Wirral Council Neighbourhoods

Heswall Dales Local Nature Reserve

Management Plan 2020- 2025







Management Plan written/updated by:	Reason for update:	Date:
Luke Bithell with input from the Friends of Heswall Dales		03/02/2020
Josef Hanik and Chris Werney	Green Flag Judges Comments and Stewardship	01/02/2021
Josef Hanik	Green Flag Judges Comments & Council Policy	31/01/2022

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1 INTRODUCTION

This management plan is intended to provide a framework for the development and improvement of Heswall Dales Local Nature Reserve. If you wish to find out further information about this document or submit any suggestions, please contact:

Wirral Council Park and Countryside

The Heswall Dales Manager Wirral Country Park Visitors Centre Station Road Thurstaston Wirral CH61 0HN

Email: wcp@wirral.gov.uk

This plan (and other information about Heswall Dales Local Nature Reserve) can be viewed, downloaded and printed from:

https://www.wirral.gov.uk/leisure-parks-and-events/parks-and-open-spaces/heswall-dales

The content and structure of the Management Plan has been informed by the following guidelines:

- A Guide to Producing Park and Green Space Management Plans (CABE Space, 2004)
- Wirral Parks and Open Spaces Strategy, 2014 2024
- Wirral Plan 2020
- Raising the Standard: The Green Flag Awards Guidance Manual (Keep Britain Tidy, 2016)

2 THE WIDER POLICY CONTEXT

Wirral Council's Parks and Countryside Service are based within the Neighbourhood Services Department of Wirral Council.

The content and structure of the Management Plan has been informed by the following guidelines:

A Guide to Producing Park and Green Space Management Plans (CABE Space, 2004) https://www.cabe.org.uk/files/parks-and-green-space-management-plans.pdf

Raising the Standard: The Green Flag Awards Guidance Manual (Keep Britain Tidy, 2016) www.greenflagaward.org/media/1019/green-flag-award-guidelines.pdf

1 Corporate Objectives

The Council's Vision is that Wirral will be a place where the vulnerable are safe and protected, where employers want to invest and local businesses thrive, and where good health and an excellent quality of life is within the reach of everyone who lives here.

The Wirral Plan agreed by cabinet in September 2021 sets out a series of pledges which the Council and its partners will work to achieve by 2026 focussing on 5 key themes:

- Inclusive Economy
- Safe and Pleasant Communities
- Sustainable Environment
- Brighter futures
- Active and healthy lives

The Wirral 2021-26 plan is available to download online:

http://democracy.wirral.gov.uk/documents/s50080601/Appendix%201%20Wirral%20Plan%202021-26.pdf

2 Parks and Countryside Service Objectives

The department's role is to protect the environmental quality of key locations across the borough for all local people, communities, and visitors to enjoy and to influence investors to operate their businesses and encourage new investors. Parks and countryside site maintenance and land uses will be re-aligned where appropriate to achieve resource and economic efficiencies whilst promoting health, social and environmental benefits to our communities.

The Parks and Countryside Service have produced a 10-year Parks and Open Spaces Strategy that will inform and direct the next 10 years for the service (running from 2014-2024). It is available online at:

https://www.wirral.gov.uk/sites/default/files/all/Leisure%20parks%20and%20events/parks%20and%20open%20spaces/Wirral%20Parks%20and%20Open%20Spaces%20Strategy%202014-2024.pdf

The Strategy sets out how Wirral Parks and Countryside Service will aim to provide attractive and well managed parks and open spaces, whilst being accessible; and providing positive and healthy activities for all local people, communities, and visitors to enjoy and to attract and retain

investment in the borough. The service also intends to contribute to the environmental sustainability and biodiversity of Wirral to achieve a good balance by protecting habitats while supporting economic growth.

3 Environmental Initiatives

Wirral Council is committed to carrying out its work in an environmentally responsible manner.

Wirral Council declared an Environment and Climate Emergency at Council in July 2019 and through this committed to action to address the ecological and climate crisis that we face.

The commitment to action aims to:

- cut climate damaging pollution locally in line with global targets, whilst developing resilience to more extreme weather patterns and rising sea levels that impact Wirral
- protect and enhance biodiversity

As a local authority, we can have a positive influence through:

- how we organise our operations and services
- the regulations and policies we set
- the goods and services we buy
- the investments we make
- the example we set to others

Tackling the ecological and climate crisis presents major opportunities locally to improve quality of life, health, wellbeing and the economy.

More information on the Climate Emergency Declaration may be found at:

https://www.wirral.gov.uk/about-council/climate-change-and-sustainability/climate-change-action

To deliver against these aims Wirral Has developed 'Cool Wirral'. The Cool Wirral campaign is aimed at encouraging local climate-related action in support of the delivery of the 'Cool 2 Climate Change Strategy for Wirral:-

View Wirral Council's Cool 2 climate strategy and progress reports

The Cool Wirral Partnership (formerly the Wirral Climate Change Group) co-ordinates local action on climate change. The partnership is supported by Wirral Council and a variety of partnership.

More information on the Cool Wirral Partnership may be found at:

https://www.wirral.gov.uk/about-council/climate-change-and-sustainability/cool-wirral#:~:text=The%20Cool%20Wirral%20Partnership%20(formerly,Wirral%20Partnership%20N HS%20Foundation%20Trust

Some key initiatives include:-

Designating Pollinators and wildflower sites

A large proportion of pollinators are flies, including more than 250 species of hoverfly. Bees make up about a quarter of the pollinating insects and in the UK alone there are approximately 250

species of bee, 24 species of bumblebee, 225 species of solitary bee and just one species of honeybee. Butterflies and moths are also pollinators as well as bugs and beetles.

In line with the council's Climate Emergency Response, steps are being taken to prioritise pollinators. Dependant on the location of a verge, pollinators are prioritised in various ways, these methods can include:

- planting pollinator friendly plants
- not mowing grass verges when wildflowers of significance are in season
- reduced weed removal in the area of pollinator sites

https://www.wirral.gov.uk/environmental-problems/street-care-and-cleaning/pollinators-and-wildflower-sites

No Mow May

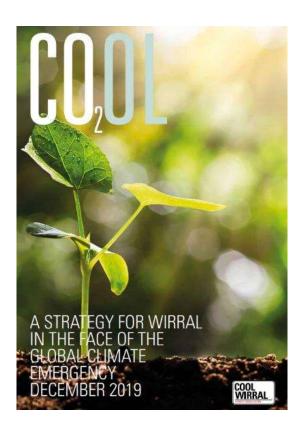
Throughout the month of May, the council takes part in the <u>No Mow May campaign</u>, which is about stopping mowing in general grass areas in parks to help bees, butterflies and wildlife.

Trees, hedgerows and woodland

The council have been working with partners and stakeholders to develop a 10-year strategy to consider how we manage and respond to the borough's current trees and the future provision of trees. In the ten-year span of this strategy over 210,000 trees will be planted, at least 21,000 per year. In doing so we will replace many times over the number of trees unavoidably lost. The trees that are planted will see Wirral's tree canopy cover doubled by the time they are fully grown.

We will adopt the principle of 'the right tree for the right place' to ensure the most resilient tree population possible. We will establish a clear picture of Wirral's tree stock and its benefits. We will work constructively with individuals and groups to deliver this vision.

https://www.wirral.gov.uk/about-council/climate-change-and-sustainability/trees-hedgerows-and-woodland



Our Values

'To work for Wirral Council is to be a public servant. We are here to serve our residents, to meet their needs, to protect them and to help them raise and achieve their aspirations.

This is the principle our organisation is built upon.

We have unrelenting focus on our residents. What they expect, what they need, and what they want underpins every decision we make.'

- Paul Satoor, Chief Executive

Customer
Focused

We listen to our customers and acknowledge what they tell us. We let them know we have heard them and take action.



We are flexible, open, honest, and respectful with our residents and customers, and always look for ways to make it easier for them to do business with us.

We view things from the customer's perspective and focus on what we can do to give them the best possible service.

Accountable

We are leaders and take personal responsibility for our work. We act with integrity to be the best we can be.



We take ownership and solve problems. If we don't know the answer, we don't stop until we have found the solution.

We take pride in doing what we say we are going to do. We are trusted by our colleagues, Members and residents to do a great job.

Professional

We treat everyone with respect. This includes our colleagues, residents and Members. We are courteous, punctual and communicate effectively to get the best results

We provide a professional service that people in Wirral are proud of. We know how our role makes a difference and lead by example.



We are positive, honest and value the contributions of others. We build positive and trusting relationships to work together to deliver the best possible service for colleagues, Members and residents.

We acknowledge when we are asked something and answer quickly and clearly. We are clear about how we will provide the best possible service.

Ambitious

We aim high in everything we do. We do what we can and learn from experience to get the best for our colleagues, Members and residents.



We will challenge, as well as support, each other to try new things and improve what we do. We continually look for better ways of doing things for our colleagues, Members and residents.

AMBITIOUS

We have high standards and expectations for ourselves, colleagues, Members and residents. We celebrate when we do well and recognise the achievements of others.

3 SITE INFORMATION

3.1 Location and map

Name: Heswall Dales

Grid Reference: SJ 261821

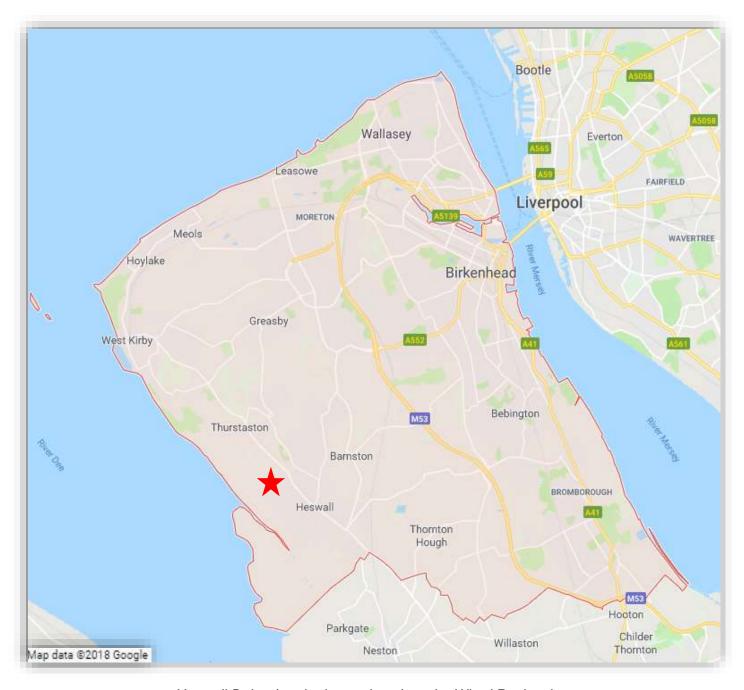
Location: Heswall Dales is located on the west of the of the Wirral Peninsula, close to the banks of the Dee Estuary. It is surrounded by residential property and located 1km north west of the

town of Heswall.

Address: Heswall Dales, Oldfield Rd, Heswall, Wirral CH60 6SN **Primary classification:** SSSI (Site of Specific Scientific Interest)

Ward: Heswall

Size: 29.6 hectares (73.1 acres)



Heswall Dales (marked as red star) on the Wirral Peninsula.

3.2 General access



Vehicular

Parking is limited to the surrounding roads, namely Oldfield Road and Pipers Lane. Due to the sensitive nature of the Dales there is no public access for vehicles directly into the park. There is access for vehicles to the Ranger's Office and for visitors to the not-for-profit Dale Farm. Access for this is off Oldfield Road.

Pedestrian

There are seven main pedestrian entrances (shown in the previous map). The main entrance is from Oldfield Road. The reserve can also be accessed from lower Heswall, via Bush Way which is off Piper's Lane. Heswall Dales is easily walkable from the centre of Heswall and surrounding residential property. Due to the nature of the site pathways are often undulating or uneven meaning that access for people with disabilities can be limited. However path improvements in the last few years have meant that paths are more suitable, but more improvement is needed.

Equestrian

Footpath (FP34) is permissive for horse access. This can be accessed from the Bush Way entrance.

Cycle

Due to the sensitive nature of the site there is no cycle access in the Heswall Dales.

Public transport

There are 3 bus routes that stop close by to the Heswall Dales, on Delavor Road and Thurstaston Road.

3.3 Site designations

Heswall Dales has been designated:

- Site of Special Scientific Interest (SSSI) For the full SSSI citation and map see Appendix
- Local Nature Reserve (LNR)
- A small part of the site, Bush Way, has been locally designated as a Site of Biological Importance (SBI)
- Green Flag Award (2020)

3.4 Facilities and main features

The sites primary aim is to preserve, restore and maintain the lowland heath habitat. The site doesn't have many facilities on site, however there are plenty of natural and physical features:

- Ranger's office and messroom
- Dale Farm Trust (with visitors car park and shop)
- Noticeboards for interpretation and information
- SSSI status heathland
- SSSI status woodland
- Extensive network of footpaths
- Bridlepath (permissive)

3.5 Tenure

Heswall Dales Local Nature Reserve is owned and managed by Wirral Borough Council, Parks and Countryside. An area of land and buildings and car park is leased to Wirral Evolutions and Dale Farm Trust. Not all of the nationally designated Site of Special Scientific Interest is owned by Wirral Borough Council; some parts are owned by private residences surrounding Heswall Dales. In addition, the Cheshire Wildlife Trust owns "Cleaver Heath" – an adjacent heathland that is part of the same Site of Special Scientific Interest. A map showing the full extent of the SSSI is in Appendix 5.1.

3.6 Visitors and main uses

Most visitors are walkers looking to enjoy an area of quiet green space. Local residents use the Dales as an area for exercise and dog walking, whilst other visitors may combine the Dales with a longer walk taking in the Wirral Way and/or foreshore. Dale Farm staff and service users are on site daily from Monday to Friday and they offer a point of sale for farm products to visitors.

Stakeholders and partners:

- Friends of Heswall Dales
- Wirral Evolutions and Dale Farm Trust
- Volunteers
- Ward Councillors
- Natural England
- Merseyside Police
- Wirral Council Community Safety Team
- Cheshire Wildlife Trust (local group: Wirral Wildlife)
- The Royal Society for the Protection of Birds (RSPB)
- Surrounding homeowners and landowners

3.7 Wirral Evolutions and the Dale Farm Trust

Dale Farm is a cluster of buildings, outbuildings, allotments and car park within Heswall Dales Local Nature Reserve that is leased by Wirral Council to Wirral Evolutions Ltd. Wirral Evolutions Ltd is a people centred service for adults with disabilities with locations across the Wirral and they work to enrich the lives and opportunities for people with learning and physical disabilities through maximising their personal potential. Their 'Mission' is to work together to inspire lives, remove barriers and widen horizons for the people we support while:

- Enriching Lives
- Improving Wellbeing
- Developing Individuals
- Being Community Integrated



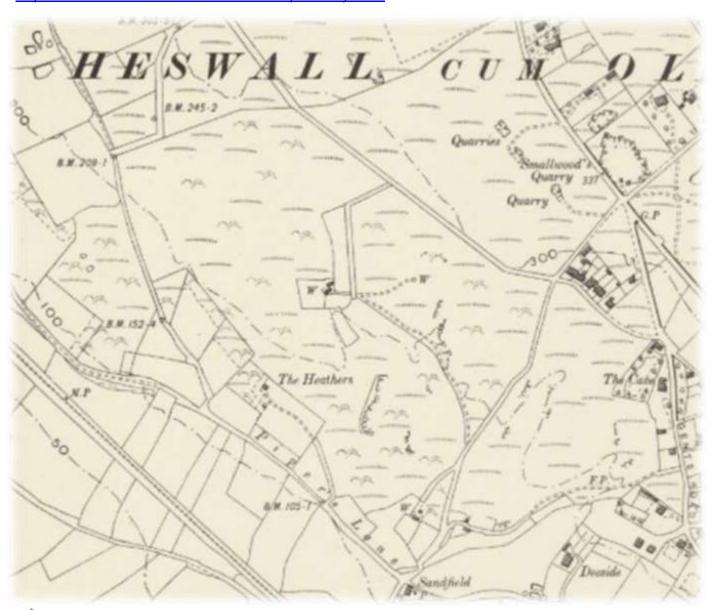
Wirral Evolutions provides a day service at Dale Farm where there are opportunities to learn life skills through the therapeutic use of horticulture. This work is supported by and in collaboration with Dale Farm Trust.

Day to day activities on the farm include planting and growing organic fruit and vegetables in the fields and poly-tunnels. A farm shop is open to the public every weekday selling fruit, vegetables and award-winning honey produced by on site bee keeping, along with a small café. The Dale Farm Family sees how much working outdoors as a team benefits both the mental and physical wellbeing for all participating community members and offers the opportunity for service users to undertake the John Muir 'Discovery Award'



3.8 History

'The Dales', as they are known locally, were originally areas of common heathland used for grazing. The heathland lying on the sandstone outcrops at Heswall and Thurstaston Common now represent valuable examples of increasingly rare Lowland Heath in the North of England and the habitat is protected as a Site of Special Scientific Interest. The Dales have survived encroachment by surrounding residential development and offer the visitor a wonderful experience of solitude, panoramic vistas of the Dee Estuary, fresh air and access to the wild countryside all within a stone's throw of the town of Heswall, an old settlement that was recorded in the Domesday Book in 1086 as 'Eswelle' and owned by Robert de Rodelent. In 1277 the ownership passed to Patrick de Haselwall, Sheriff of Cheshire. The area has been cited as a possible location of 'Dingesmere' associated with the Battle of Brunanburgh and destination for the escaping Scandinavian forces. Several small quarry sites appear adjacent to what is now Heswall Dales on the 1899 map below. By 1913 these are no longer marked so it may be that the sandstone was unsuitable for use as a building material. For more information visit: https://www.heswalldalesfriends.co.uk/p/history.html





Cheshire XXII.NW (includes: Barnston; Brimstage; Gayton; Heswall Cum Oldfield; Pensby; Thornton Hough.) Revised: 1897 to 1898, Published: 1899

3.8 Landscape

The site is underlain by Triassic sandstone over which podzolic soils have developed and consists of a number of small deep water worn valleys. The soil is acidic and relatively poor in terms of nutrients hence the vegetation of heather, mosses and particular types of grasses which can thrive where other plants cannot. These soils support a fine representative dry heathland community which has been invaded by bracken, birch-oak woodland and gorse scrub. Damp heath and acidic marshy grassland has developed along some of the natural water courses.



