

Proposals for Herrington Burn at Shiney Row

1.0 Introduction

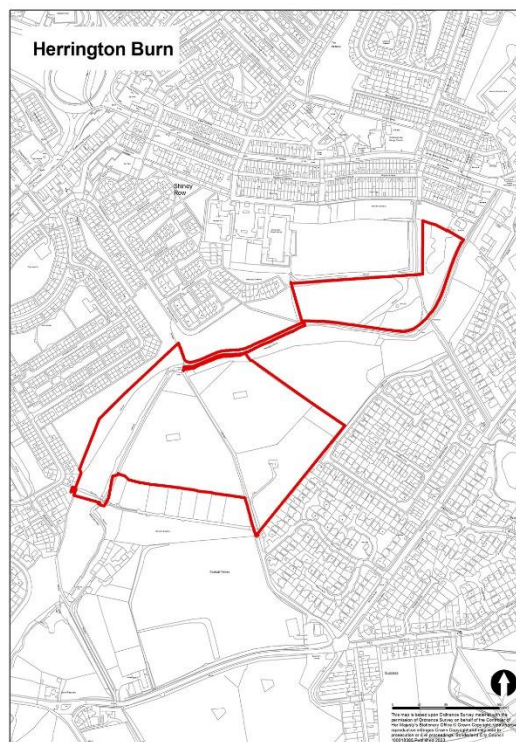
1.1 This area of open greenspaces is composed of amenity grassland, rough grassland, hedges and areas of dense hawthorn scrub. The Herrington Burn, which flows down from Herrington Country Park, dissects the northern and southern parts of the site and is the main feature of the open space. There is a public right of way alongside the edge of the burn and a network of informal paths and routes across the open space and through the scrub. There are three crossing points over Herrington Burn connecting the open space with other greenspaces, relatively small areas of open countryside and residential areas.

1.2 Housing is adjacent and surrounds the northern half of the site, which is openly available for public access, whilst the southern half is fenced off and let out as grazing for horses. Land grazed by horses and used for allotments and small holdings abut the burn on its southern bank.



2.0 Location and Accessibility

2.1 The greenspace is located between Shiney Row (to the north and west) and Success/Philadelphia (to the east) in Houghton-le-Spring, Tyne and Wear (see also Appendix 2). To the south, playing fields/open fields link the greenspace corridor towards Elba Park. It is approximately 7.5km to the south-west of central Sunderland. The greenspace is very open and accessible which causes problems of anti-social behaviour.



3.0 Methodology

3.1 Durham Wildlife Services (DWS) were commissioned to carry out an ecological appraisal of Herrington Burn at Shiney Row in May 2022. DWS used the following methodology:

- Desk Based Study;
- An Ecological Assessment;
- Protected Species and Other Species of Nature Conservation Importance;
- Controlled Invasive Species.

4.0 Site Context

4.1 There is 1 statutory designated site within 2km of the site and 4 non-statutory sites. The designated sites within 2km are listed below is shown below for descriptions refer to Appendix One Designated Sites Descriptions:

- Herrington Hill SSSI
- Herrington Hill Woodland LWS
- James Steel Park Mount Pleasant Riverside LWS
- Wear River Banks North LWS
- Penshaw Hill LWS.

Success Railway and Sedgeleth Ponds are proposed Local Wildlife Sites.

5.0 Strategic Significance

5.1 The site lies within a wildlife corridor and is protected from development as greenspace and as a Settlement Break in the city's Local Plan - the Sunderland Core Strategy. As such, it has been input into the Biodiversity Net Gain (BNG) Metric Calculator as "formally identified in local strategy." Areas of broadleaved woodland are identified within the North-East England Nature Partnerships (NEENP) Durham Priority Habitats list.

