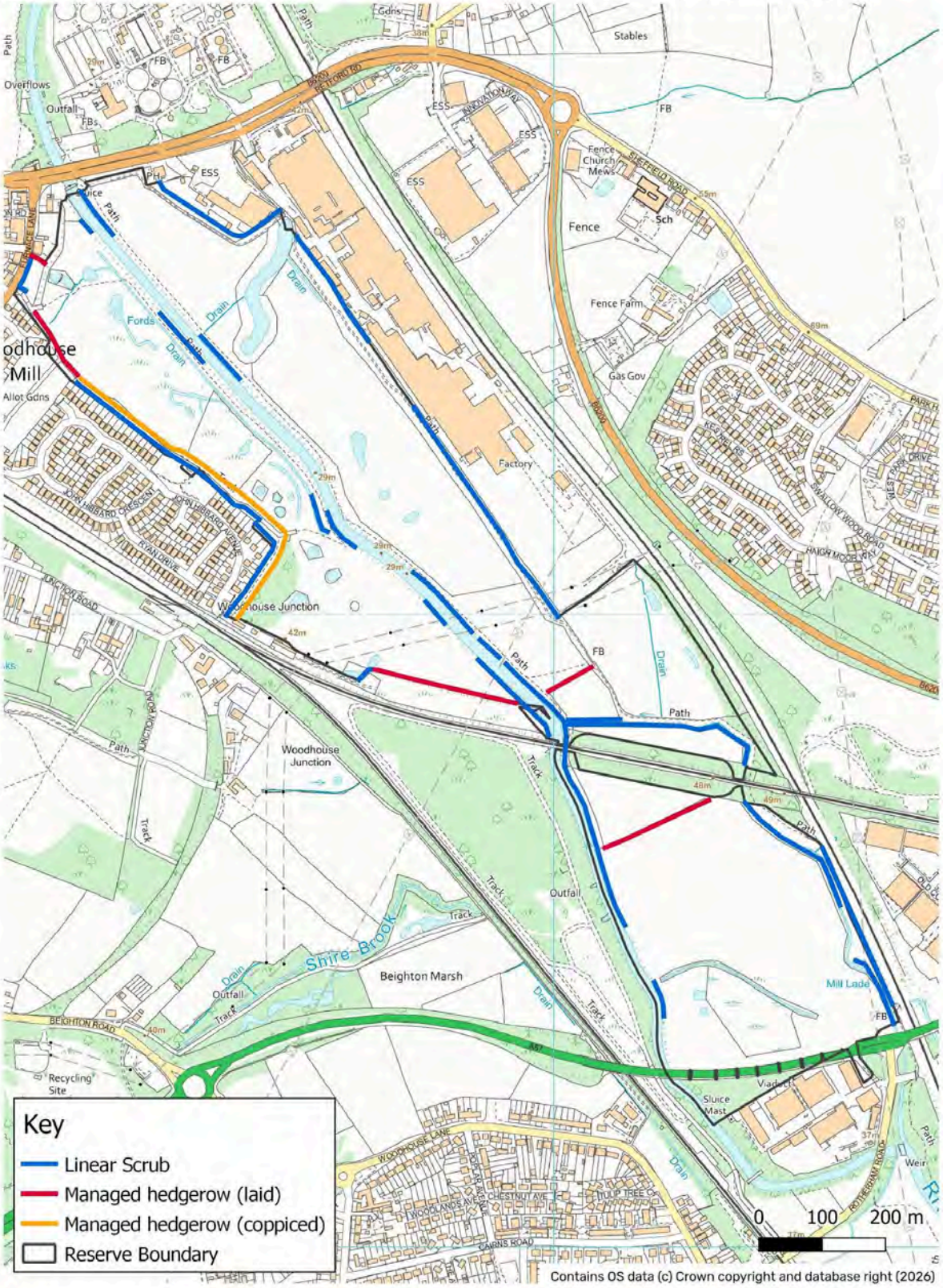
Figure 13: Hedgerow and Linear Scrub



APPENDIX I: Glossary of acronyms and terms

ATTRIBUTE - the characteristics, qualities or properties of a feature which are inherent to, and inseparable from, the feature. Indicators of the general condition of the feature