3.9 Biology

Heswall Dales is regarded as the second-best example of lowland heath in Merseyside. It is ranked second to Thurstaston Common which is larger and botanically more diverse. The majority of the dry heath is dominated by Heather *Calluna vulgaris* with Wavy Hair-grass, Mat-grass, Gorse *Ulex europaeus* and Bilberry also important components of this community. Tormentil *Potentilla erecta* and Heath Bedstraw *Galium saxatile* are the commonest herbs. On the drier sandier soils this habitat type gives way to an assemblage of Bell Heather *Erica cinerea* and Western Gorse *Ulex gallii*. This latter species has a distinct western distribution in Britain and is found on only a few localities in Merseyside. The wetter areas are dominated by purple moor-grass with Cross-leaved Heath *Erica tetralix*, Sharp-flowered Rush, Bulbous Rush, Soft Rush and Deer Grass *Trichophorum cespitosum*. Common Cotton-grass *Eriophorum angustifolium* and Tawny Sedge *Carex hostiana* are also important constituents of this community. These wet areas are the most

interesting botanically and contain such species as Many-stalked Spike Rush *Eleocharis multicaulis* and Green-ribbed Sedge *Carex binervis*, both of which have a very localised distribution in Merseyside. Birch-oak woodland has developed over some of the site. The younger woodland is mainly composed of silver and downy birch with Pedunculate Oak and Rowan occasionally found. In the older more mature woodland, birch is still the main tree species, but Oak and Rowan are more abundant and Whitebeam *Sorbus aria*, Hawthorn and Elder are common in the understorey. Alder and Grey Willow are found in wetter parts of the wood, principally along the stream which runs through the eastern-most dale. Pendulous Sedge *Carex pendula* is also commonly found on the site.



3.10 Management and summary of the known challenges

Lowland Heath

Since 2012 management has been governed under the terms of a Higher Level Stewardship (HLS) agreement with Natural England. The agreement covers areas of SSSI lowland heath and woodland owned and managed by Wirral Council and the general conditions for management set out by the HLS appear in Appendix 5.2). The overall aim for the management of the lowland heath is to restore areas that are currently not in good/favourable condition and that have become degraded by scrub, bracken, gorse, invasive grasses or secondary woodland encroachment.

Soil type, management history and location in relation to existing heathland sites were significant factors in determining suitability. Significant site clearance and weed control has been required but it is expected that, following suitable treatment, heathland vegetation will re-establish without the need for seeding from external sources. This option will help to restore and strengthen the vegetation mosaics characteristic of lowland heathland, and thus enhance the integrity of the historic landscape character of the area, retain and manage historic environment features and benefit heathland wildlife.

Bracken control is aimed at controlling the spread, or removing existing stands, of bracken to maintain and restore biodiversity value. Bracken management can also help to maintain and conserve the diverse vegetation mosaic characteristic of local landscapes.

For the lowland heath area there is an action plan for both scrub clearance and bracken control. Scrub clearance is carried out between the 1st October and 1st March each year. Bracken control takes place in summer months, when the temporary licence for spraying is permitted and should be ideally carried out when the 3rd frond is developed but still soft.

The current 10 year HLS agreement is due to expire in 2022. Options for future management will have to be discussed with Natural England but the priority for management will be to restore areas of lowland heath.

Woodland

Management of the woodland is to benefit wildlife and protect and strengthen the local landscape character. Tree removal, coppicing or pollarding may be required to maintain or enhance the woodland. Some woodland management is undertaken as part of the HLS agreement. This includes removal of woody vegetation from areas of lowland heath restoration.

Known Challenges

Heswall Dales is a sensitive habitat that can be affected by some issues that larger parks and open spaces can more easily absorb. Visitor pressure, especially the increased visitor numbers experienced during periods of lockdown due to the Coronavirus pandemic, affect the Dales especially by:

- Trampling of lowland heath vegetation
- Erosion of footpaths
- Nutrient enrichment of the soil through dog fouling

Wirral Council staff including the Heswall Dales Manager, Local Paths Liaison Officer, Transportation Planning Officer and Road Safety Manager met in 2020 to discuss the increase in cycling seen in parks and countryside areas during the periods of lockdown due to the Coronavirus pandemic. Proposals discussed included improved signage with Countryside Code highlighted along with a 'Safer Routes' campaign and possibly installation of cycle parking racks next to entrances at SSSIs where cycling is not permitted.

Natural England have approved use of a gritstone suitable for use on areas of lowland heath. This will allow the wider network of paths within the Dales to be surfaced and for more areas to be accessible to people with mobility problems and those requiring mobility aids. Having a good signed path network will hopefully reduce the trampling of vegetation and creation of 'unofficial paths'.

Additional bins have helped with dog fouling and new/refurbished noticeboards with good signage will help to advise visitors of the need to keep dogs on leads and remove all dog waste.

The Friends of Heswall Dales have an excellent informative website for visitors. The Council website will be updated to ensure that all information is up to date and highlights the importance of the habitat.

4 GREEN FLAG CRITERIA AND ASSESSMENT

The intention is for Heswall Dales to maintain the standards as defined by the Green Flag Award Scheme; further details about the scheme are available at www.greenflagaward.org.uk

The following Green Flag assessment criteria are used as a focus for the development of the park.

- A welcoming place
- Healthy, safe and secure
- Well maintained and clean
- Environmental management
- Biodiversity, landscape and heritage
- Community involvement
- Marketing and communication
- Management

4.1 A welcoming place

There are seven main pedestrian entrances to Heswall Dales and one permissive bridleway. In addition the Wirral Way cycle and walking route runs close by to the park, information about this can be found here:

https://www.ldwa.org.uk/ldp/members/show_path.php?path_name=Wirral+Way

Signage

New fingerposts have been installed since 2019 to improve signage for visitors around the park. An existing signpost also exists along the permissive horse route.

Noticeboards

A new noticeboard was installed in Spring 2020. The noticeboard is located close to the Ranger's Office and contains information about the Dales and how volunteer or join the Friends group.

An existing noticeboard is in place at the entrance from Oldfield Road, and which is shared by Dale Farm (Not-for-profit organisation located inside the Dales) and the Friends of Heswall Dales. Another noticeboard, on the other side of the Dales at the Bush Way entrance, was funded by Dale Farm, the Wirral Society, The Friends of Heswall Dales and Wirral Council.

4.2 Healthy, safe and secure

Annual Site Health and Safety Inspection

The following items are appraised on the annual site inspection of the park:

- Paths, steps, ramps
- Walls, fences, gates
- Buildings
- Furniture signs, seats, litterbins etc.
- Soft landscape grass, planted areas, water features etc.
- Trees

Arboricultural maintenance

Tree safety inspections are conducted by the councils appointed professional arboricultural specialist. Work is then contracted out and conducted on a priority basis. Heswall Dales was surveyed and work completed in 2019. A procedure has been written which describes the basic steps when a member of staff has concerns regarding a specific tree or trees. The staff member should report the tree to the Heswall Dales Manager. The manager then passes the information onto the Tree and Woodland Officer or Assistant Senior Manager, who will instruct a contractor to do the work if required. Wirral Council's grounds maintenance team undertake a programme of seasonal tree work related to tree safety and amenity works when needed. Tree work related to woodland management and habitat management is carried out by the Rangers with the help of volunteers based on the HLS agreement.

Control of dogs and dog fouling

The Dales is very popular with dog walkers, with the vast majority presenting no issue to the park or its users. However, we know from the evidence produced from the Wirral Parks Survey (2012) that dog fouling and dogs off leads are a major concern for park users across the Wirral. Not only is dog waste a problem to human users, it has detrimental effects on the heathland by adding nutrients to the soil. Therefore, in response, in 2019 Parks and Countryside team have installed three new bins to combat dog fouling in the park. In addition, the Friends group as well as regularly picking up dog waste have been trying an educational approach to the problem by means of polite notices or personal contact. For further information regarding dog fouling, visit:

https://www.wirral.gov.uk/environmental-problems/street-care-and-cleaning/dog-fouling

Anti-social behaviour

The park is covered by Byelaws, made under Section 164 of the Public Health Act, 1875 although many have been replaced by wider national legislation. There are very few problems with vandalism and graffiti at the park. The council has a graffiti team who can be called upon to deal with incidents. any graffiti that is perceived to be racist and/or offensive will be logged, and a service request generated to the contractor responsible for removing graffiti. The target time for the removal of graffiti of this nature is within 24 hours. If the graffiti is not racist and/or offensive in nature, it will only be removed from property belonging to the Council The target for removal is within 10 working days. The Rangers work with many local groups, to instil a sense of ownership of the park and an understanding of the problems caused by anti-social behaviour. Groups help the rangers with tasks such as litter picking, conservation or clearing fly-tipping. Wirral Council's Community Patrol is established to provide a 24-hour response to any concerns notified to them regarding anti-social behaviour occurring within Council owned land. The Patrol provides a reactive response to calls from the public and Council staff and generally they do not undertake routine patrolling. Problems of a persistent or on-going nature however can be raised with the team. To report an issue please visit:

https://www.wirral.gov.uk/communities-and-neighbourhoods/anti-social-behaviour/report-anti-social-behaviour

Alternatively call 0151 606 2020 Mon-Fri 8:45am-5pm. or 0151 666 5265 (for out of hours).

Buildings

All buildings are locked at night. The Council's Asset Management Team is responsible for repair and maintenance of buildings and to ensure that buildings comply with legislative requirements. The Rangers support the management of the facilities by inspecting buildings and reporting any problems to the Asset Management Team. (See Appendix 19, 20 and 21).

4.3 Well maintained and clean

Rangers based at Wirral Country Park undertake regular patrols and make note of any minor maintenance issues as they arise. The Heswall Dales Manager actions anything that cannot be dealt with by the Rangers e.g. building repair works.

Litter management

There are litter bins situated on all main entrances. The bins are emptied as needed, usually twice a week during the high season. Rangers and volunteers routinely litter pick as needed, with all other members of parks staff are prepared to pick up litter as and when they see it. Any reports of littering or fly tipping are dealt with as soon as possible either by the Rangers or the park staff.

Paths

Paths are kept clean and litter free, with path upgrades on a rolling program. In 2018 a large section of path was improved and repaired using a sandstone that was agreed by Natural England to be suitable for the site. Public Rights of Way are managed with support from Wirral Council's Local Paths Liaison Officer



4.4 Environmental management

Wirral Parks and Countryside put sustainability at the heart of decision making and service delivery. We seek to have a positive impact on the environment, both now and for the future. Our key commitments are:

- Improve our sustainable performance
- Comply with environmental legislation
- Purchase sustainably
- Use natural resources sustainably
- Travel sustainably
- Minimise waste
- Manage land sustainability
- Raise Awareness
- Work in partnership

Peat Usage

There is no peat usage in any capacity for the Dales, which is both a policy for all parks and countryside sites across the Wirral and a requirement of the SSSI to not introduce organic matter to the site.

Chemical use

As detailed in the "Operations likely to damage the special interest" of the Heswall Dales, the application of pesticides, including herbicides (weedkillers) is not allowed. The exception to this rule is for bracken control and for stump treating trees such silver birch as detailed in Appendix 2 or for control of non-native invasive species. Chemical storage and usage complies with requirements as defined in the current herbicide handling legislation and Official Controls (Plant Protection Products) Regulations 2020 (OCR)

For further information please go to:

https://www.gov.uk/government/publications/the-official-controls-plant-protection-products-regulations-2020-policy-statement/the-official-controls-plant-protection-products-regulations-2020-policy-statement

Control of Substances Hazardous to Health (COSHH) assessment records of all chemicals are retained in the Rangers Office and at Wirral Country Park.

Invasive species management

The following non-native species (Daffodil, Spanish Bluebell, Variegated Yellow Archangel, and non-native invasive species such as Japanese Knotweed and Himalayan Balsam should be eradicated due to their ability to take over and shade out native ground flora.

Energy and water

The Rangers Office is heated and supplied with hot water by a condensing 'combi' gas boiler.

Climate change adaption

In 2019 Wirral Borough Council declared a Climate Emergency. As part of this it is a developed climate change adaption strategy, which has two main goals:

- to substantially cut climate pollution associated with Wirral
- to adapt Wirral to unavoidable climate change

The strategy and yearly progress reports are available here: https://www.wirral.gov.uk/about-council/climate-change-and-sustainability/cool-climate-change-strategy

4.5 Biodiversity, landscape and heritage

Heswall Dales has been a designated Site of Special Scientific Interest since 1979 and is one of the best remaining examples of lowland heath in Merseyside. The priority for site management has always been the protection of the lowland heath habitat and the flora and fauna it supports. The site has been recorded as 'unfavourable' by Natural England since 1998. Large areas of gorse and bracken cover much of the site along with invasive birch. Heswall Dales is under an Environmental Stewardship Scheme with Natural England to restore areas of lowland heath and the associated plant and animal communities.



Butterflies in the Heswall Dales are diverse. From the top-left clockwise, the above selection shows: Peacock, Meadow Brown, Comma, Common Blue, Red Admiral and Gatekeeper.

4.6 Community involvement

The Heswall Dales is surrounded by the town of Heswall, and as such is popular for involving the communities surrounding it.

Friends of Heswall Dales

There is a well-established and active Friends of Heswall Dales group that meet regularly and are in regular contact with the council. Their website is full of wonderful information about the Dales and includes information on walking routes, fundraising and contact information. The Friends of Heswall Dales have organised seminars on lowland heath management and assist in fundraising with monies used to manage the site. Their website can be found here:

https://www.heswalldalesfriends.co.uk/

Wirral Evolutions and Dale Farm Trust

Wirral Evolutions and Dale Farm Trust work in partnership to provide life skills for adults with disabilities. The service users grow food on site and manage beehives. Produce is sold in the small on-site shop and at other local outlets. The service users have access to a sensory garden and undertake some tasks on the Dales with the Ranger and the Friends of Heswall Dales.



Volunteers

Heswall Dales has many volunteers, which meet on a Wednesday every week to carry out work on site to conserve the rare habitat. Information about volunteering can be found on the <u>Wirral Council's Website</u> or the <u>Friends website</u>



4.7 Marketing and communication

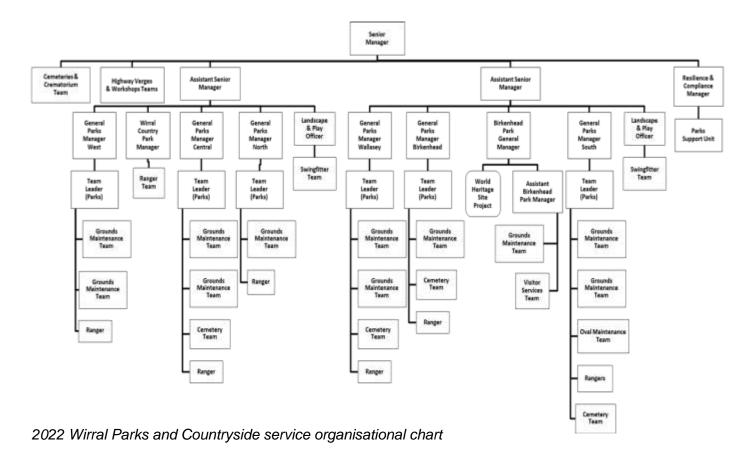
Heswall Dales is widely advertised and site information is available across many different platforms:

- <u>Wirral Council website</u>: Includes information on opening hours, facilities, access information, contact details and link to the Green Flag management plan for the site.
- <u>Friends of Heswall Dales Website</u>: wealth of information about the site, walking routes and information on how to volunteer.
- Friends of Heswall Dales Facebook Page: Regular updates about the site
- Dale Farm Trust Website
- Wirral Parks Forum: Information and pictures of the site
- Visit Wirral Website: Walking information about the Heswall Dales
- Wirral's Circular Trail: A circular cycle trail around the Wirral runs nearby to the Dales.
- Newspapers: Walking routes such as these advertised in the Cheshire Life and the Liverpool Echo.

4.8 Management

Wirral Council is responsible for the management and maintenance of the site (see figure below for service organisational chart). Wirral's Parks and Countryside is responsible for the day to day maintenance and management with support from

Enquiries regarding the management and maintenance of the park can be made directly to the Heswall Dales Manager: wcp@wirral.gov.uk



5 APPENDICES

5.1 SSSI Citation (Heswall Dales)

File ref: SJ 28/6

County: Merseyside Site Name: Heswall Dales

District: Wirral

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and

Countryside Act 1981.