6.0 Habitat Assessment

6.1 The habitat types found in Herrington Burn are set out below.

Habitats	Conditions
Urban – artificial, unvegetated unsealed surface: bare ground Walkways and footpaths tracks with an unsealed surface or very degraded surface. These were generally compacted gravel or aggregate in composition with areas of encroachment from the grass verges. Further, several 'desire lines' or unofficial tracks were present where regular footfall had worn the surface of the grassland habitats revealing compacted bare ground.	N/a
Heathland and Shrub – Mixed scrub Large parcels of dense mixed scrub, dominated by hawthorn with limited diversity. Structurally, the area has lacked management, and the canopy is tight and of a similar age and size. As a result, the ground flora is very limited; however, several 'desire lines' and rides through the scrub are present and an increased abundance of flowering plants are present in these areas. Evidence of anti-social behaviour was noted throughout this area with fires, destruction of vegetation, and fly tipping	Moderate
Sparsely vegetated - Ruderal/Ephemeral Relatively small areas of tall ruderal were present across the site, often adjacent to patches of scrub where mowing of the sward may not occur. Typically, species diversity was limited, and areas were often dominated by willowherb species.	Poor

<p>Woodland – other woodland; broadleaved</p> <p>Two small parcels of broad-leaved woodland are present to the south-west of the survey area, both are situated along an access track which separates two grassland fields. The largest parcel of woodland is situated to the northern end of this access track, along the southern burn bank. The smaller parcel is located to the eastern side of the track, within the grazed field – an overgrown hedge is present to either side of the woodland stand.</p> <p>The north section of woodland is relatively young plantation woodland with a limited ground flora and understory present. Evidence of anti-social behaviour was recorded. The woodland edge here is surrounded by scrub and tall ruderal habitats along the burn providing some structural diversity along the woodland edge.</p>	<p>Moderate</p>
<p>Grasslands Modified</p> <p>Modified grassland forms the most commonly recorded habitat across the site with open areas of poor semi-improved rank grasslands, areas of mown amenity grasslands, and grazed rigg and furrow pasture. Typically, across all grassland swards, species diversity is poor overall with under 9 species per metre square (often fewer than 6-8 species present). However, increased species diversity is noted in ranker, unmown areas typically present within the northern survey area.</p> <p>Within the southern survey boundary, parcelled between the burn and an area of amenity grassland, a ranker sward was recorded which similar to the ranker sward present to the north, the area has a greater overall species diversity; however, still falls within the 6-8 species per metre squared range for the condition scoring.</p>	<p>Good</p>
<p>Native Hedgerow</p> <p>Along the boundary of the southern grazed field, two distinct intact hedge lines are present. Hedgerow 1 is species diverse, whereas Hedgerow 2 is limited to hawthorn. Both hedgerows are tall and overgrown.</p>	<p>Poor/Good</p>
<p>River – Other rivers and streams: Herrington Burn</p> <p>The Herrington Burn flows east-west through the survey area. The burn at this location is relatively narrow, typically not exceeding 1.5 – 2-metres in width. At the time of the survey, the water depth was mainly shallow (<10cm) and sluggish with little discernible flow. The bed material was frequently cobbly and some artificial features (e.g., wear/ford, bridges) are also present. The banksides are naturally vegetated with scrub and tall ruderal species along the water course and are often exhibit quite a shallow slope; however, a steeper bank profile is visible in some areas. Issue with dumping and rubbish in the water course.</p>	<p>Not conditions assessed by DWS – part of WRT assessment</p>

7.0 Protected Species and Species of Nature Conservation Importance

Breeding and wintering birds

7.1 ERIC returned over 16,000 records of birds, including 183 species within 2km of the site. The data search returned records relating to both amber-listed and red-listed species of conservation as well as Schedule 1 listed breeding species. None of the records relate to the site.

7.2 Several common bird species have been observed, with common woodpigeon, swallow, European robin, common blackbird, Eurasian wren recorded. The scrub and trees across the site will likely provide suitable nesting and foraging habitat for a range of relatively common species. The grassland habitats will likely provide foraging opportunities and some nesting opportunities in ranker areas.