AOD - (Height) above ordnance datum

BAP - Biodiversity Action Plan

Comp - Compartment

COSHH - Control of Substances Hazardous to Health

EA - Environment Agency

EMF - Ecological Monitoring Framework

FACTOR - anything that has the potential to influence or change a feature, or to affect the way in which a feature is managed

FEATURE - the most valued elements of the site, for which it is managed

GCN - Great Crested Newt

ha - Hectare

HLS - Higher Level Stewardship

HSE - Health and Safety Executive

HSI - Habitat Suitability Index

INNS - Invasive non-native species

JNCC - Joint Nature Conservation Committee

LNR - Local Nature Reserve

NCA - National Character Area

PRoW - Public Right of Way

RMBC - Rotherham Metropolitan Borough Council

SCC - Sheffield City Council

SRWT - Sheffield and Rotherham Wildlife Trust

TPT - Trans Pennine Trail

UK - United Kingdom

VISION - a statement describing the ideal condition of a site, at a given point in the future

APPENDIX II: Operational standards and techniques

Protection and control

All clear-felling operations will be designed to minimise the risk of damage from wind, fire, pests and diseases.

Minimising wind damage

All restructuring will make use of wind firm edges, where available, to minimise the risk of damage from wind. Assessment using the ForestGALES modelling system may be used to further limit the risk from wind damage if required.

Minimising fire risk

There are old records of fires along Green Lane, once affecting one of the garden fences. Practical work will be carried out with this risk in mind, for example, creating wood chips instead of piles of tree branches or only piling branches on the reserve side of green lane.

Pests and diseases

In addition to the INNS mentioned already in the management plan, there are rabbits present in the reserve and there is a healthy population of grey squirrel. Browsing damage will be monitored during patrols.

The Common Leaf Weevil *Phyllobious pomaceas* and P.argentatus may attack broadleaved restock sites during early May and June. The insect requires adjacent grassland during the larval stages and little can be done to prevent the attacks without the use of insecticides.

Chalara (ash dieback) is a windborne disease of ash trees that is now widespread throughout Sheffield. Ash is common along the Green Lane and it is anticipated that all ash trees on the reserve will be lost to this disease during the course of this management plan.

Tree health will be monitored through an annual inspection by the relevant staff and the results recorded, in line with the Trust's tree safety policy. Where necessary, foliar samples, etc, may be sent to Forest Research for analysis. Monitoring for other more serious insect pests will be done during harvesting operations.

Biosecurity

Procedures and measures designed to protect the environment against harmful biological agents e.g. fungal pathogens, are laid out in the Trust's Biosecurity procedure, which will be adhered to during the delivery of this management plan.

Archaeology

Known archaeological features will be marked and protected if heavy machinery is to be used in the area.

Protected species

All forestry operations will be carried out between the end of August and the end of February to avoid disturbance to breeding birds. Areas rich in ancient woodland ground flora will be protected from vehicular damage during management operations. Known bat roosts will be excluded from operational areas, as required.

Veteran and notable trees

Trees suspected to be veteran or notable will be marked and retained during forestry operations. These records are available at SRWT headquarters.

Water management

The natural and artificial watercourses/features can be seen in **Figure 5**. Planning for operations in the vicinity of water features is in accordance with the Forestry Commission (UKFS) Forest and Water Guidelines.

All water features within the vicinity of harvest operations will be highlighted within the Hazard Assessment with regard to fuel storage and possible spillage. Only minimal intervention of forest operations will take place within the above to further reduce any impact of soil erosion, sedimentation and harvest pollution.

The Environment Agency is to be alerted to any possible contamination of watercourses. There are no plans to use fertilisers or herbicides within the above buffer areas.

Domestic stock and fencing

The condition of boundary fences will be inspected during patrols.

Use of pesticides and fertilisers

The range of pesticide use on the reserve has been kept to a minimum. No fertiliser has been or should be applied.

Work will be carried out in accordance with SRWT policies and procedures, which undertakes to reduce the use of all synthetic chemicals where possible either by use of less harmful products or where appropriate, the use of an integrated pest management system.

Control of Substances Hazardous to Health (COSHH) assessments and completed pesticide records are held on file.

All pesticide applications will be carried out in accordance with Forestry Commission Field Book 8 - The Use of Herbicides in the Forest. All operators will be competent to apply pesticides. Warning signs will be erected on treated sites and site visitors informed of the operations in advance, if required.