Local Planning Authority: Wirral Metropolitan Borough Council

National Grid Reference: SJ 261821 Area: 29.6 (ha) 73.1 (ac)

Ordnance Survey Sheet 1:50,000: 108 1:10,000: SJ 28 SE

Date Notified (Under 1949 Act): 1979 Date of Last Revision: —

Date of Last Revision:

Date Notified (Under 1981 Act): 1983 1986

Other Information:

1. The site boundary has been extended at this revision.

Description and Reasons for Notification:

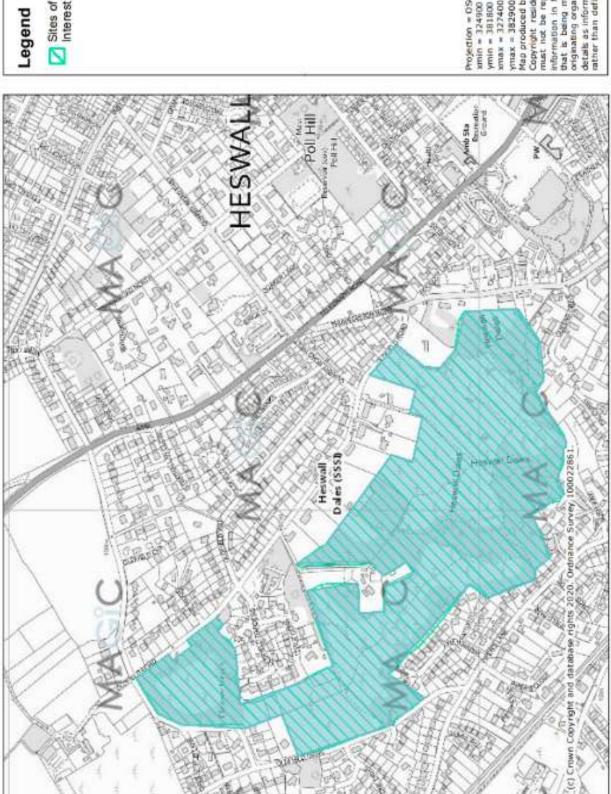
Heswall Dales is located 1 km north west of the town of Heswall. The site is underlain by Triassic sandstone over which podsolic soils have developed and consists of a number of small deep water worn valleys. These soils support a fine representative dry heathland community which has been invaded by bracken, birch-oak woodland and gorse scrub. Damp heath and acidic marshy grassland has developed along some of the natural water courses.

Heswall Dales is regarded as the second best example of lowland heath in Merseyside. It is ranked second to Thurstaston Common which is larger and botanically more diverse.

The majority of the dry heath is dominated by heather *Calluna vulgaris* with wavy hair-grass, matgrass, gorse *Ulex europaeus* and bilberry also important components of this community. Tormentil *Potentilla erecta* and heath bedstraw *Galium saxatile* are the commonest herbs. On the drier sandier soils this habitat type gives way to an assemblage of bell heather *Erica cinerea* and western gorse *Ulex gallii*. This latter species has a distinct western distribution in Britain and is found on only a few localities in Merseyside.

The wetter areas are dominated by purple moor-grass with cross-leaved heath *Erica tetralix*, sharp-flowered rush, bulbous rush, soft rush and deer grass *Trichophorum cespitosum*. Common cotton-grass *Eriophorum angustifolium* and tawny sedge *Carex hostiana* are also important constituents of this community. These wet areas are the most interesting botanically and contain such species as many-stalked spike rush *Eleocharis multicaulis* and green-ribbed sedge *Carex binervis*, both of which have a very localised distribution in Merseyside.

Birch-oak woodland has developed over some of the site. The younger woodland is mainly composed of silver and downy birch with pedunculate oak and rowan occasionally found. In the older more mature woodland, birch is still the main tree species, but oak and rowan are more abundant and whitebeam *Sorbus aria*, hawthorn and elder are common in the understorey. Alder and grey willow are found in wetter parts of the wood, principally along the stream which runs through the eastern-most dale. Pendulous sedge *Carex pendula* is also commonly found on the site.



Sites of Special Scientific Interest (England)

Projection = 05GB36 xmin = 324900 ymin = 381800 xmax = 327400 ymax = 382900

Map produced by MAGIC on 3 February, 2020.

information in MAGIC is a snepshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for detals as information may be illustrative or representative rather than definitive at this stage. Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some

5.2 Operations likely to damage the special interest

- 1 Cultivation, including ploughing, rotovating, harrowing, and re-seeding.
- 2 Grazing, the introduction of grazing and changes in the grazing regime (including type of stock, intensity or seasonal pattern of grazing and cessation of grazing).
- 3 The introduction of stock feeding and changes in stock feeding practice.
- The introduction of mowing or other methods of cutting vegetation and changes in the mowing or cutting regime (including hay making to silage and cessation).
- 5 Application of manure, fertilisers and lime.
- 6 Application of pesticides, including herbicides (weedkillers).
- 7 Dumping, spreading or discharge of any materials.
- 8 Burning and changes in the pattern or frequency of burning.
- 9 The release into the site of any wild, feral or domestic animal*, plant or seed.
- 10 The killing or removal of any wild animal*, including pest control.
- The destruction, displacement, removal or cutting of any plant or plant remains, including tree, shrub, herb, hedge, dead or decaying wood, moss, lichen, fungus, leaf-mould or turf.
- 12 The introduction of tree and/or woodland management+ and changes in tree and/or woodland management+.
- 13a Drainage (including the use of mole, tile, tunnel or other artificial drains).
- 13b Modification of the structure of watercourses (eg streams), including their banks and beds, as by re-alignment, re-grading and dredging.
- 13c Management of aquatic and bank vegetation for drainage purposes.
- 14 The changing of water levels and tables and water utilisation (including irrigation, storage and abstraction from existing water bodies and through boreholes).
- 15 Infilling of ponds, pools or marshes.
- 20 Extraction of minerals, including peat, topsoil and subsoil.
- Construction, removal or destruction of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, or the laying, maintenance or removal of pipelines and cables, above or below ground.
- 22 Storage of materials on the site.
- Erection of permanent or temporary structures, or the undertaking of engineering works, including drilling.
- Modification of natural or man-made features, clearance of boulders, large stones, loose rock or scree and battering, buttressing or grading rock-faces and cuttings, infilling of pits and quarries.
- Use of vehicles likely to damage or disturb the flora or fauna.
- 27 Recreational or other activities likely to damage the flora or fauna.
- Introduction of game or waterfowl management and changes in game and waterfowl management and hunting practice.
- * 'animal' includes any mammal, reptile, amphibian, bird, fish or invertebrate.
- + including afforestation, planting, clear and selective felling, thinning, coppicing, modification of the stand or underwood, changes in species composition, cessation of management.

5.3 Higher Level Stewardship Agreement

General conditions on all Higher Level Stewardship (HLS) agreement land:

On your HLS agreement land you must follow the general management conditions set out below, unless specifically stated otherwise in a subsequent section of this agreement. HLS agreement land is all land on which Higher Level Stewardship management prescriptions apply, including items within a Capital Works Plan

- Do not apply lime.
- On the conventional land that you manage: do not apply pesticides, except for the control
 of spear thistle, creeping thistle, curled dock, broad-leaved dock, common ragwort, nettles
 or other undesirable species named in your agreement. Herbicides may only be applied to
 these species by weedwiper or by spot treatment.
- Do not allow your agreement land to be levelled, infilled, used for the storage or dumping
 of materials or used by motor vehicles or machinery (except where necessary for the
 management of the land), if this is likely to cause long-term damage from rutting or
 compaction of the soil, or otherwise damage areas being managed under the scheme.
- Do not light fires (including burning brash or cuttings) where they could cause damage to features of archaeological or historic interest, or within ten metres of tree canopies or on any areas managed for their wildlife habitat interest. (This does not restrict your ability to manage heathland vegetation by controlled burning in compliance with the Heather and Grass Burning Regulations 1986 and accompanying Code.)
- Do not allow your agreement land to be used for organised games or sports, rallies, camping or caravanning, shows or sales where this is likely to damage areas being managed for their wildlife habitat interest or features of archaeological or historic interest; where this is likely to cause excessive or unreasonable disturbance to wildlife being encouraged under your agreement; or where this would cause unreasonable restriction to Public Rights of Way or "access land" as designated under the Countryside and Rights of Way Act 2000.
- Do not carry out or permit metal detecting or archaeological fieldwork on any of the archaeological sites on your holding identified in your Farm Environment Plan, unless agreed with your Natural England adviser in writing. In some cases a derogation will also be required.

Restoration of lowland heath

General description of the management required:

This option is aimed at restoration of lowland heathland that is not currently in good/favourable condition, including on sites whose management has been neglected. Such sites are likely to have become degraded by scrub, bracken, gorse, invasive grasses or secondary woodland encroachment, and in some cases overgrazing and too frequent burning, and may or may not currently be under active management. Soil type, management history and location in relation to existing heathland sites will be significant factors in determining suitability. Significant site clearance and weed control may be needed, but it is expected that, following suitable treatment, heathland vegetation will re-establish without the need for seeding from external sources. This option will help to restore and strengthen the vegetation mosaics characteristic of lowland heathland, and thus enhance the integrity of the historic landscape character of the area, retain and manage historic environment features and benefit heathland wildlife.

Indicators of success

- By year 5, cover of dwarf shrubs should be between 10% and 90% (*Calluna vulgaris*, *E. cinerea*, *E. Tetralix*, *Ulex gallii*, *Vaccinium myrtillus*, *Empetrum nigrum*).
- By year 10 cover of dwarf shrubs (*Calluna vulgaris*, *E. cinerea*, *E. Tetralix*, *Ulex gallii*, *Vaccinium myrtillus*) should be between >50% of the whole site and 75% to 90% of each heathland compartment.
- By year 5, there should be a wide range of age classes of ericaceous cover present. This should include between 10% and 40% cover of pioneer stage / between 10% and 50% cover of degenerate stage and no more than 20% cover of dead ericaceous cover.
- By year 10, there should be a wide range of age classes of ericaceous cover present. This should include between 10% and 40% cover of pioneer stage (including pseudo-pioneer) / between 20% and 80% building and mature phase / between 10% and 30% cover of degenerate stage and no more than 10% cover of dead ericaceous cover. A variation of growth phases should be
- present within individual compartments not just across the site.
- By year 5, recently burnt areas should cover less than 10% of the land.
- By year 10, recently burnt areas should cover less than 5% of the land.
- By year 3, cover of Common / Western Gorse should be less than 50% with Ulex europaeus less than 25% across the whole heathland species.
- By year 10, cover of bare ground should be at least 1% but not more than 10% and should consist of firm, sunlit, horizontal, sloping or vertical exposed bare ground, with no more than 1% heavily disturbed.
- By year 5, a firebreak network should be established over at least the area of land where a firebreak is considered necessary, this can make use of footpaths and access routes.
- By year 5, at least 2 desirable wildflower species such as (Armeria maritima.
- Galium saxatile, Genista anglica, Hypochaeris radicata, Lotus corniculatus,
- Plantago lanceolata, Plantago maritima, Polygala serpyllifolia, Potentilla erecta, Rumex acetosella, Scilla verna, Serratula tinctoria, Thymus praecox, Viola riviniana) should be occasional.
- By year 10, cover of bryophytes should be at least >10% and lichens should be at least >5%.
- All SSSI land should be in favourable or recovering condition.
- By year 10, at least 1 graminoid species should be frequent and 2 species at least occasional such as (Agrostis spp., Ammophila arenaria, Carex spp., Danthonia decumbens, Deschampsia flexuosa, Festuca spp., Molinia caerulea, Nardus stricta, Trichophorum cespitosum) but Deschampsia flexuosa and Nardus stricta no more than occasional and <25% cover.

Maintenance of woodland

General description of the management required:

The aim of this option is to maintain farm woodlands to benefit wildlife and protect and strengthen the local landscape character. It is only appropriate where the woodlands are part of the farmed landscape or part of the management of the agricultural holding (e.g. grazed). The option may require the exclusion or management of livestock. Open areas within the woodland may need to be managed. Tree protection, coppicing or pollarding may be required to maintain or enhance the woodland and these may be funded under HLS capital items.

Indicators of success

- Tree species Oak / Birch should be present at irregular spacing's, with an overall canopy cover of between 50% and 100% of the area.
- Cover of shrubs (dwarf scrub *Erica cinerea*, *Calluna vulgaris*, *Vaccinium myrtillus* should be between 10% and 100%.
- At least 2 of the following desirable woodland flora species (Deschampsia flexuosa, Pteridrum aquilinum, Erica cinerea, Calluna vulgaris, Vaccinium myrtillus) should be at least occasional.
- By year 4, none of the following undesirable species (beech, rhododendron, sycamore) should be more than occasional.
- All SSSI land should be in favourable or recovering condition.
- By year 5 the following non-native species (Daffodil, Spanish Bluebell, Variegated Yellow Archangel, and non native invasive species such as Japanese Knotweed and Himalayan Balsam should be eradicated due to their ability to take over and shade out native ground flora

Management prescriptions; the dos and don'ts of management The following rules apply across the whole area being managed under this option. Follow the agreed capital works programme produced as part of the HLS agreement.

- Prevent damage to trees from livestock/wild mammals/deer/grey squirrels/rabbits. This
 includes damage caused by browsing, bark stripping, rubbing against trees or guards and
 soil compaction below canopies.
- Unless otherwise agreed with your Natural England adviser, all mature or over-mature standing trees and all standing and fallen deadwood must be retained, unless it is a genuine safety hazard. Tree surgery must be limited to that required for the safety of people and livestock.
- There must be no application of nutrients such as fertilisers, organic manures or waste materials (including sewage sludge).
- Supplementary feeding is not permitted.
- There must be no ploughing or other cultivation, reseeding, rolling or chain harrowing.
- There must be no new drainage or modification/improvement to existing drainage systems.
 Existing drains can be maintained.
- Bonfires are not permitted.
- In year 1 to 4, follow a programme (agreed as your capital works plan) of rotational Bracken management through cutting / bruising / spraying / burning. Never manage more than 30% of the site in any one year.
- In year 1 to 4, follow a programme (agreed as your capital works plan) of rotational scrub management. Never manage more than half of the site in any one year and never completely eradicate scrub from the site.
- Control all Daffodil, Spanish Bluebell, Variegated Yellow Archangel, and non native invasive species such as Japanese Knotweed and Himalayan Balsam.

Management prescriptions; the dos and don'ts of management

The following rules apply across the whole area being managed under this option.

Remove areas of scrub and invasive trees agreed with your Natural England contact, together with arisings. Control unbrowsed regrowth with approved herbicide or by stump winching but do not carry out stump removal on archaeological features. Tree and scrub species include: Betula spp., Prunus spinosa, Pinus spp., Runus spp., Sarathamnus scoparius, Quercus spp., Hippophae rhamnoide..

- Restore a balanced range of dwarf shrub age classes by burning, or cutting and removing a number of patches each year. The area to be restored will depend on existing structure composition, but each should be less than 5ha.
- Control bracken in areas agreed with your Natural England adviser. Use an approved herbicide or, if no ground-nesting birds, deer or other vulnerable wildlife are present, cut twice annually or bruise with a suitable roller. Remove or till the compact litter mat where it is greater than 5cm deep. Take advice from your Natural England adviser if the work will be done on areas with archaeological interest.
- In areas targeted to benefit rare species and where no bare ground exists, remove turf from small 5-20m2 areas or strips to create a number of patches scattered in unshaded areas across the site. A small pushed blade is the preferred tool to use for turf removal. Do not use this prescription on archaeological sites or historic features.
- Agree a plan with your Natural England adviser to reverse any drainage of wet heath or mire to restore original hydrology.
- Provide fire control measures as agreed with your Natural England adviser, including fire breaks, a fire plan and an adequate water supply.
- After successful establishment, operations involving ploughing, sub-surface cultivation, reseeding, installation of new drainage or modification of existing drainage systems are not permitted unless agreed with your Natural England adviser.
- Do not apply fertilisers, organic manures, lime or waste materials (including sewage sludge.
- Supplementary feeding should be confined to mineral blocks.
- Control undesirable plant species such as Creeping Thistle /Spear Thistle /Curled Dock /Broad-leaved Dock / Common Ragwort / other herbaceous spp include: Cirsium arvense, Digitalis purpurea, Epilobium spp, (excluding. E. Palustre), Chamerion angustifolium, Juncus effuses, J.squarrosus, Ranunculus spp., senecio spp., Rumex obtusifolius., Urtica dioia, 'course grasses' so that by year 5 there cover is less that 15% and by year 10 their cover is less than 1%. Agree control methods with your Natural England adviser. Control undesirable exotic species so that by year 10 there is <1% negative indicators exotics include: Rhododendron ponticum, Gaultheria shallon, Fallopia japonica.
- Control trees / scrub so that by year 5 their cover is less than 25% and by year 10 their cover is less than 15% in each heathland compartment. Some scrub and trees should be maintained.
- Follow the agreed capital works programme produced as part of this HLS agreement.