Bats

7.3 None of the records appear to be listed for the site itself. Although no suitable roosting features were identified during the site walkover, it is possible that trees with cavities are present on or adjacent to site and provide some roosting potential for bats. Additionally, scrub and woodland habitats will provide foraging opportunities and commuting lines for bats.

Badger

7.4 No evidence of badger.

Western European Hedgehog

7.5 None of the records appear to be listed for the site itself. The scrubby and ranker grassland areas on site could provide suitable habitat for shelter and hibernation. The site likely provides foraging opportunities if hedgehogs are present. There is disturbance from the general public when walking dogs. However, given the density of the scrub, it is likely hedgehogs can find relatively quiet areas. The site is also surrounded by residential housing and main roads, which may limit dispersal to and from site.

Riparian Mammals – Otter and Water vole

7.6 Habitat sub-optimal for water vole. Evidence of anti-social behaviour was also recorded including pollution/fly tipping and vegetation damage which may reduce the likelihood of either species being present along this section. It is likely that otter, if present in the area, use the burn at least as a commuting feature.

Invertebrates

7.7 ERIC NE provided 62 records of invertebrates from within 2km – none are listed on site. Notable species include wall, small heath, rockface beetle, dingy skipper, common darter and several Natural Environment and Rural Communities (NERC) moth species. It is possible that habitats on site, particularly the ranker grasslands and stream may be utilised by invertebrates.

8.0 Existing Management and Maintenance

8.1 Land surrounding Herrington Burn is maintained by SCC. Grounds maintenance on the adjacent amenity grassland is carried out by Gentoo.

9.0 General description and observations

9.1 Herrington Burn, Shiney Row has an urban feel. It is characterised by mixed of amenity grassland, rank grassland, areas of dense scrub and the Herrington Burn Water course, all in close proximity to housing, allotments and small holdings. The site experiences pressure from anti-social behaviour, from excess litter and dumping on the greenspace and in the scrub. The use of motorbikes and quadbikes causes disturbance to wildlife and puts people off from using the greenspace. The footpaths are in poor condition, which is exacerbated by motorbikes. There is evidence that areas of scrub are used as informal gathering spaces. This generates litter and creates an air of insecurity. This will put people off using the burn other than for dog walking or as a cut through. There is no signage, entrance features and the site has no identity. The site is connected with other greenspaces such as Herrington Country Park and Success Railway via the public right of way that runs along the burn and the multiple bridges over the burn. However, there is little information to show the connections and some of the entrances and routes into and out of the greenspace are intimidating.

9.2 Herrington Burn is a key feature of the greenspace. As the Herrington Burn flows through this area of open greenspace, it is subject to dumping of large objects, such as fridges, sofas and bikes. In addition, dropped litter is blown into the water and carried down from further upstream. This rubbish affects Herrington Burn visually, creating a general feeling of neglect, as well as adding pollutants in the water. The burn has steep sides and is surrounded by dense shrub and tree vegetation. Horses graze in a number of fields, on the south side of the burn. Horse manure is stored on the bankside, which results in run off pollution. It will be important to engage with these landowners as the project progresses to raise awareness about pollution and encourage a change in behaviour.

Access and Site Identity

9.3 The greenspace surrounding Herrington Burn is very open with multiple entrances from the surrounding housing and crossing points over the watercourse. Therefore, it is very challenging to keep motorised vehicles off the greenspace. However, the entrance from South View can be improved. The entrance feels unwelcoming, and it looks as if the route leads the visitor into private property. There is evidence of fly tipping from vehicles. Therefore, this entrance point is a priority for improvement to ensure the greenspace is welcoming with a new barrier to deter vehicles.

10.0 Summary of Constraints and Key Issues

Issue	Comment
Planning Policy	Proposals support local policy, enhancing the existing greenspace, Settlement Break and wildlife corridor.
Climate Change and Health	Proposals will support further opportunities for carbon sequestration. Within an area of deprivation nearby- site enhancement will support area.