Waste disposal and pollution

No significant waste from forest operations has been identified.

The Environment Agency and SCC/RMBC Environmental Enforcement Officer will be informed of all illegal activities as appropriate.

Fly-tipped waste and garden refuse will be removed and disposed of by a licensed waste carrier where appropriate. The reserve will be litter-picked on a regular basis.

Fuel and chemical containers will be removed from the site by operators and disposed of through a licensed tip or a specialist waste disposal contractor.

Surplus fuels and chemicals will be returned to the SRWT store before safe disposal in line with environmental requirements.

Procedures and equipment will be in place during operations for control of any oil or chemical spill in the woodland, see section Emergency Procedures below.

Emergency procedures

Chemical and oil spill

A chemical and oil spill emergency plan will be in place for all operations. Where a third party is taking the responsibility of forest works manager, such as in a standing sale, they will be required to have a robust procedure in place.

Accident plan

All felling operations will have a harvesting plan providing emergency procedure details in case of accident or injury, including nearest A & E hospital, main access grid reference and details of mobile telephone signal. Other work operations will include emergency details on the risk assessment for the work.

The SRWT telephone number is clearly indicated on site signage to allow members of the public to make contact in case of accident and emergency. The forest manager and/or SRWT personnel will attend as quickly as possible when an accident or injury occurs, unless very minor.

Management of Health and Safety

The management of health and safety underpins all operational activities. A framework of responsibility as set out in 'Managing Health and Safety in Forestry Operations' (Health & Safety Executive, HSE, 1999) will be established in all operations. When standing timber is sold, SRWT will mostly take on the role of the Landowner, with the purchaser taking on the role of Forest Works Manager (FMW).

Vendors and subcontractors will be selected after being audited for health and safety compliance.

APPENDIX III: Operational Standards and Techniques - checklist

To be completed before management operations undertaken

Operational Standards and Techniques	**Yes/No/ Not Applicable**
Protection and control Clear-felling operations designed to minimise the risk of damage from wind, fire, pests and disease.	
Wind damage and fire risk Forestry operations designed to make use of wind firm edges, where available Work will minimise fire risk, taking into account known regular vandalism	
Tree pests and diseases Tree diseases currently active in work area (please list): Appropriate biosecurity measures in place:	
Other Protected Species Harvesting operations will be limited to periods outside of bird nesting season Ground conditions suitable to support machinery and level of activity expected for the operation without risk significant damage (Y/N) If no, list mitigations below: Ground based/aerial bat roost assessment has been undertaken and the risk to roosting bats managed by an appropriate risk assessment.	
Archaeology All/any prehistoric archaeological features excluded from operational areas.	
Veteran and notable trees All/any veteran and notable trees in operational areas identified and marked for retention.	

Operational Standards and Techniques	Yes/No/ Not Applicable
Water management Buffer areas in place along all watercourses in the operational area. All water features within the vicinity of harvest operations highlighted within the Hazard Assessment with regard to fuel storage and possible spillage. Use of fertilisers and pesticides excluded from buffer areas. Procedures and equipment for control of any oil/ fuel spill in the woodland in place.	
Pesticides use Assessments made to determine if pesticide treatment is required. If yes: Least harmful pesticide and delivery mechanism selected for use. Necessary COSHH assessments and pesticide reports completed and held on file. Copies of competency certificates for all operators on file. Pesticide report forms to be completed on a daily basis by operators and held on file. Warning signage to be erected on treated sites and visitors informed of the operations in advance if required. Fuel and chemical containers to be removed from the site by operators and disposed of through a licensed tip or a specialist waste disposal contractor. Surplus fuels and chemicals will be returned to the SRWT store before safe disposal in line with environmental requirements. Procedures and equipment for control of any oil or chemical spill in the woodland in place. All pesticide applications to be carried out in accordance with Forestry Commission Field Book 8 - The Use of Herbicides in the Forest and with SRWT pesticide policies and procedures.	

Operational Standards and Techniques	Yes/No/ Not Applicable
Management of Health and Safety Risk assessment for works has been produced, signed off and placed on file. Chemical and oil spill emergency plan in place. Site fire plan/known risks shared with all contractors (if fire risk high) Warning signage agreed and in place. Responsibility for maintenance of signage has been allocated. Contact details for all parties (contract manager, principal contractor, site manager etc) shared and placed on file.	