Additional management requirement

- Wood brash and cut scrub must not be stored on areas of heathland, it must be removed from the site. Heaps of wood chip from cut scrub must not be stored on site, it must be removed from site.
- Woodchip can be applied to designated Public Rights of Way within the woodland area with permission from the Council ROW Department. Woodchip cannot be placed on any

- other paths or tracks on the heath area of the heath/wood interface. Any chippings spread on footpaths within woodland areas may be spread up to a maximum depth of 5 inches.
- Maintain patches, links and transitions between lowland heathland (wet and dry) and birchoak woodland in extent and, where appropriate, in location.
- Maintain presence of the following species within wet heath habitats: See Conservation Objectives for more details *Sphagnum* species including:

Sphagnum compactum

Sphagnum auriculatum var auriculatum

Sphagnum cuspidatum

Sphagnum fimbriatum

Sphagnum recurvum var mucronatum

Sphagnum papillosum

Sphagnum capillifolium

Drosera intermedia

• Control all Daffodil, Spanish Bluebell, Variegated Yellow Archangel and non native invasive species such as Japanese Knotweed and Himalayan Balsam.

Bracken control supplement General description of the management required:

This option is aimed at controlling the spread, or removing existing stands, of bracken where it is desirable to do so. This is usually for maintaining or restoring biodiversity value or protecting archaeological sites. Bracken management can also help to maintain and conserve the diverse vegetation mosaic characteristic of local landscapes.

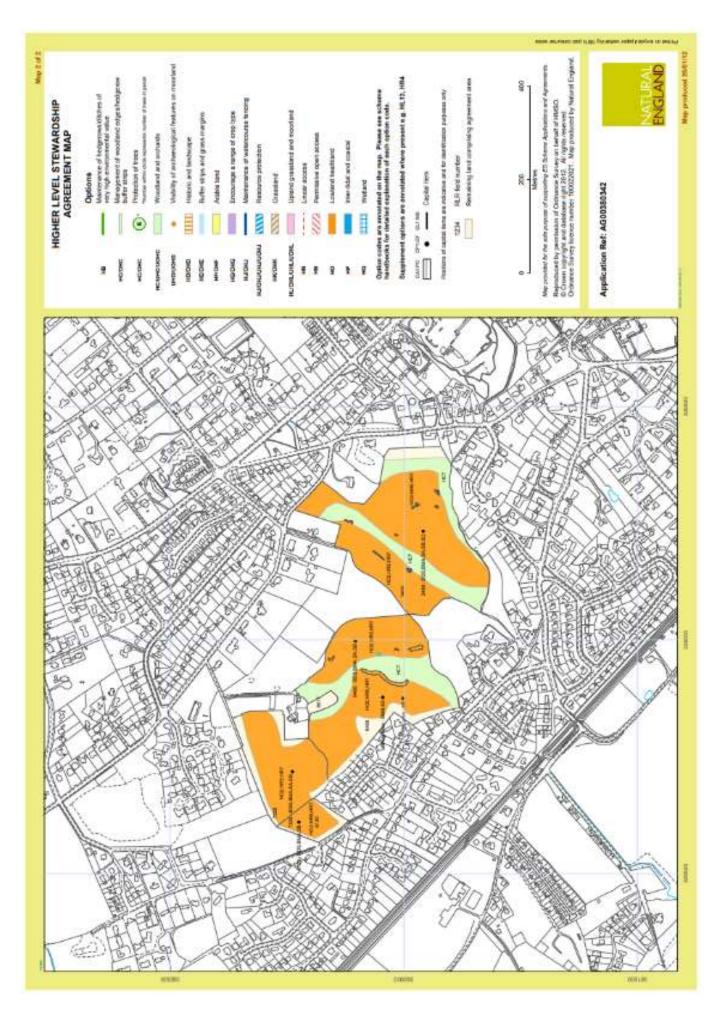
Indicators of success

 By year 5, cover of bracken on feature (Wirral Borough Councils part of Heswall Dales and Caldy Hill SSSI) should be between 0% and 10%, by year 10 it should be less than 10%.

Management prescriptions; the dos and don'ts of management

The following rules apply across the whole area being managed under this option.

- Control Bracken by cutting / applying herbicide / method agreed in writing with your Natural England adviser. Wherever possible, the primary method of control should be by mechanical means.
- Do not carry out chemical control of bracken where spray drift may settle on watercourses, cliffs, ledges, limestone pavement, screes, gills, steep slopes or where important fern species or susceptible communities are present.
- Do not undertake any chemical control in water catchment areas without the necessary prior consent from the Environment Agency.
- The area treated in each year should be small enough for the agreement holder to be able to carry out any necessary follow-up control using the resources available to them.
- Temporary grazing control techniques should be implemented to protect vegetation regeneration where necessary. Details agreed in writing with your Natural England adviser.
- Any re-infestation during the term of the agreement should be effectively controlled and removed.



5.4 HESWALL DALES BOTANICAL SURVEY AUGUST 2020



info@wirralwildlife.org.uk www.wirralwildlife.org.uk 7 December 2020

This report compares the 2020 surveys to two previous ones: all used Rangers 1998 management compartments, as far as possible.

- 1998 Heathland plant species recorded by Tim Gannicliffe.
- 2011 sample areas recorded by Sue Craggs.
- 2020 heathland and a little woodland recorded by Wirral Wildlife team. Woodland to be continued in 2021.

A habitat map from 1980 was also retrieved (by a Heswall Society member). It is not easy to tie up with the later maps, not least because no paths are marked, but it shows some useful things from a date near to that of the SSSI citation.

Priorities for management in the near future (see map):

- 1) Clear birch and European gorse from:
- 1A) Area below bottom path, comp 1,3,5. Especially large area of birch over Ling in eastern part of comp 3, and upper edges of all compartments where there is a greater variety of shrubs.

 1B) parts of comp 5 and 7 above the bottom path (5.2, 7.4 on map) and continue clearance on the rest of those compartments, especially 5.1.
- 2) Continue control of birch and European gorse in

Comp 1 good area of slightly grassy heath.

Comp 4 good bilberry area

Comp 8 good mixed heathland

Comp 11 especially European gorse on and around heathland area

Comp 13 manage birch and European gorse and consider more clearance to extend heathland to edge of plateau.

Comp 14 bracken. It seems the eastern part of the Dales has long had abundant bracken, and it is worth being selective about where to try control (where it is invading good heathland) and where to tolerate it (e.g. under semi-mature birch woodland)

3) Path management: continue campaign against dog fouling, as this is raising nutrient levels. Keep European gorse edges maintained, with windows for views and a rolling programme for the rest, so the paths do not become visual tunnels.

General observations for all site:

Paths: the paths inevitably are affected by dog urine and faeces, despite efforts to clear the latter. This is reflected in the presence of non-heathland species such as ryegrass and dock, and the occasional garden escape, though none are present in large amounts. There is little that can be done about urine, but efforts to persuade walkers to clear up faeces after their dogs need to be supported.

European gorse as a 'hedge' to the paths: this was encouraged by the previous Ranger as a way of keeping dogs out of the dwarf shrub areas, and is successful at that. However, under the difficulties of the last few years it has grown too tall in many places, so that walkers experience a green tunnel edged by head-high gorse and cannot see into the heathland panels to enjoy the flowers in summer, or see some of the views across the Dee estuary. There needs to be a programme of keeping the European gorse trimmed annually in selected lengths (for views into heathland and across the Dee) and with a rolling programme of trimming for other lengths so it does not get out of hand. Regular trimming would also reduce the seed rain onto adjacent

heathland. When cutting, the gorse could be cut as low as possible, compatible with dissuading dogs/their owners from accessing the heathland, to reduce the cutting frequency.

Heathland on the Dales is in most of the site dominated by dwarf shrubs, with little in the way of grassy heath (only C1,C14). This may not matter, but it does seem that other heathland species have reduced – **see citation**. Small-scale but thorough disturbance may be desirable, cutting the shrubs to ground level and clearing, or even stripping `topsoil' – both techniques have been used successfully on Thurstaston Common SSSI. Only the flatter and more accessible areas could be done by machine, which will limit the scope for this.

Gains – part of compartments 1a, 11, 13

Losses – compartment 2 (but see below re 1980 map), damp heath in C8, parts of 3,5 and 7 Maintained as heath over all surveys - compartment 1b, 3+1+5 below bottom path, 3,8,14; parts of 5(above path), 3 and 7 which have been recently cleared but have more to do.

Comparing the 1998 map (which may have over-estimated heathland extent) to the 2020 one, the largest loss is in the private areas north of the horse-path, between the two access points onto Oldfield Road. This area was not surveyed, but there appears to be much birch woodland and relatively little heathland there now. *Natural England need to take this up with private owners.* Damp heath: In comp 8, the changed vegetation, from damp heath around 1980 to soft rush in 1998 to purple moor-grass now, suggests that water supply has reduced but also probably changed in quality. Increased birch woodland on private land and in the LNR must be taking up more water, and drainage may have been installed in the private areas. The tiny stream that feeds the damp area comes from the gardens above the SSSI, and contamination by fertilisers and pesticides is possible. Bunding the base of the damp area and persuading private owners to remove some woodland might make it wetter, but probably not help water quality. Breaking up the dense mat of purple moor grass might give any seed bank a chance to germinate. At present, concentrating on restoring the dry heath seems to be a greater priority.

Comparisons to 1980 map:

There is already much birch woodland marked in the valleys and east of Dale Farm. The extent of woodland does not seem to have greatly increased. The trees will have grown much taller in the intervening 40 years, which may be part of what makes local people and Eric Greenwood say there is a lot more birch than there used to be. However it is certainly true that there is a lot of birch within heathland areas, and a constant battle to keep this under some sort of control.

Area 2 is marked as bracken, and is now birch and European gorse, so it has not has dwarf heath for a long time if ever. It is therefore not a priority candidate for restoration.

Damp heath: there appear to be two areas on the 1980 map, the extant damp valley in comp 8, and a long strip along a valley to the east of that. The valley is now woodland; surveys in spring 2021 will see if any trace of damp heath species remains.

The neck of land that joins the main Dales to Cleaver Heath is only partly shown on the 1980 map, but did contain some heathland. Restoration of this corridor to suitable habitat to allow heathland species e.g. lizards to move between the two parts is desirable, but will need Natural England to work with the private owners.

Some heathland has been lost in privately-owned areas, which again is a matter for Natural England to take up with the owners, including encouraging the few owners who have maintained their heath in good condition.

There is a large area of dry heath marked in what must be comps 13 and 14. There is surviving heath here, and restoration of more may be possible.

SSSI citation:

'Damp heath and acidic marshy grassland have developed along some of the natural watercourses': unfortunately these areas seem to be now almost all woodland. Surveys in 2021 will look for what species may remain.

'Dry heath' is still fairly like its description, but mat-grass was present in only tiny amounts, and we did not find Heath Bedstraw or Tormentil. Some vigorous disturbance by hand or machine might bring these back from a seedbank. The heathland has had low levels of soil disturbance for some time, except where fires have occurred.

'Wetter areas' are reduced to the damp valley in C8 and the stream in the east valley (edge C14). Most of the listed species have gone.

Oaks: The SSSI citation mentions Quercus robur but not either Q. petraea or the hybrid. This must be an error in the citation. The hybrid was much less known when the SSSI citations were last checked in the 1980s, so this was presumably a mis-identification, though the oaks on the Dales all look closer to sessile than pediculate. Eric Greenwood (see below) is of the opinion that nearly all the oaks are the hybrid, with a few sessile. The WW team varied in opinion but included all oaks in sessile or hybrid (except the one known planted sapling in Area 8). The 1998 survey also put the oaks down as pedunculate, presumably because of the citation.

Notes on compartments:

Compartment 1: recorded in all three surveys as 1a (larger section) and 1b (small triangle defined by footpaths)

- 1a has changed over time: in 1998 it is recorded as dominated by Bracken with abundant Birch, Wavy hairgrass and Common bent, but few dwarf shrubs. In 2010 there was a fire 'near the Dale Farm polytunnels', marked on map as where the Dale Farm boundary sticks out into the Dales. In 2011 this part was recorded as having Ling and Bell-heather, little else but notably Deer Grass and Heath Bedstraw (both Rare). By 2020, heathland shrubs had increased, with Ling recorded Abundant, though there is still much bracken, bramble (threading through the taller plants) and frequent birches. This is one of the few areas of the SSSI with heathland grasses recorded as Frequent (wavy-hair, purple moor and common bent).
 - Management seems to have improved this area in heathland terms, and is worth continuing, especially to conserve one of the two good areas of grassy heath on the Dales.
- **1b** (not recorded 2011) is similar in 1998 and 2020: abundant Ling and Western gorse, occasional bracken and frequent birch. There has been recent management here to reduce the birch. This disturbance has allowed some other heathland species to appear e.g. soft-grass, sheep's sorrel and heath groundsel.
 - Birch clearance is beneficial in disturbing seed banks and increasing plant diversity. Such small-scale disturbance would have been normal when the heath was managed by people for fuel, grazing, etc.

European gorse has increased throughout the compartment, not just as a path edge, and needs control in some patches.

Compartment 1 is good heathland where it is well worth continuing birch control, to maintain the dwarf shrubs and acid grassland.

Compartment 2: recorded as heathland in 1998, with abundant Ling and Western gorse, though European gorse and Birch were already frequent. Recorded as bracken on the 1980 map. Now, from the footpath, birch and gorse seem to have taken over completely and the area appears to be incipient woodland. An attempt to survey will be done in 2021. It is unlikely that it will be worth trying to reclaim this to heathland when so many more promising areas, which retain Ling under the trees, need clearing.

Compartment 3, plus 1 and 5 south of bottom path: on the 1998 map the land south of the bottom footpath seems to be divided between compartments 1 (part), 3, and 5(part). Any boundaries are no longer visible onling the ground and the recording in 2020 covered this area in two groups, east and west. In 2011, Sue Craggs recorded a patch on the upper part of C3 which had been 'cleared in 2009 by mechanical means'. In the last few years large parts of these compartments have been cleared of birch by contractors.

Ling is abundant in all surveys, but there are only small amounts of Western gorse and Bell heather. After an area was cleared in 2009, Sue Craggs recorded much Ling and gorse regeneration (including seedlings), abundant bracken but also abundant wavy hair-grass and other grasses (early hair-grass, fescue, bent) and disturbance plants such as heath groundsel and Foxglove.

Bracken is locally abundant in the western half, and towards the lower edge of the eastern half, but is not a major problem here. The main impression is of low species diversity, with most variety on the upper edge near the path. Some of the heather in all the compartment is getting overmature.

Comments by Andrew Brockbank on the western half:

This area would benefit from early removal of Birch seedlings and regrowth from within the stand. Marginal clearance (approximately 5 metres wide of birch saplings and European gorse will also release heathers including E. cinerea which are currently supressed.

Whilst the stand is in vigorous condition it is mostly in late building phase to mature and a little becoming senescent. Consideration should be given to small-scale Autumn cutting and removal of heather brash which could be spread to improve seed bank on any areas elsewhere on the Dales where for example bracken and litter has been removed.

Further phase of marginal clearance of birch and gorse especially on SW side of compartment could extend the heathland area over time.

Comments by Hilary Ash on eastern half:

More birch clearance needs to be done in the eastern-most part where there are dwarf shrubs under the birches. Some thorough clearance of patches is desirable to open up the soil surface for regeneration. On this slope it will not be easy to use machinery, but the option should be explored. How did they do it in 2009?

The woodland fringe at the bottom of the slope shields the adjacent houses and gardens from view, but should not be allowed to spread up-slope.

Compartment 4: Notable for the plateau area being one of the areas where there is much Bilberry (frequent in 1998, abundant in 2020) as well as having Ling and a little western gorse. Bracken is abundant, through the volunteers are working on pulling it. Birch is frequent. The steep slope at the eastern side has been wooded at least since 1998.

The plateau area is significant for bilberry and management should continue to control birch and bracken to conserve this.

Compartment 5 north of bottom path; In 1998 is recorded as heathland with Abundant Ling and some Western gorse. Birch was abundant and bracken frequent. Sue Craggs recorded a sample area described as a valley, where bracken and birch were dominant but Ling still present. In 2020 the western triangle (1) had been recently cleared of birch and European gorse, but there was extensive re-growth and more work is needed.

The eastern two-thirds (2) was heavily dominated by European gorse, birch and bracken, though there were still dwarf shrubs underneath in places, so worth clearing. This was good heathland 20 years ago and should be reclaimed if possible.

Compartment 6: valley south of the Sixty Steps. This was not recorded in 1998 so was presumably already wooded. Survey 2021.

Compartment 7: not recorded in 1998; 2011 only recorded a sample in the wooded lower section by Sixty Steps. However, the upper parts of this are in 2020 good heathland: Working north (by comp 5) to south (by Sixty Steps):-

- 3) Area burnt February 2019. Very good heathland regeneration. Mostly Ling/Heather (A) with some Bell heather (O,LA) and Western gorse (O,LA). A very little birch and bracken, which could be removed.
- 4) uncleared patch, but good heather under the 4m-tall birch, so worth clearing as a priority.
- 5) Woodland as land falls away near Sixty Steps Birch and European gorse without dwarf shrubs. Survey 2021.

Compartment 8: Heathland in all three surveys. 1998 records abundant Ling, occasional Western gorse and a little bilberry, but not any bell heather. Birch was abundant. 2011 Birch and European gorse were abundant, reducing the dwarf shrubs. 2020 parcel (1) heathland at south end, is currently a very good area of dwarf shrubs, with few trees and little European gorse (this area had been cut early 2020 by volunteers). However the Ling and Bell heather are aging, some moribund, so rejuvenation is needed, e.g.by close cutting to ground in autumn. Birch is still frequent and requires continual management. Bracken is abundant on slopes and needs continued management to control spread.