Greenspace	Area is low in greenspace quality and has lower woodland cover. Proposals will reduce deficiencies.
Biodiversity	Proposals will further support stepping stone connectivity within wildlife corridor and improve overall biodiversity.
Invasive Species	Himalayan Balsam was recorded along Herrington Burn along with Montbretia.
Landscape Character	Not an area of higher landscape value. Landscape Character Assessment recommends more woodland cover to area.
Historic Environment	No significant historic features to note.
Water Environment	Partly lies within Flood Zone 3 of Herrington Burn. Proposals will not positively support water quality and biodiversity and help to mitigate for flooding.
Rights of Way / Access	Public footpath runs alongside the burn, and additional pathways cross the burn, joining Shiney Row to Success. Suggested short section of Right of Way could be improved. Currently muddy track.
Soil and Nitrates	No negative impact on soils. No nitrate fertilisers will be used as site lies within Nitrate Vulnerable Zone.
Utilities	NWL Sewer runs immediately to the west of Herrington Burn. Any planting will avoid easements relating to this pipeline.

11.0 Proposed Works (See also map further below)

11.1 Habitat Restoration aims at Herrington Burn at Shiney Row

- To improve Herrington Burn visually and habitat value by a series of in-stream interventions including green bank protection, re-meanders to stream, large woody debris, channel aggradation, fish easement and livestock fencing
- To improve diversity of scrub and create open areas
- To improve grassland quality through management programme
- To improve water quality by reducing run off and litter entering the water.
- To remove Himalayan Balsam, Japanese Knotweed and Montbretia along Herrington Burn from Herrington Country Park.

11.2 Access and Interpretation

- To provide greater identity and promote routes and connections with surrounding greenspaces.
- To improve entrance from South View to make site more welcoming and deter fly tipping.
- To resurface 200m section of footpath.

12.0 Budget for Herrington Burn

Source of Funding	Amount (£)
Area Committee	25,000

NECF	20,200
NLHF	60,000
Total	105,200

Habitat	Project	Delivery	Indicative budget £	Season Completed
Scrub	Ongoing litter picking and removal of flytipping.	S/T/V	0	To be carried out by volunteers. All year
	Management to open up areas to improve ground flora, support regeneration and have variety of age structure	Contractors	10,000	October to March
	Planting understory	S/T/V	1,000	Spring
Grassland	Cut and remove grass arisings	S/T/V	0	August/September
	Grassland Management	Contractor	10,000	Autumn
New Tree planting	Planting of heavy standards	Contractor	20,200	November-March
Water course	Green bank protection, channel aggradation, woody debris and re-meander	WRT	15,600	Anytime
	Fish Easement	WRT	3,000	Anytime
	Protective Fencing to protect the water course	WRT	4,000	Anytime
	Treat invasive species	WRT	4,000	Spring
	WRT management Fees		3,413	
Total			71,213	

Access and Interpretation

Project	Delivery	Indicative Budget £	Month Completed
Installation of entrance feature to stop vehicles.	Contractors	13,987	Anytime
Installation of signage and directional signage	Contractors	5,000	Anytime
Resurface 200m footpath	Contractors	15,000	Anytime
Total		33,987	

Further information

If you would like to discuss the proposals/detail further, please contact:

Anne Gladwin

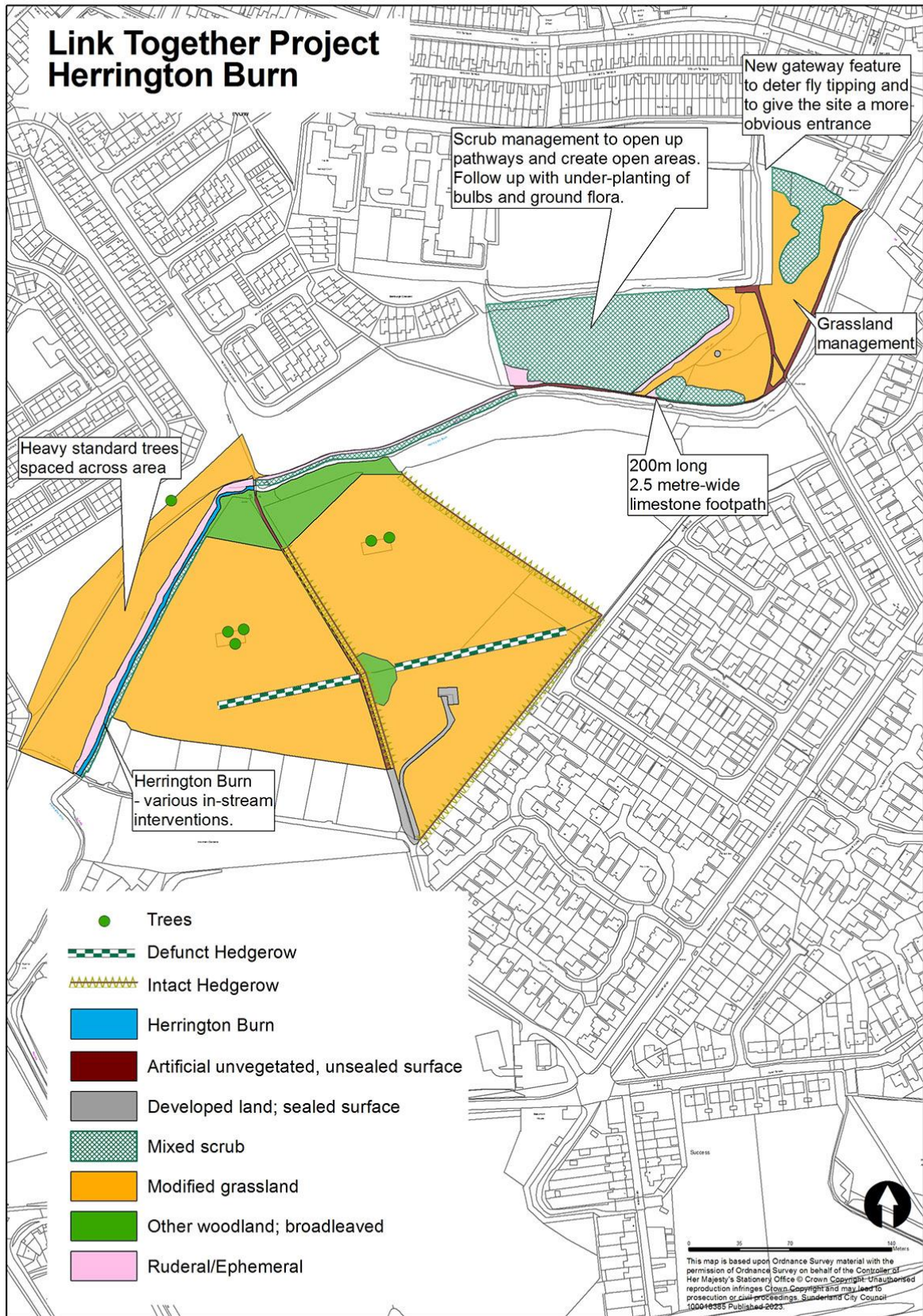
Link Together Project Manager

Email: anne.gladwin@durhamwt.co.uk

<https://www.durhamwt.com/link-together>

Draft

Link Together Project Herrington Burn



Appendix 1:

WRT Watercourse and Catchment Intervention - Examples

Earth Bund



Earth Bund - A sloped embankment or bund constructed from earth. They are designed to withhold water flowing over land during high rainfall events and prevent flooding. They can also intercept pollutants. They are engineered to limit outflow and designed for longevity with hidden structure and pipes.

Large woody debris



Large Woody Debris - also referred to as LWD, is typically described as fallen trees, logs, and branches that are at least four inches wide and six feet long. These cost-effective features are designed not to impede low/moderate flows but help water onto the floodplain during high flow events. Leaky design (that doesn't try to contain the power of water) and heavy-duty steel fixings prevent damage and dislodgement.

Green bank protection



Green bank protection is used to protect banks from erosion by reducing the erodibility of earth banks. Willow weaves, fixed brush, driven posts with fixings create a low risk, cost effective habitat improvement.