Parcel (2) north of ditch = 1998 plateau. As in both former surveys, a good area of dwarf shrubs - abundant Ling, with smaller amounts of Bell heather, Bilberry and Western gorse all mostly Vigorous, some Intermediate. Bracken abundant in parts. *Birch management needs to be continued.*

• Damp valley: this is mentioned in the SSSI citation, but has been steadily losing its species of interest. Not recorded 1998 except to note purple moor-grass` occasional, locally abundant, in compartment. By 2011 Soft rush is the main wetland plant, though Greenribbed sedge is still locally frequent', and there was much birch and European gorse casting shade from the slopes. In 2020 the area is even less wet, soft rush has declined and purple moor-grass is dominant, though at least 3 clumps of green-ribbed sedge were still present. This suggests both drying out and increased nutrients compared to the 1980s, when the citation was last revised. The wetness only lasts to an obvious lip of stone halfway down, after which the flora is birch, bracken and bramble, as on the slopes surrounding the upper part. Cross-leaved heath and all the other interesting sedges and rushes listed in the citation seem to have gone long ago. Some may have grown in other wet patches, but these are now all woodland.

There is probably little that can be done to reverse this situation, as the water supply from the upper slopes has obviously reduced, and what there is probably carries nutrients from gardens. It might be worth digging out some purple moor-grass (avoid the green-ribbed sedge) to see if any more species regenerate from seedbank, but the chances must be low.

Compartment 9: woodland, to do 2021.

Compartment 10: woodland, to do 2021. In 1998 it was mostly birch, European gorse and bracken, with a little Ling and Bell heather.

Compartment 11: In 1998 dominated by birch and bracken, with no dwarf shrubs noted. However there has been much management work to remove birch and reduce bracken, and recently (in last few years) a small fire. The GPS was taken in the fire patch, which is regenerating well. There is now frequent Ling, Bell heather and Western gorse, although *European gorse is abundant and needs control*. It appears that management has significantly increased heathland in this area.

Compartment 12: private gardens

Compartment 13: plateau heathland, separated from C11 by large deep valley, which is wooded. Birch has been recently cleared and bracken pulled. Part had a fire in February 2020, and there are traces of an older burn about 3 years ago.

Recorded as heathland in 1998, with abundant Ling, frequent western gorse, also some bell heather. Birch was frequent. By 2011, Sue Craggs records the west end as mostly birch and European gorse. The east part retained Ling, Bilberry (abundant in parts) and Bell heather but had Dominant bracken. Recent management plus fires have restored good heathland on the upper part of this. The most recent fire area is just starting to regenerate. It would be worth clearing the edges of bracken and birch, especially round the fire site, to extend the heathland to the edge of the plateau. The lower part is still heavily dominated by bracken, with frequent birch, but may be worth clearing given how well the upper part is doing.

Compartment 14: heathland in western half but wooded in east as the land falls into the stream valley.

Slopes recorded as heathland in 1998, with abundant Ling, occasional Western gorse and rare Bell heather, but bracken was Frequent, locally abundant. In 2020 there is abundant bell heather and Western gorse, frequent Bilberry and Ling, giving this area a slightly different appearance to the rest of the SSSI, where Ling is usually the most abundant shrub. There are also frequent heathland grasses (purple moor-grass and wavy-hair grass), as in C1. Bracken is abundant and European gorse frequent – both need management to maintain this varied heath.

Hilary J Ash MA, PhD, MCIEEM

5.5 HESWALL DALES SSSI, WIRRAL BOROUGH COUNCIL LAND - AUGUST 2020

Taylor Lawton TL, Andrew Broc	RDAIR AD, Natasila Mai Will Nivi				
Compartment 1 - Heathland -	1A (SJ 25819 82332) - 15/8/2020	(TG. TL. JM)			
	(SJ 25737 82300) - 11/8/2020 (HA, NM)	(-, ,- ,			
(D	letower stiete M. Marile vest				
(Dwarf shrubs: V = Vigorous, I: Trees: .l=iuvenile=whips to sanli	= Intermediate, M = Moribund) ing size, SM = semi-mature, M=mat	ure			
moss specimens taken, to be ID		uic			
P = Path, E = Edge					
		1A	1A	1B	1B
O = III		^	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		\/ (!:41- 1\
Calluna vulgaris Erica cinerea	Heather/ling Bell-heather	A O	V	A O	V (little I)
Ulex europaea	European gorse	F	V	F, L/A	V
Ulex gallii	Western gorse	0	V	A	V (little I)
Vaccinium myrtillus	Bilberry	0	V		v (iittic i)
Vaccinani ingrance	Billiony				
Bare ground				R	
Agroetic capillarie	Common hont	0		0	
Agrostis capillaris Aira praecox	Common bent Early hair-grass	J		R	
Aira praecox Betula pendula	Silver birch	0		IX	
Betula pubescens	Downy birch	0			
Betula x aurata	Hybrid birch	F		F, L/A	
Castanea sativa	Sweet chestnut	0		. , 🗆 / .	
Chamaenerion angustifolium	Rosebay willowherb	Ō		R	
Cotoneaster sp	Cotoneaster	R			
Cytisus scoparius	Broom	R		0	
Deschampsia flexuosa	Wavy hair-grass	F		0	
Digitalis purpurea	Foxglove	F		R	
Geranium robertianum	Herb robert	R(E)			
Hieracium vagum	Hawkweed	R		R	
Holcus lanatus	Yorkshire fog			O (cleared)	
Holcus mollis	Creeping soft-grass			R (cleared)	
Hypochaeris radicata	Cat's-ear			0	
llex aquifolium	Holly	O (J)		2(5)	
Lolium perenne	Perennial rye-grass	- · /-		O(P)	
Lonerica periclymenum	Honeysuckle	O, L/F			
Lotus pendunculatus	Greater bird's-foot trefoil	R (E)			
Molinia caerulea	Purple moor-grass	F		D	
Pinus nigra Pinus sylvestris	Black pine Scots pine	R (J)		R	
Pteridium aquilinum	Bracken	A,LD		O, L/A	
Quercus cerris	Turkey oak	R (J)		R (J)	
Quercus x rosacea	Hybrid oak	0		1. (0)	
Quercus petraea	Sessile oak	F			
Quercus sp	Oak	R (J)		O (J)	
Rubus fruticosus agg	Bramble	Α		R	
Rumex acetosella	Sheep's sorrel			0	
Rumex obtusifolius	Broad-leaved dock			R (P)	
Senecio sylvaticus	Heath groundsel			0	
Silene dioica	Red campion	_		R	
Sorbus aucuparia	Rowan	F		R (J)	
Sorbus intermedia	Swedish whitebeam	R			
Taxus baccata	Yew	R O L /A /E)			
Urtica dioica	Nettle	O, L/A (E)			
Apis mellifera	Honeybee				
Bombus lapidarius	Red tail bumblebee				
Bombus lucorum/terrestris	White/buff tail bumblebee				
Bombus pascuorum	Common carder bumblebee				
Celastrina argiolus	Holly blue butterfly				
Coccinella septempunctata	Seven spot ladybird				
Lycaena phlaeus	Small copper butterfly				
Pyronia tithonus Vanessa atalanta	Gatekeeper butterfly Red admiral butterfly				

IB - Wooded Area - North ed	go by reetpatir				
Understory almost none, Cano	ppy 80% cover				
Acer pseudoplatanus	Sycamore	R			
Betula pendula	Silver birch	F			
Betula x aurata	Hybrid birch	F			
Pinus sylvestris	Scots pine	0			
Quercus petraea	Sessile oak	R (SM)			
Quercus x rosacea	Hybrid oak	0			
Sambucus nigra	Elder	O (J)			
Sorbus intermedia	Swedish whitebeam	0			
Taxus baccata	Yew	R			
Ground flora					
Acer pseudoplatanus	Sycamore	R (J)			
Aegopodium podagraria	Ground elder	R, L/A			
Agrostis capillaris	Common bent-grass	F.			
Arrhenatherum elatius	False oat-grass	R (P)			
Chamaenerion angustifolium	Rosebay willowherb	R			
Digitalis purpurea	Foxglove	R			
0 1 1	-				
Dryopteris dilatata	Broad buckler fern	R (I) (D ==l=			
agus sylvatica	Beech		anted as hed	ge to adjoining ga	irden)
Geranium robertianum	Herb robert	R			
Geum urbanum	Wood avens	R			
Hedera helix	lvy	F, L/A			
llex aquilifolium	Holly	O (J)			
Lolium perenne	Perennial rye-grass	R (P)			
Lonerica periclymenum	Honeysuckle	0			
Rosa canina	Dog rose	R			
Rubus fruticosus	Bramble	A			
Sorbus aucuparia	Rowan	O (J+SM)			
•		F			
Ulex europaeus	Gorse				
Urtica dioica	Nettle	R			
Compartment 3 - Heathland - Some of the boundaries marker approximately the western half of	Grid refs below- 18/8/2020 (HA, d on the 1998 map are no longer o of 1998 comp 3 plus comp 1 south	bvious. This co	•		
Compartment 3 - Heathland - Some of the boundaries marker approximately the western half of (Dwarf shrubs: V = Vigorous, I = Trees: J=juvenile=whips to sapl	d on the 1998 map are no longer o of 1998 comp 3 plus comp 1 south	bvious. This co	•		
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Compartment 3 - Heathland - Some of the boundaries marker approximately the western half of (Dwarf shrubs: V = Vigorous, I: Trees: J=juvenile=whips to sapl P = Path, E = Edge C1 was recorded in two patch between that and C2 (see mathematical cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula pubescens Betula x aurata Chamaerion angustifolium Deschampsia flexuosa	d on the 1998 map are no longer of 1998 comp 3 plus comp 1 south a line intermediate, M = Moribund) ing size, SM=semi-mature, M=Mature, SM=semi-mature,	bvious. This co of the main pa ure W 2; and a sc erences) C1W 1 O	rubby area	C1 W 1 C1W 2 A O on fringes O,LA fringes F fringes	C1W 2 V
Compartment 3 - Heathland - Some of the boundaries marker approximately the western half of (Dwarf shrubs: V = Vigorous, I: Trees: J=juvenile=whips to sapl P = Path, E = Edge C1 was recorded in two patch between that and C2 (see mathematical cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula pubescens Betula x aurata Chamaerion angustifolium Deschampsia flexuosa Digitalis purpurea	d on the 1998 map are no longer of 1998 comp 3 plus comp 1 south a line intermediate, M = Moribund) ing size, SM=semi-mature, M=Mat in the state of	bvious. This co of the main pa ure W 2; and a sc erences) C1W 1 O F	rubby area	C1 W 1 C1W 2 A O on fringes O,LA fringes F fringes F,L/A (J + SM	C1W 2 V
Compartment 3 - Heathland - Some of the boundaries marker approximately the western half of (Dwarf shrubs: V = Vigorous, I: Trees: J=juvenile=whips to sapl P = Path, E = Edge C1 was recorded in two patch between that and C2 (see mathematical cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula pubescens Betula x aurata Chamaerion angustifolium Deschampsia flexuosa Digitalis purpurea Hieracium vagum	d on the 1998 map are no longer of 1998 comp 3 plus comp 1 south a line intermediate, M = Moribund) ing size, SM=semi-mature, M=Mat in the state of	bvious. This co of the main pa ure W 2; and a sc erences) C1W 1 O F	rubby area	C1 W 1 C1W 2 A O on fringes O,LA fringes F fringes F,L/A (J + SM	C1W 2 V
Compartment 3 - Heathland - Some of the boundaries marker approximately the western half of (Dwarf shrubs: V = Vigorous, I: Trees: J=juvenile=whips to sapl P = Path, E = Edge C1 was recorded in two patch between that and C2 (see mathematical contents) Calluna vulgaris Erica cinerea Ulex gallii Agrostis capillaris Betula pendula Betula pubescens Betula x aurata Chamaerion angustifolium Deschampsia flexuosa Digitalis purpurea Hieracium vagum lex aquifolium sapling	d on the 1998 map are no longer of 1998 comp 3 plus comp 1 south a line intermediate, M = Moribund) ing size, SM=semi-mature, M=Mat in the state of	bvious. This co of the main pa ure W 2; and a sc erences) C1W 1 O F	rubby area	C1 W 1 C1W 2 A O on fringes O,LA fringes F fringes F,L/A (J + SM	C1W 2 V
Compartment 3 - Heathland - Some of the boundaries marker approximately the western half of (Dwarf shrubs: V = Vigorous, I: Trees: J=juvenile=whips to sapl P = Path, E = Edge C1 was recorded in two patch between that and C2 (see mathematical contents) Calluna vulgaris Erica cinerea Ulex gallii Agrostis capillaris Betula pendula Betula pubescens Betula x aurata Chamaerion angustifolium Deschampsia flexuosa Digitalis purpurea Hieracium vagum lex aquifolium sapling lex x altclerensis	d on the 1998 map are no longer of 1998 comp 3 plus comp 1 south a line intermediate, M = Moribund) ing size, SM=semi-mature, M=Mating size, SM=semi-mature, SM=semi-mature, SM=semi-mature, SM=semi-mature, SM=semi-mature, SM=semi-mature, SM=semi-mat	bvious. This co of the main pa ure W 2; and a sc erences) C1W 1 O F	rubby area	C1 W 1 C1W 2 A O on fringes O,LA fringes F fringes F,L/A (J + SM	C1W 2 V
Compartment 3 - Heathland - Some of the boundaries marker approximately the western half of (Dwarf shrubs: V = Vigorous, I: Trees: J=juvenile=whips to sapl P = Path, E = Edge C1 was recorded in two patch between that and C2 (see mathematical cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula pubescens Betula x aurata Chamaerion angustifolium Deschampsia flexuosa Digitalis purpurea Hieracium vagum Ilex aquifolium sapling Ilex x altclerensis Pinus nigra	d on the 1998 map are no longer of 1998 comp 3 plus comp 1 south a line in the state of the stat	bvious. This co	rubby area	C1 W 1 C1W 2 A O on fringes O,LA fringes F fringes F,L/A (J + SM	C1W 2 V V
Compartment 3 - Heathland - Some of the boundaries marker approximately the western half of (Dwarf shrubs: V = Vigorous, I = Trees: J=juvenile=whips to sapl P = Path, E = Edge C1 was recorded in two patch between that and C2 (see mathematical street of the compact of the com	d on the 1998 map are no longer of 1998 comp 3 plus comp 1 south a line in the state of 1998 comp 3 plus comp 1 south a line in the state of the sta	bvious. This co	rubby area	C1 W 1 C1W 2 A O on fringes O,LA fringes F,L/A (J + SM	C1W 2 V V
Compartment 3 - Heathland - Some of the boundaries marker approximately the western half of (Dwarf shrubs: V = Vigorous, I = Trees: J=juvenile=whips to sapl P = Path, E = Edge C1 was recorded in two patch between that and C2 (see many) Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula pubescens Betula x aurata Chamaerion angustifolium Deschampsia flexuosa Digitalis purpurea Hieracium vagum lex aquifolium sapling lex x altclerensis Pinus nigra Pteridium aquilinum Quercus petraea	d on the 1998 map are no longer of 1998 comp 3 plus comp 1 south a line in the state of 1998 comp 3 plus comp 1 south a line in the state of the sta	bvious. This co	rubby area	C1 W 1 C1W 2 A O on fringes O,LA fringes F,L/A (J + SM R R R R R R R R R R R	C1W 2 V V
Compartment 3 - Heathland - Some of the boundaries marker approximately the western half of (Dwarf shrubs: V = Vigorous, I = Trees: J=juvenile=whips to sapl P = Path, E = Edge C1 was recorded in two patch between that and C2 (see mathematical see mathematical	d on the 1998 map are no longer of 1998 comp 3 plus comp 1 south a line size, SM=semi-mature, M=Mating size, SM=semi-mature, SM=semi-mature, SM=semi-mature, SM=semi-mature, SM=semi-matur	bvious. This co	rubby area	C1 W 1 C1W 2 A O on fringes O,LA fringes F,L/A (J + SM	C1W 2 V V
Compartment 3 - Heathland - Some of the boundaries marker approximately the western half of (Dwarf shrubs: V = Vigorous, I = Trees: J=juvenile=whips to sapl P = Path, E = Edge C1 was recorded in two patch between that and C2 (see mathematical see mathematical	d on the 1998 map are no longer of 1998 comp 3 plus comp 1 south a later mediate, M = Moribund) ing size, SM=semi-mature, M=Mating size, SM=semi-mature, SM=semi-mature, SM=semi-mature, SM=semi-mature, SM=semi-mature,	bvious. This co	rubby area	C1 W 1 C1W 2 A O on fringes O,LA fringes F,L/A (J + SM R R R R R R R R R R R	C1W 2 V V
Compartment 3 - Heathland - Some of the boundaries marker approximately the western half of (Dwarf shrubs: V = Vigorous, I = Trees: J=juvenile=whips to sapl P = Path, E = Edge C1 was recorded in two patch between that and C2 (see mathematical see mathematical	d on the 1998 map are no longer of 1998 comp 3 plus comp 1 south a later mediate, M = Moribund) ing size, SM=semi-mature, M=Mating size, SM=semi-mature, SM=semi-mature, SM=semi-mature, SM=semi-mature, SM=semi-mature,	bvious. This co	rubby area	C1 W 1 C1W 2 A O on fringes O,LA fringes F,L/A (J + SM R R R R R R R R R R	C1W 2 V V
Compartment 3 - Heathland - Some of the boundaries marker approximately the western half of (Dwarf shrubs: V = Vigorous, I = Trees: J=juvenile=whips to sapl P = Path, E = Edge C1 was recorded in two patch between that and C2 (see mathematical see mathematical	d on the 1998 map are no longer of 1998 comp 3 plus comp 1 south of 1998 comp 3 plus comp 1 south ling size, SM=semi-mature, M=Mat hes, the western heathland C1 has attached to report for grid refundation of the semi-mature of the semi-matur	bvious. This co	rubby area	C1 W 1 C1W 2 A O on fringes O,LA fringes F,L/A (J + SM R R R R R R R R R R	C1W 2 V V
Compartment 3 - Heathland - Some of the boundaries marker approximately the western half of (Dwarf shrubs: V = Vigorous, I: Trees: J=juvenile=whips to sapl P = Path, E = Edge C1 was recorded in two patce between that and C2 (see material seed of the company of	d on the 1998 map are no longer of 1998 comp 3 plus comp 1 south a later mediate, M = Moribund) ing size, SM=semi-mature, M=Mating size, SM=semi-mature, M=	bvious. This co	rubby area	C1 W 1 C1W 2 A O on fringes O,LA fringes F fringes F,L/A (J + SM R R R R R R R R R R R	C1W 2 V V
Compartment 3 - Heathland - Some of the boundaries marker approximately the western half of (Dwarf shrubs: V = Vigorous, I = Trees: J=juvenile=whips to sapl P = Path, E = Edge C1 was recorded in two patch between that and C2 (see mathematical see mathematical	d on the 1998 map are no longer of 1998 comp 3 plus comp 1 south of 1998 comp 3 plus comp 1 south ling size, SM=semi-mature, M=Mat hes, the western heathland C1 has attached to report for grid refundation of the semi-mature of the semi-matur	bvious. This co	rubby area	C1 W 1 C1W 2 A O on fringes O,LA fringes F,L/A (J + SM R R R R R R R R R R	C1W 2 V V
Compartment 3 - Heathland - Some of the boundaries marker approximately the western half of the state of the	d on the 1998 map are no longer of 1998 comp 3 plus comp 1 south a later mediate, M = Moribund) ing size, SM=semi-mature, M=Mating size, SM=semi-mature, M=	bvious. This co	rubby area	C1 W 1 C1W 2 A O on fringes O,LA fringes F fringes F,L/A (J + SM R R R R R R R R R R R	C1W 2 V V
Compartment 3 - Heathland - Some of the boundaries marker approximately the western half of the capproximately the capprox	d on the 1998 map are no longer of 1998 comp 3 plus comp 1 south a later mediate, M = Moribund) ing size, SM=semi-mature, M=Mating size, SM=semi-mature, M=	bvious. This co of the main pa ure W 2; and a sc erences) C1W 1 O F F (J) R R R R R R R R	crubby area	C1 W 1 C1W 2 A O on fringes O,LA fringes F fringes F,L/A (J + SM R R R R R R R R R R R	C1W 2 V V

NOTES - Andrew Brockbank					
CW 1 Area occupying approxima	ately 15% of the open habitat we s	urveved Poten	tial dwarf-shrub) heath	
	opaea, Betula pendula regeneration, Pter		liai awaii Siliak	ricaui	
	, , , , , , , , , , , , , , , , , , , ,				
	ablished beneath the gorse and bracken				
Approximate extent of this patch	is shown as Comp C W Sect 1 on	attached map.			
CW 2 Dwarf-shrub heath predon	□ n inantly <i>Calluna vulgari</i> s occupies appro	ximately 85% of t	he open area		
	areas with dense cover of birch se				
	ntinuous cover with some character				
			in dry neam		
	ii is frequent and Erica cinerea appears				
	and stand is shown as Comp C W			140	
with 5 GPS points recorded at th	e fringes: 25728220, 25678225, 2	5628225, 256	78222, 257182 	219	
C2 was recorded in three not	shoo: C20 C 12572 9249 C2h	SJ2578 8217 t	S 2501 0214		
C2 was recorded in three pat		532376 6217	0 2301 0214		
C2c is roughly the 1998 area s	and is listed under that				001
		C2 a	C2 a	C2 b	C2 b
Calluna vulgaris	Heather/ling	Α	V some I	Α	I to M
Erica cinerea	Bell-heather	0	V some I	F	I to M
Jlex europaea	European gorse			0	I to M
Jlex gallii	Western gorse	F	V some I	F	I to M
/accinium myrtillus	Bilberry	R	V some I	R	V
		•	. 55/110 1	•	·
Agroetie capillarie	Common bent	R,P			
Agrostis capillaris					
Betula pendula	Silver birch	F,LA, J		F,LA,J	
Betula pubescens	Downy birch	R, J		R,J	
Betula x aurata	Hybrid birch	O,J		O,J	
Deschampsia flexuosa	Wavy hair-grass	R			
Digitalis purpurea	Foxglove	R			
Hieracium vagum	Hawkweed	R			
lex aquifolium sapling	Holly sapling			R,J	
ex x altclerensis	Highclere holly			R,J	
Pteridium aquilinum	Bracken	O, LA lower sl	one	R	
Quercus petraea	Sessile oak	O,J	ОРС	O,J	
	Bramble	0,5		0,3	
Rubus fruticosus agg				U	
Rumex acetosella	Sheep's sorrel	R,E			
Senecio sylvaticus	Heath groundsel	R		_	
Sorbus aucuparia	Rowan	R,J		R	
Hypnum cupressiforme	Cypress-leaved plait-moss	F,LA			
Brachythecium rutabulum	Rough-stalked feather-moss	R			
	Hair-point moss	R			
Cladonia sp	Pixie-cup lichen	R			
<u> </u>					
Apis mellifera	Honey bee				
Bombus lucorum/terrestris	White/buff tail bumble bee				
	Common carder bumble bee				
Bombus pascuorum		ID OLL - ALL:			
Bombus terrestris	_ buff-tailed bumble bee queen	ID Chioe Aldri	dge from photo)	
Bombus lapidarius	red-tailed bumble bee				
Compartment 1and 3 : Woodl	and 18/8/2020 (3-5 HA,TG,MBS)			
Down slope from Heathland in	n compartments 3 and 5, along	edge of hous	e gardens bel	ow.	
·					
Free: I-iuvenile-whine to sanlir	ng size, SM=semi-mature, M=Matu	ro.			
P = Path, E = Edge	ig size, oivi=seriii matare, ivi=iviate				
= - r aui, L = Luge					
	Inace not attempted, # = present	NET 00010	05700015		
	ompartment between GPS points 2				
C1W2 along SW edge of compa	artment between GPS points 2567	3222 and 2565	8218 (near the	corner garde	en plot)
Canopy		C2	C1W1	C1W2	
Betula pendula	Silver birch	A (SM and M)	D (M)	D (M)	
lex aquifolium	Holly	O,L/A	#	#	
lex x altclerensis	Highclere holly	R			
Pinus nigra	Black pine	R (M)		# (M)	
Pinus sylvestris	Scots pine	R (M)		ne (IVI)	
	-	IX (IVI)		ш	
Prunus sp	Cherry	0 (1 === 1 05.0)		#	
Quercus petraea	Sessile oak	O (J and SM)			-
Quercus x rosacea Taxus baccata	Hybrid oak Yew	039		#	

Agrostis capillaris	Common bent		#	#	
Chamaenerion angustifolium	Rosebay willowherb	R	#	#	
Deschampsia flexuosa	Wavy hair-grass	R			
Digitalis purpurea	Foxglove	K	#		
Fagus sylvatica	Beech			# (J)	
Hedera helix	lvy		#	π (3)	
Hedera cv	variegated ivy garden escape		#	#	
Holcus lanatus	Yorkshire fog		#	π	
Lonicera peryclimenum	Honeysuckle	O,LA		#	
Crocosmiifolia	Montbretia garden escape	0,27	#	<i>II</i>	
Pteridium aquilinum	Bracken	A,LD		#	
Rubus fruticosus	Bramble	O,LF	#	#	
Sorbus aucuparia	Rowan	R (J)	#	#	
Ulex europaea	European gorse	O,LA <4m tall	**	#	
Ulex gallii	Western gorse	R	11		
Vinca minor	Lesser periwinkle garden escap	1	#		
VIIICA IIIIIOI	Ecoser periwirine garden escap		T .		
Andricus fecundator	artichoke gall on oak				
Andricus kollari	marble gall on oak				
Cepaea hortensis	white-lipped banded snail				
Phytomyza ilicis	holly leaf-miner				
r nytomyza IIICIS	nony lear-miner				
The Black pines here and also:	hara on site are probably Austrian	nine Dinus minus	oon nicro		
THE DIACK PITIES HERE AND EISEV	here on site are probably Austrian	Pinus nigra	ssp nigra		
Compartment 4 - Heathlend	SJ 2592 8211 - 15/8/20 (HA,AI,JM)				
Compartment 4 - Heatmand -	55 2592 6211 - 15/8/20 (HA,AI,JM)				
(December 1) Minimum I	hata massali ata D.A. D.A. aib				
(Dwarf shrubs: V = Vigorous, I:					
	apling size, SM = semi mature, M =				
This compartment has a damp	patch (d) where former path diverte	d, P = Path			
		E 1 /A			
Calluna vulgaris	Heather/ling (inc.seedlings)	F, L/A	V		
Ulex gallii	Western gorse	R	V		
Vaccinium myrtillus	Bilberry	Α	V		
A .:	0 1 1				
Agrostis capillaris	Common bent	O (P)			
Betula pendula	Silver birch	F, L/A (M)			
Betula pendula Betula x aurata	Silver birch Hybrid birch	F, L/A (M) F, L/A (J)			
Betula pendula Betula x aurata Chamaenerion angustifolium	Silver birch Hybrid birch Rosebay willowherb	F, L/A (M) F, L/A (J) R (P)			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass	F, L/A (M) F, L/A (J) R (P)			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove	F, L/A (M) F, L/A (J) R (P) O			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb	F, L/A (M) F, L/A (J) R (P) O R R (d)			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d)			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lyy	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lvy Holly	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R (O) R			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium Juncus effusus	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lvy Holly Soft rush	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R (d) R O (J, SM) R (d)			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium Juncus effusus Lolium perenne	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lyy Holly Soft rush Perennial rye-grass	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R (d) R O (J, SM) R (d) R (P by d)			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium Juncus effusus Lolium perenne Molinia caerulea	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lvy Holly Soft rush Perennial rye-grass Purple moor-grass	F, L/A (M) F, L/A (J) R (P) O R R (d) F (d) R (J, SM) R (d) R (P by d) F, L/A in d			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium Juncus effusus Lolium perenne Molinia caerulea Phalaris arundinacea	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lvy Holly Soft rush Perennial rye-grass Purple moor-grass Reed canary-grass	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R (d) R (d) R (d) R (d) F, L/A in d R (d)			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium Juncus effusus Lolium perenne Molinia caerulea Phalaris arundinacea Plantago major	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lvy Holly Soft rush Perennial rye-grass Purple moor-grass Reed canary-grass Greater plantain	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R (d) R (f) R (h)			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium Juncus effusus Lolium perenne Molinia caerulea Phalaris arundinacea Plantago major Polygonum depressum	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lwy Holly Soft rush Perennial rye-grass Purple moor-grass Reed canary-grass Greater plantain Common knotgrass	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R (d) R (d) R (f) R (h)			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium Juncus effusus Lolium perenne Molinia caerulea Phalaris arundinacea Plantago major Polygonum depressum Pteridium aquilinum	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lwy Holly Soft rush Perennial rye-grass Purple moor-grass Reed canary-grass Greater plantain Common knotgrass Bracken	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R O (J, SM) R (d) R (P by d) F, L/A in d R (d) R (P) R (d) A (being pulle	d by volunteers		
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium Juncus effusus Lolium perenne Molinia caerulea Phalaris arundinacea Plantago major Polygonum depressum Pteridium aquilinum Quercus x rosacea	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lyy Holly Soft rush Perennial rye-grass Purple moor-grass Reed canary-grass Greater plantain Common knotgrass Bracken Hybrid oak	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R (d) R (d) R (d) R (H)			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium Juncus effusus Lolium perenne Molinia caerulea Phalaris arundinacea Plantago major Polygonum depressum Pteridium aquilinum Quercus x rosacea Quercus petraea	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lyy Holly Soft rush Perennial rye-grass Purple moor-grass Reed canary-grass Greater plantain Common knotgrass Bracken Hybrid oak Sessile oak	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R O (J, SM) R (d) R (P by d) F, L/A in d R (d) R (P) R (d) C (D))	
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium Juncus effusus Lolium perenne Molinia caerulea Phalaris arundinacea Plantago major Polygonum depressum Pteridium aquilinum Quercus x rosacea Quercus petraea Ranunculus repens	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lyy Holly Soft rush Perennial rye-grass Purple moor-grass Reed canary-grass Greater plantain Common knotgrass Bracken Hybrid oak Sessile oak Creeping buttercup	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R O (J, SM) R (d) R (P by d) F, L/A in d R (d) R (P) R (d) C (J, SM) R (D, SM)			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium Juncus effusus Lolium perenne Molinia caerulea Phalaris arundinacea Plantago major Polygonum depressum Pteridium aquilinum Quercus x rosacea Quercus petraea Ranunculus repens Sorbus aucuparia	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lvy Holly Soft rush Perennial rye-grass Purple moor-grass Reed canary-grass Greater plantain Common knotgrass Bracken Hybrid oak Sessile oak Creeping buttercup Rowan	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R (O (J, SM) R (d) R (P by d) F, L/A in d R (d) R (P) R (d)			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium Juncus effusus Lolium perenne Molinia caerulea Phalaris arundinacea Plantago major Polygonum depressum Pteridium aquilinum Quercus x rosacea Quercus petraea Ranunculus repens Sorbus aucuparia Sorbus intermedia	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lvy Holly Soft rush Perennial rye-grass Purple moor-grass Reed canary-grass Greater plantain Common knotgrass Bracken Hybrid oak Sessile oak Creeping buttercup Rowan Swedish whitebeam	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R (O (J, SM) R (d) R (P by d) F, L/A in d R (d) R (P) R (d) R (D) R (D) R (D) R (J) R (J) O (J, SM) R (SM)			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium Juncus effusus Lolium perenne Molinia caerulea Phalaris arundinacea Plantago major Polygonum depressum Pteridium aquilinum Quercus x rosacea Quercus petraea Ranunculus repens Sorbus aucuparia Sorbus intermedia Taraxacum	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lvy Holly Soft rush Perennial rye-grass Purple moor-grass Reed canary-grass Greater plantain Common knotgrass Bracken Hybrid oak Sessile oak Creeping buttercup Rowan Swedish whitebeam Dandelion	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R (O (J, SM) R (d) R (P by d) F, L/A in d R (d) R (P) R (d) A (being puller R (J) O, L/F (J, SM) R (d) O (J,SM) R (SM) R (SM) R (P)			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium Juncus effusus Lolium perenne Molinia caerulea Phalaris arundinacea Plantago major Polygonum depressum Pteridium aquilinum Quercus x rosacea Quercus petraea Ranunculus repens Sorbus aucuparia Sorbus intermedia	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lvy Holly Soft rush Perennial rye-grass Purple moor-grass Reed canary-grass Greater plantain Common knotgrass Bracken Hybrid oak Sessile oak Creeping buttercup Rowan Swedish whitebeam	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R (O (J, SM) R (d) R (P by d) F, L/A in d R (d) R (P) R (d) R (D) R (D) R (D) R (J) R (J) O (J, SM) R (SM)			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium Juncus effusus Lolium perenne Molinia caerulea Phalaris arundinacea Plantago major Polygonum depressum Pteridium aquilinum Quercus x rosacea Quercus petraea Ranunculus repens Sorbus aucuparia Sorbus intermedia Taraxacum	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lvy Holly Soft rush Perennial rye-grass Purple moor-grass Reed canary-grass Greater plantain Common knotgrass Bracken Hybrid oak Sessile oak Creeping buttercup Rowan Swedish whitebeam Dandelion Nettle	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R (O (J, SM) R (d) R (P by d) F, L/A in d R (d) R (P) R (d) A (being puller R (J) O, L/F (J, SM) R (d) O (J,SM) R (SM) R (P) R (P)			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium Juncus effusus Lolium perenne Molinia caerulea Phalaris arundinacea Plantago major Polygonum depressum Pteridium aquilinum Quercus x rosacea Quercus petraea Ranunculus repens Sorbus aucuparia Sorbus intermedia Taraxacum	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lvy Holly Soft rush Perennial rye-grass Purple moor-grass Reed canary-grass Greater plantain Common knotgrass Bracken Hybrid oak Sessile oak Creeping buttercup Rowan Swedish whitebeam Dandelion	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R (O (J, SM) R (d) R (P by d) F, L/A in d R (d) R (P) R (d) A (being puller R (J) O, L/F (J, SM) R (d) O (J,SM) R (SM) R (SM) R (P)			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium Juncus effusus Lolium perenne Molinia caerulea Phalaris arundinacea Plantago major Polygonum depressum Pteridium aquilinum Quercus x rosacea Quercus petraea Ranunculus repens Sorbus aucuparia Sorbus intermedia Taraxacum	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lwy Holly Soft rush Perennial rye-grass Purple moor-grass Reed canary-grass Greater plantain Common knotgrass Bracken Hybrid oak Sessile oak Creeping buttercup Rowan Swedish whitebeam Dandelion Nettle Cushion moss	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R (O (J, SM) R (d) R (P by d) F, L/A in d R (d) R (P) R (d) A (being puller R (J) O, L/F (J, SM) R (d) O (J,SM) R (SM) R (P) R (P)			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium Juncus effusus Lolium perenne Molinia caerulea Phalaris arundinacea Plantago major Polygonum depressum Pteridium aquilinum Quercus x rosacea Quercus petraea Ranunculus repens Sorbus aucuparia Sorbus intermedia Taraxacum	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lwy Holly Soft rush Perennial rye-grass Purple moor-grass Reed canary-grass Greater plantain Common knotgrass Bracken Hybrid oak Sessile oak Creeping buttercup Rowan Swedish whitebeam Dandelion Nettle Cushion moss Gatekeeper butterfly	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R (O (J, SM) R (d) R (P by d) F, L/A in d R (d) R (P) R (d) A (being puller R (J) O, L/F (J, SM) R (d) O (J,SM) R (SM) R (P) R (P)			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium Juncus effusus Lolium perenne Molinia caerulea Phalaris arundinacea Plantago major Polygonum depressum Pteridium aquilinum Quercus x rosacea Quercus petraea Ranunculus repens Sorbus aucuparia Sorbus intermedia Taraxacum Urtica dioica	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lwy Holly Soft rush Perennial rye-grass Purple moor-grass Reed canary-grass Greater plantain Common knotgrass Bracken Hybrid oak Sessile oak Creeping buttercup Rowan Swedish whitebeam Dandelion Nettle Cushion moss	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R (O (J, SM) R (d) R (P by d) F, L/A in d R (d) R (P) R (d) A (being puller R (J) O, L/F (J, SM) R (d) O (J,SM) R (SM) R (P) R (P)			
Betula pendula Betula x aurata Chamaenerion angustifolium Deschampsia flexuosa Digitalis purpurea Epilobium hirsutum Geum urbanum Hedera helix Ilex aquifolium Juncus effusus Lolium perenne Molinia caerulea Phalaris arundinacea Plantago major Polygonum depressum Pteridium aquilinum Quercus x rosacea Quercus petraea Ranunculus repens Sorbus aucuparia Sorbus intermedia Taraxacum Urtica dioica	Silver birch Hybrid birch Rosebay willowherb Wavy hair-grass Foxglove Great willowherb Wood avens lyy Holly Soft rush Perennial rye-grass Purple moor-grass Reed canary-grass Greater plantain Common knotgrass Bracken Hybrid oak Sessile oak Creeping buttercup Rowan Swedish whitebeam Dandelion Nettle Cushion moss Gatekeeper butterfly Speckled Wood butterfly	F, L/A (M) F, L/A (J) R (P) O R R (d) R (d) R (O (J, SM) R (d) R (P by d) F, L/A in d R (d) R (P) R (d) A (being puller R (J) O, L/F (J, SM) R (d) O (J,SM) R (SM) R (P) R (P)			