Drainage improvements



Drainage improvements help convey surface water to areas of temporary flood storage. Gravel drains, pipes, swales can intercept surface water, improve access and reduce the risk of pollution downstream.

Wetland scrape



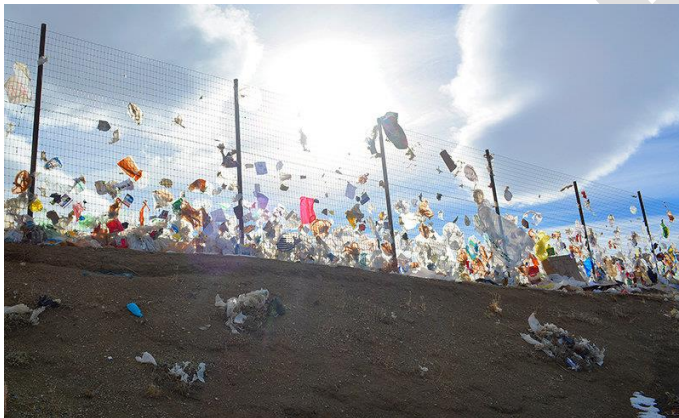
Wetland scrapes can help to create additional 'temporary' flood storage in floodplains. They can also trap sediments and encourage infiltration to groundwater.

Fish passage easement



Engineered solution to facilitate fish passage at man-made in river obstructions. Simple **fish easements** in a 'close to nature' style can be engineered with block stone or fixed baulks or beams can modify flows to allow improved river function.

Fence to intercept litter



Windblown litter is intercepted by carefully placed **fencing**. The resultant litter is easier to collect and prevents watercourses becoming blocked.

CSO



Combined Sewerage Overflow (CSO). Hard engineered structures that require maintenance and can lead to bank and bed scour. Can be protected with green engineering. In stream steps can become a barrier to fish and sediments.

Re-meander



Creating a new meandering course or reconnecting cut-off meanders, therefore slowing down the river flow by reducing gradient and providing additional flood storage. Reconnection to floodplain is possible.

Channel aggradation



Channel aggradation means the replacement of river gravels which have been lost due to channel scour or changes in channel geometry. Can lead to dramatic improvements in river process, form and function.

Livestock fencing



Livestock fencing from watercourses directly benefits water quality and encourages beneficial riparian vegetation i.e. bank habitat.

Tree coppicing



Tree coppicing is a traditional technique which benefits watercourses which are overshadowed. The coppicing of bankside trees increases the longevity and health of these features, provides valuable habitat and habitat corridors in river valley and wetland landscapes. In the right location selective coppice can help stabilise river and ditch banks.

Stone bridge protection



Where bed scour and channel incision expose foundations, **stone and/or green engineered protection** around footings and banks can reduce/reverse scour by working with natural processes common to all hard structures in stream.

Tree thinning



As well as benefitting woodlands, **thinning** can allow light into tunnelled sections of river. Arisings can be utilised for in river works.

Himalayan Balsam- Invasive species removal



As its name suggests, **Himalayan balsam** is from the Himalayas and was introduced here in 1839. It is an invasive weed of riverbanks and damp areas, where it prevents native species from growing. When it dies back in winter, riverbank soils are more rapidly eroded

Japanese Knotweed- Invasive species removal



Japanese knotweed and **Giant Japanese Knotweed** are perennial weeds, producing tall canes, up to 2.1m (7ft) in height during the summer. It forms mono-cultures and due to its ability to damage buildings, can impact property values. Winter die back also produces bare patches of earth.

Giant Hogweed- Invasive species removal



Giant Hogweed is a close relative of cow parsley originally from Southern Russia and Georgia. It can reach over 3m (10ft) in height. It is highly invasive, forming mono-cultures and the sap can cause severe skin burns to pets and people. It also dies back in winter exposing ground to elevated rates of soil loss.

Appendix 2

Site Locations Overview Map