Compartment 5 - Heathland -	SJ 2576 8215 TO SJ 25798212 -	18/8/20 (HA,TG	,MBS)		
1998 boundary no longer					
traceable, so this refers to					
,					
approximately the same area					
above the bottom path (below the	e				
path was recorded with comp 3)					
Western triangle recently cleared, need	ds more work, but some heathland plants	present. Rest of	compartment und	leared, but there i	s heather under
(Dwarf shrubs: V = Vigorous, I=	Intermediate M – Moribund)				
	oling size, SM = semi mature, M =	mature			
Calluna valgaria	Lloothou/line	Δ.	Laama M		
Calluna vulgaris	Heather/ling	Α	I some M		
Erica cinerea	Bell-heather	F	1		
Ulex europaea	European gorse	0	ı		
· · · · · · · · · · · · · · · · · · ·		-			
Ulex gallii	Western gorse	Α	I		
Betula pendula	Silver birch	A (J)			
Betula x aurata	Hybrid birch	A (J)			
	•				
Pinus nigra	Black pine	R (M)			
Pteridium aquilinum	Bracken	0			
Pinus nigra	Black pine	R			
· · · · · · · · · · · · · · · · · · ·					
Rubus fruticosus agg	Bramble	0			
Hypnum cupressiforme	Cypress-leaved plait-moss	F			
Compartment 6 - Woodland -	SJ XXXX XXXX - DATE - (INITIA	LS)			
Compartment 7 - Heathland -	SJ 2588 8210 - 15/8/2020 (HA, A	I, MBS)			
·		·			
(Dwarf shrubs: V = Vigorous, I =	·				
Trees: J=juvenile=whips to saplir	ng size, SM = semi-mature, M=ma	ture			
P = Path					
Calluna vulgaris	Heather/ling	F, L/A	V, some I		
Erica cinerea	Bell-heather	O, L/A	V		
Ulex europaea	European gorse	F, L/A	V		
Ulex gallii	Western gorse	O, L/A	V		
Vaccinium myrtillus	Bilberry	R, L/A	V		
vaccinium myrunus	Bliberry	IX, L/A	V		
Agrostis capillaris	Common bent	O, L/A (P)			
· .					
Betula pendula	Silver birch	A (M)			
Betula x aurata	Hybrid birch	A (J)			
Carex pilulifera	Pill sedge	R - c. 10 plan	te		
· · · · · · · · · · · · · · · · · · ·					
Chamaenerion angustifolium	Rosebay willowherb	R (P)			
Deschampsia flexuosa	Wavy hair-grass	R, L/O (P)			
Digitalis purpurea	Foxglove	R			
Geum urbanum	Wood avens	R (P)			
Hedera helix		R			
	My				
Holcus lanatus	Yorkshire fog	O (P)			
Hypochaeris radicata	Cat's-ear	O,L/F (P)			
llex aquifolium	Holly	R			
Lapsana communis	Nipplewort	R			
Lolium perenne	Perennial rye-grass	O (P)			
Molinia caerulea	Purple moor-grass	R			
Persicaria maculosa	Redshank	R			
Pinus nigra	Black pine	R			
Pteridium aquilinum	Bracken	F, L/A			
Quercus x rosacea	Hybrid oak	O (J)			
Quercus petraea	Sessile oak	O (J)			
•			along poths'		
Quercus petraea	Sessile oak	O (M) (5 seer	aiong patris)		-
Rubus fruticosus agg	Bramble Shapple correl	0			
Rumex acetosella	Sheep's sorrel Broad-leaved dock	O (D)			
Rumex obtusifolius		R (P)			
Senecio sylvaticus	Heath groundsel	0			
Sorbus aucuparia	Rowan	O (J)			
Taxus baccata	Yew	R			
Hypnum cupressiforme	Cypress-leaved plait-moss	0			
Brachythecium rutabulum	Rough-stalked feather-moss	R			
A ! II! f -	H				
Apis mellifera	Honeybee				
Bombus lucorum/terrestis	White/buff tail bumblebee				
Bombus pascuorum	Common carder bumblebee				
Lycaena phlaeus	Small copper butterfly				
· '					
Earth ball		R (P)	L		

NOTES					
Working north (by comp 5) to	south (by Sixty Steps):				
3) Area burnt February 2019.	Very good heathland regeneration.	Mostly Ling/hea	ther (A) with so	me Bell heath	ner (O, L/A) and
Western gorse (O, L/A). A ver	y little birch and bracken, which coul	d be removed.			
1) Uncleared patch, but good	heather under 4m tall birch, so wort	h clearing.			
5) Woodland as land falls awa	ay near Sixty Steps - birch and Euro	pean gorse with	out dwarf shrub	os.	
Woodland along path that c	livides compartment 7 from com	partment 8, so	growing in be	oth. Prelimin	ary survey.
Canopy					
Betula pendula	Silver birch	D, 90% cover			
Understorey		very little cove			
Onderstorey		very inde cove	1, Ca. 10 /6		
lex aquifolium	Holly, SM				
Quercus petraea	Sessile oak SM				
Sorbus aucuparia	Rowan SM				
Taxus baccata	Yew				
Ground layer					
A cor populatorus	Symposo I				
Acer pseudoplatanus Agrostis capillaris	Sycamore J Common bent				
Agrostis capillaris Anthriscus sylvestris					
Anthriscus sylvestris Dactylis glomerata	Cow parsley Cocksfoot				
	Broad buckler-fern				
Oryopteris dilatata Oryopteris filix-mas	Male fern				
Geranium robertianum	Herb Robert				
Geranium robertianum Geum urbanum	Wood avens				
	vvood avens Honeysuckle				
Lonicera periclymenum					
Pteridium acquilinum	Bracken				
Rubus fruticosus	Bramble				
Urtica dioica Bare ground	Stinging nettle Bare ground				
3					
	4) 0 1 0507 0045 0)0 1 0500 004	0 45/0/0000 //	IA MDC AN		
Two heathland areas separate		2 - 15/8/2020 (H	HA, MBS, AI)		
Two heathland areas separate (Dwarf shrubs: V = Vigorous,			HA, MBS, AI)		
Two heathland areas separate (Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge	ed by the damp valley. I = Intermediate, M = Moribund) pling size, SM = semi-mature, M=mature,	ature			
Two heathland areas separate (Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sa	ed by the damp valley. I = Intermediate, M = Moribund)	ature F, L/A	1) M-I, 2) V-I		
Two heathland areas separate (Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea	ed by the damp valley. I = Intermediate, M = Moribund) pling size, SM = semi-mature, M=mature,	eture F, L/A F, L/A	1) M-l, 2) V-l 1)l-M, 2)l		
Two heathland areas separate Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea	ed by the damp valley. I = Intermediate, M = Moribund) pling size, SM = semi-mature, M=mature,	F, L/A F, L/A F, L/A	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V		
Two heathland areas separate Dwarf shrubs: V = Vigorous, Frees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex gallii	led by the damp valley. I = Intermediate, M = Moribund) poling size, SM = semi-mature, M=mature, M=matur	eture F, L/A F, L/A	1) M-l, 2) V-l 1)l-M, 2)l	JA	
Two heathland areas separate Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex gallii	Heather/ling Bell-heather European gorse Western gorse	F, L/A F, L/A F, L/A O,L/A	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V	JA	
Two heathland areas separate Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea Jlex gallii Vaccinium myrtillus	Heather/ling Bell-heather European gorse Western gorse	F, L/A F, L/A F, L/A O,L/A O, L/A	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L	JA	
Two heathland areas separate Dwarf shrubs: V = Vigorous, Frees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea Jlex gallii /accinium myrtillus	Heather/ling Bell-heather European gorse Western gorse Bilberry	F, L/A F, L/A F, L/A O,L/A O, L/A R F, L/A (M + SI	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L	JA	
Two heathland areas separate Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea Jlex gallii /accinium myrtillus Agrostis capillaris Betula pendula	Heather/ling Bell-heather European gorse Western gorse Bilberry Common bent	F, L/A F, L/A F, L/A O,L/A O, L/A	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L	JA	
Two heathland areas separate Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea Jlex gallii /accinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa	Heather/ling Bell-heather European gorse Western gorse Bilberry Common bent Silver birch Hybrid birch Sweet chestnut	F, L/A F, L/A F, L/A O,L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P)	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L	J/A	
Fwo heathland areas separate Dwarf shrubs: V = Vigorous, Frees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea Jlex gallii Vaccinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium	Heather/ling Bell-heather European gorse Western gorse Bilberry Common bent Silver birch Hybrid birch Sweet chestnut Rosebay willowherb	F, L/A F, L/A F, L/A O,L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P)	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L	JA	
Two heathland areas separate Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea Jlex gallii /accinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana	Heather/ling Bell-heather European gorse Western gorse Bilberry Common bent Silver birch Hybrid birch Sweet chestnut Rosebay willowherb Enchanter's Memoribund) Heather/ling Bell-heather European gorse Western gorse Bilberry	F, L/A F, L/A F, L/A O,L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L	JA	
Two heathland areas separate Dwarf shrubs: V = Vigorous, Frees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea Jlex gallii /accinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp	Heather/ling Bell-heather European gorse Western gorse Bilberry Common bent Silver birch Hybrid birch Sweet chestnut Rosebay willowherb Enchanter's-nightshade Cotoneaster	F, L/A F, L/A F, L/A O,L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R (J)	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L	JA	
Two heathland areas separate Dwarf shrubs: V = Vigorous, Frees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea Jlex gallii /accinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata	ed by the damp valley. I = Intermediate, M = Moribund) pling size, SM = semi-mature, M=mature,	F, L/A F, L/A F, L/A O, L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R (J) R (P)	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L	JA	
Two heathland areas separate Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea Jlex gallii Vaccinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata Deschampsia flexuosa	l = Intermediate, M = Moribund) pling size, SM = semi-mature, M=mature, M=ma	F, L/A F, L/A F, L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R (J) R (P)	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L	JA	
Two heathland areas separate Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea Jlex gallii Vaccinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata Deschampsia flexuosa Digitalis purpurea	led by the damp valley. I = Intermediate, M = Moribund) Dling size, SM = semi-mature, M=mature, M=mature	F, L/A F, L/A F, L/A O,L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R (J) R (P) R	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L	J/A	
Two heathland areas separate Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea Jlex gallii Vaccinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata Deschampsia flexuosa Digitalis purpurea Epilobium montanum	led by the damp valley. I = Intermediate, M = Moribund) pling size, SM = semi-mature, M=mature, M=mature	F, L/A F, L/A F, L/A O, L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R (J) R (P) R R R O (P)	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L	JA	
wo heathland areas separate Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea Jlex gallii Vaccinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata Deschampsia flexuosa Digitalis purpurea Epilobium montanum Eagus sylvatica	led by the damp valley. I = Intermediate, M = Moribund) poling size, SM = semi-mature, M=mature, M=matur	F, L/A F, L/A F, L/A F, L/A O, L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R (J) R (P) R R R O (P) R (J-1 mtr)	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L	JA	
Two heathland areas separate Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea Jlex gallii /accinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata Deschampsia flexuosa Digitalis purpurea Epilobium montanum Fagus sylvatica Geum urbanum	led by the damp valley. I = Intermediate, M = Moribund) poling size, SM = semi-mature, M=mature, M=matur	F, L/A F, L/A F, L/A F, L/A O, L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R (J) R (P) R R O (P) R (J-1 mtr) R (P)	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L	J/A	
Two heathland areas separate Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea Jlex gallii /accinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata Deschampsia flexuosa Digitalis purpurea Epilobium montanum Tagus sylvatica Geum urbanum Hedera helix	l = Intermediate, M = Moribund) pling size, SM = semi-mature, M=mature, M=ma	F, L/A F, L/A F, L/A O, L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R (J) R (P) R O (P) R (J-1 mtr) R (P) R	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L	JA	
Two heathland areas separate Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex gallii Vaccinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata Deschampsia flexuosa Digitalis purpurea Epilobium montanum Eagus ylvatica Geum urbanum Hedera helix ex aquifolium	ed by the damp valley. I = Intermediate, M = Moribund) pling size, SM = semi-mature, M=maximum size, SM = semi-mature, SM = se	F, L/A F, L/A F, L/A F, L/A O, L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R R (J) R (P) R R O (P) R R (J-1 mtr) R (P) R R (J - 60cm)	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L	J/A	
Two heathland areas separate Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex gallii Vaccinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata Deschampsia flexuosa Digitalis purpurea Epilobium montanum Fagus sylvatica Beeum urbanum Hedera helix ex aquifolium Lapsana communis	ed by the damp valley. I = Intermediate, M = Moribund) pling size, SM = semi-mature, M=maximum size, SM = semi-mature, SM = se	F, L/A F, L/A F, L/A F, L/A O, L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R R (J) R (P) R R R (J,T mtr) R (P) R R (J - 60cm) R (P + cut are	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L	JA	
Two heathland areas separate Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea Jlex europaea Jlex gallii Vaccinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata Deschampsia flexuosa Digitalis purpurea Epilobium montanum agus sylvatica Geum urbanum Hedera helix ex aquifolium Lapsana communis Jolinia caerulea	l = Intermediate, M = Moribund) bling size, SM = semi-mature, M=mature, M=ma	F, L/A F, L/A F, L/A F, L/A O, L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R R (J) R (P) R R R O (P) R (J-1 mtr) R (P) R R (J - 60cm) R (P + cut are O, L/A	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L	JA	
Two heathland areas separate Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea Jlex gallii Vaccinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata Deschampsia flexuosa Digitalis purpurea Epilobium montanum Tagus sylvatica Geum urbanum Hedera helix ex aquifolium Lapsana communis Molinia caerulea Plantago major	l = Intermediate, M = Moribund) bling size, SM = semi-mature, M=mature, M=ma	F, L/A F, L/A F, L/A F, L/A O, L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R (J) R (P) R R R O (P) R (J-1 mtr) R (P) R R (J - 60cm) R (P + cut are O, L/A R (P)	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L	J/A	
Two heathland areas separate Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea Jlex gallii Vaccinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata Deschampsia flexuosa Digitalis purpurea Epilobium montanum Fagus sylvatica Geum urbanum Hedera helix eva aquifolium Lapsana communis Molinia caerulea Plantago major Pteridium aquilinum	led by the damp valley. I = Intermediate, M = Moribund) Dling size, SM = semi-mature, M=maximum size, SM = semi-mature, SM = s	F, L/A F, L/A F, L/A F, L/A O, L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R (J) R (P) R R R (J-1 mtr) R (P) R R (J-60cm) R (P + cut are O, L/A R (P) A	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L	JA	
Two heathland areas separate Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea Jlex gallii Vaccinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata Deschampsia flexuosa Digitalis purpurea Epilobium montanum Eagus sylvatica Geum urbanum Hedera helix ex aquifolium apsana communis Molinia caerulea Plantago major Pteridium aquilinum Quercus x rosacea	led by the damp valley. I = Intermediate, M = Moribund) poling size, SM = semi-mature, M=mature, M=matur	F, L/A F, L/A F, L/A F, L/A O, L/A O, L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R (J) R (P) R R R O (P) R (J-1 mtr) R (P) R R (J - 60cm) R (P + cut are O, L/A R (P) A R, (J+ SM)	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L	JA	
Two heathland areas separate Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Crica cinerea Dlex gallii Vaccinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata Deschampsia flexuosa Digitalis purpurea Epilobium montanum Fagus sylvatica Geum urbanum Hedera helix ex aquifolium Lapsana communis Molinia caerulea Plantago major Pteridium aquilinum Quercus x rosacea Quercus petraea	led by the damp valley. I = Intermediate, M = Moribund) Dling size, SM = semi-mature, M=mature, M=mature	F, L/A F, L/A F, L/A F, L/A O, L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R (J) R (P) R R R O (P) R (J-1 mtr) R (P) R R (J - 60cm) R (P + cut are O, L/A R (P) A R, (J + SM) O (J + SM)	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L W)		ting sick
Two heathland areas separate Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex gallii /accinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata Deschampsia flexuosa Digitalis purpurea Epilobium montanum Eagum urbanum Hedera helix lex aquifolium Lapsana communis Molinia caerulea Plantago major Peteridium aquilinum Quercus x rosacea Quercus petraea Quercus petraea Quercus robur	l = Intermediate, M = Moribund) pling size, SM = semi-mature, M=mature, SM = semi-mature, SM = semi-mature	F, L/A F, L/A F, L/A F, L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R (J) R (P) R R R (J) R (P) R R R (J - 60cm) R (P + cut are O, L/A R (P) A R, (J + SM) O (J + SM) R (J) = 1 planter	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L		king sick
Fwo heathland areas separate Dwarf shrubs: V = Vigorous, Frees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Ulex gallii Vaccinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata Deschampsia flexuosa Digitalis purpurea Epilobium montanum Fagus sylvatica Geum urbanum Hedera helix lex aquifolium Lapsana communis Molinia caerulea Plantago major Pteridium aquilinum Quercus x rosacea Quercus petraea Quercus robur Rubus fruticosus agg	led by the damp valley. I = Intermediate, M = Moribund) Dling size, SM = semi-mature, M=mature, M=mature	F, L/A F, L/A F, L/A F, L/A O, L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R (J) R (P) R R R O (P) R (J-1 mtr) R (P) R R (J - 60cm) R (P + cut are O, L/A R (P) A R, (J + SM) O (J + SM)	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L W)		king sick
Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea Jlex gallii Vaccinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata Deschampsia flexuosa Digitalis purpurea Epilobium montanum Fagus sylvatica Geum urbanum Hedera helix lex aquifolium Cuercus x rosacea Quercus petraea Quercus robur Rubus fruticosus agg Gorbus aucuparia	l = Intermediate, M = Moribund) bling size, SM = semi-mature, M=mature, SM = semi-mature, SM = semi-mature	F, L/A F, L/A F, L/A F, L/A O, L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R R (J) R (P) R R R (J-1 mtr) R (P) R R (P + cut are O, L/A R (P) A R, (J+ SM) O (J + SM) R (J)= 1 plante O (E)	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L W)		king sick
Fwo heathland areas separate Dwarf shrubs: V = Vigorous, Frees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Jlex europaea Jlex gallii Vaccinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata Deschampsia flexuosa Digitalis purpurea Epilobium montanum Fagus sylvatica Geum urbanum Hedera helix lex aquifolium Lapsana communis Molinia caerulea Plantago major Pteridium aquilinum Quercus x rosacea Quercus petraea Quercus petraea Quercus robur Rubus fruticosus agg Sorbus aucuparia	led by the damp valley. I = Intermediate, M = Moribund) Dling size, SM = semi-mature, M=mature, SM = semi-mature, M=mature,	F, L/A F, L/A F, L/A F, L/A O, L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R (J) R (P) R R O (P) R (J-1 mtr) R (P) R R (J - 60cm) R (P + cut are O, L/A R (P) A R, (J + SM) O (J + SM) O (J) O (J) O (J)	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L W)		king sick
Two heathland areas separate Dwarf shrubs: V = Vigorous, Frees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Ulex curopaea Ulex gallii Vaccinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata Deschampsia flexuosa Digitalis purpurea Epilobium montanum Fagus sylvatica Geum urbanum Hedera helix lex aquifolium Lapsana communis Molinia caerulea Plantago major Peteridium aquilinum Quercus x rosacea Quercus petraea Quercus petraea Quercus robur Rubus fruticosus agg Sorbus aucuparia Hypnum cupressiforme Apis mellifera Autographa gamma	l = Intermediate, M = Moribund) bling size, SM = semi-mature, M=mature, SM = semi-mature, SM = s	F, L/A F, L/A F, L/A F, L/A O, L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R (J) R (P) R R O (P) R (J-1 mtr) R (P) R R (J - 60cm) R (P + cut are O, L/A R (P) A R, (J + SM) O (J + SM) O (J) O (J) O (J)	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L W)		king sick
Two heathland areas separate (Dwarf shrubs: V = Vigorous, Trees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Vaccinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata Deschampsia flexuosa Digitalis purpurea Epilobium montanum Fagus sylvatica Geum urbanum Hedera helix lex aquifolium Lapsana communis Molinia caerulea Plantago major Pteridium aquilinum Quercus x rosacea Quercus petraea Quercus petraea Quercus pobur Rubus fruticosus agg Sorbus aucuparia Hypnum cupressiforme Apis mellifera Autographa gamma Bombus lucorum/terrestris	l = Intermediate, M = Moribund) bling size, SM = semi-mature, M=mature, SM = semi-mature, M=mature, M=matu	F, L/A F, L/A F, L/A F, L/A O, L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R (J) R (P) R R O (P) R (J-1 mtr) R (P) R R (J - 60cm) R (P + cut are O, L/A R (P) A R, (J + SM) O (J + SM) O (J) O (J) O (J)	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L W)		king sick
Two heathland areas separate Dwarf shrubs: V = Vigorous, Frees: J=juvenile=whips to sap P = Paths only E = Edge Calluna vulgaris Erica cinerea Ulex curopaea Ulex gallii Vaccinium myrtillus Agrostis capillaris Betula pendula Betula x aurata Castanea sativa Chamaenerion angustifolium Circaea lutetiana Cotoneaster spp Dactylis glomerata Deschampsia flexuosa Digitalis purpurea Epilobium montanum Fagus sylvatica Geum urbanum Hedera helix lex aquifolium Lapsana communis Molinia caerulea Plantago major Peteridium aquilinum Quercus x rosacea Quercus petraea Quercus petraea Quercus robur Rubus fruticosus agg Sorbus aucuparia Hypnum cupressiforme Apis mellifera Autographa gamma	l = Intermediate, M = Moribund) bling size, SM = semi-mature, M=mature, SM = semi-mature, SM = s	F, L/A F, L/A F, L/A F, L/A O, L/A O, L/A R F, L/A (M + SI F, L/A (J) R (J,P) O R R (J) R (P) R R O (P) R (J-1 mtr) R (P) R R (J - 60cm) R (P + cut are O, L/A R (P) A R, (J + SM) O (J + SM) O (J) O (J) O (J)	1) M-I, 2) V-I 1)I-M, 2)I 1)I, 2)V 1)I, 2)V 1)I, 2) V and L W)		king sick

NOTES					
•	good parcel of dwarf shrubs, w				
early 2020 by volunteers). Brack	cen on slopes. Two white-flowere	ed bell heather -	probably a nati	ural colour form,	as remote from
North of ditch. Good heathlar	nd with Ling, Bell heather, Bilber	ry and Western o	gorse, all mostl	y V, some I. Bra	cken abundan
Compartment 8 - Damp Valley	v - S 126028214 - 15/9/2020 (U	A IM AI)			
Compartment 6 - Damp Valle	y - SJ26038214 - 15/8/2020 (H	A, JIVI, AI)			
Dwarf shrubs: V = Vigorous, I =	= Intermediate, M = Moribund)				
Trees: I-iuwenile-whine to sanli	ing size, SM = semi-mature, M=	mature			
rrees. J=juverilie=wriips to sapii	ing size, Sivi = semi-mature, ivi=i	mature			
Calluna vulgaris	Heather/ling	R	V		
Ulex gallii	Western gorse	R	V		
Betula x aurata	Hybrid birch	F, L/A (J)			
Carex binervis	Green-ribbed sedge	0			
Chamaenerion angustifolium	Rosebay willowherb	R			
Cytisus scoparius	Broom	0			
Juncus effusus	Soft rush	R A L/D			
Molinia caerulea Pteridium aquilinum	Purple moor-grass Bracken	A, L/D F, L/A			
Quercus petraea	Sessile oak	R (J)			
Rubus fruticosus agg	Bramble	F			
Salix cinerea	Common sallow	R (J)			
NOTES					
Lip in ground about half way do	wn. After that the flora is only Pte	eridium aquilinur	n. Rubus frutice	sus and Betula	sp. and condi
damp.					
	Purple moor-grass, with bracken	on slopes. Only	trace of damp	area flora listed	in SSSI citation
ew plants of Green-ribbed sed	je.				
Compartment 9 - Woodlands	- SJxxxxxxxx - date (initials)				
,					
Compartment 10 - Woodland	s - SJxxxxxxxx - date (initials)			
Compartment 11 - Heathland	- SJ 2614 8120 - 17/8/2020 (H	A, MBS, AB)			
(Durant abrillia 1/ Vincerous I					
(Dwan shrubs: v = vigorous, r=					
Troca: Liungarila-whipa to conli	= Intermediate, M = Moribund)	moturo			
	= Intermediate, M = Moribund) ing size, SM = semi-mature, M=I	mature			
		mature			
P = Path	ing size, SM = semi-mature, M=i	mature			
P = Path	ing size, SM = semi-mature, M=i	mature			
P = Path Weather conditions: damp, clou	ing size, SM = semi-mature, M=I udy, cool Heather/ling	mature F, L/A	V (few I)		
P = Path Weather conditions: damp, clou Calluna vulgaris Erica cinerea	ing size, SM = semi-mature, M=i udy, cool	F, L/A F, L/A	V		
P = Path Weather conditions: damp, clou Calluna vulgaris Erica cinerea Ulex europaea	ing size, SM = semi-mature, M=i udy, cool Heather/ling Bell-heather European gorse	F, L/A F, L/A A	V		
P = Path Weather conditions: damp, clou Calluna vulgaris Erica cinerea Ulex europaea	ing size, SM = semi-mature, M=i udy, cool Heather/ling Bell-heather	F, L/A F, L/A	V		
P = Path Weather conditions: damp, clou Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii	ing size, SM = semi-mature, M=i udy, cool Heather/ling Bell-heather European gorse Western gorse	F, L/A F, L/A A O, L/A	V		
P = Path Weather conditions: damp, clou Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris	ing size, SM = semi-mature, M=i udy, cool Heather/ling Bell-heather European gorse Western gorse Common bent	F, L/A F, L/A A O, L/A	V		
P = Path Weather conditions: damp, clou Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula	ing size, SM = semi-mature, M=1 udy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch	F, L/A F, L/A A O, L/A O, L/A (P)	V		
P = Path Weather conditions: damp, clou Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata	ing size, SM = semi-mature, M=i udy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch	F, L/A F, L/A A O, L/A O, L/A (P) A	V		
P = Path Weather conditions: damp, clou Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge	F, L/A F, L/A A O, L/A O, L/A (P) A A	V		
P = Path Weather conditions: damp, clou Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium	ing size, SM = semi-mature, M=i udy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch	F, L/A F, L/A A O, L/A O, L/A R R	V		
P = Path Weather conditions: damp, clou Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom	F, L/A F, L/A A O, L/A O, L/A R R R R R(P)	V		
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata	ing size, SM = semi-mature, M=i udy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb	F, L/A F, L/A A O, L/A O, L/A R R	V		
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass	F, L/A F, L/A A O, L/A O, L/A P A R R R R(P) R(P)	V		
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass	F, L/A F, L/A A O, L/A O, L/A P A A R R R R(P) R(P)	V		
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern	F, L/A F, L/A A O, L/A O, L/A O, L/A (P) A R R R R(P) R (P) R R R R	V		
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas Geranium cv	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape	F, L/A F, L/A A O, L/A O, L/A O, L/A P A R R R R R(P) R (P) R R R R R R R R R R R R	V		
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas Geranium cv Geranium robertianum	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape Herb robert	F, L/A F, L/A A O, L/A O, L/A O, L/A P A R R R R R R R R R R R R R R R R R	V		
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas Geranium cv Geranium robertianum Hedera helix	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape Herb robert lvy	F, L/A F, L/A A O, L/A O, L/A P A R R R R(P) R(P) R R R R R R R R R R R R R R	V		
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas Geranium cv Geranium robertianum Hedera helix Hieracium vagum	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape Herb robert lvy Hawkweed	F, L/A F, L/A A O, L/A O, L/A O, L/A (P) A A R R R R(P) R(P) R R R R R R R R R R R R R R R R R R R	V		
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas Geranium cv Geranium robertianum Hedera helix Hieracium vagum Holcus lanatus	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape Herb robert Ny Hawkweed Yorkshire fog	F, L/A F, L/A A O, L/A O, L/A O, L/A (P) A A R R R R R R R R(P) R R R R R R R R R R R R R R R R R R R	V		
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas Geranium cv Geranium robertianum Hedera helix Hieracium vagum Holcus lanatus Hypochaeris radicata	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape Herb robert Ny Hawkweed Yorkshire fog Cat's-ear	F, L/A F, L/A A O, L/A O, L/A O, L/A (P) A R R R R(P) R(P) R R R R R R R R R R R R R R R R R R R	V		
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas Geranium cv Geranium robertianum Hedera helix Hieracium vagum Holcus lanatus Hypochaeris radicata Lolium perenne	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape Herb robert Iny Hawkweed Yorkshire fog Cat's-ear Perennial rye-grass	F, L/A F, L/A A O, L/A O, L/A O, L/A P A R R R R R(P) R(P) R R R R R R R R R R R R R R R R R R R	V		
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas Geranium cv Geranium robertianum Hedera helix Hieracium vagum Holcus lanatus Hypochaeris radicata Lolium perenne Molinia caerulea	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape Herb robert My Hawkweed Yorkshire fog Cat's-ear Perennial rye-grass Purple moor-grass	F, L/A F, L/A A O, L/A O, L/A O, L/A R R R R R R R R R R R R R R R R R R R	V		
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas Geranium cv Geranium robertianum Hedera helix Hieracium vagum Holcus lanatus Hypochaeris radicata Lolium perenne Molinia caerulea Nardus Stricta	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape Herb robert My Hawkweed Yorkshire fog Cat's-ear Perennial rye-grass Purple moor-grass Mat-grass	F, L/A F, L/A A O, L/A O, L/A O, L/A P A R R R R R R R R R R R R R R R R R	V		
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas Geranium cv Geranium robertianum Hedera helix Hieracium vagum Holcus lanatus Hypochaeris radicata Lolium perenne Molinia caerulea Nardus stricta Plantago major	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape Herb robert Ivy Hawkweed Yorkshire fog Cat's-ear Perennial rye-grass Purple moor-grass Mat-grass Greater plantain	F, L/A F, L/A A O, L/A O, L/A O, L/A R R R R R R R R R R R R R R R R R R R	V	(houses)	
P = Path Weather conditions: damp, cloud calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas Geranium cv Geranium robertianum Hedera helix Hieracium vagum Holcus lanatus Hypochaeris radicata Lolium perenne Mollinia caerulea Nardus stricta Plantago major Prunus laurocerasus	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape Herb robert hy Hawkweed Yorkshire fog Cat's-ear Perennial rye-grass Purple moor-grass Mat-grass Greater plantain Cherry laurel	F, L/A F, L/A A O, L/A O, L/A O, L/A (P) A A R R R R(P) R(P) R R R R R R R R R R R R R R R R R R R	V V V	y houses)	
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas Geranium cv Geranium robertianum Hedera helix Hieracium vagum Holcus lanatus Hypochaeris radicata Lolium perenne Molinia caerulea Nardus stricta Plantago major Prunus laurocerasus Pteridium aquilinum	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape Herb robert Ny Hawkweed Yorkshire fog Cat's-ear Perennial rye-grass Purple moor-grass Mat-grass Greater plantain Cherry laurel Bracken	F, L/A F, L/A A O, L/A O, L/A O, L/A (P) A A R R R R(P) R(P) R R R R R, L/A (P) R R R R R, L/A (P) R R R R R R, L/A (P) R R R R R R R R R, L/A (P) R R R R R R R R R R R R R R R R R R R	V V V	y houses)	
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas Geranium cv Geranium robertianum Hedera helix Hieracium vagum Holcus lanatus Lolium perenne Molinia caerulea Nardus stricta Plantago major Prunus laurocerasus Pteridium aquilinum Quercus petraea	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape Herb robert ly Hawkweed Yorkshire fog Cat's-ear Perennial rye-grass Purple moor-grass Mat-grass Greater plantain Cherry laurel Bracken Sessile oak	F, L/A F, L/A A O, L/A O, L/A O, L/A P A R R R R R(P) R(P) R R R R R R R R R R R R R R R R R R R	V V V	y houses)	
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas Geranium cv Geranium robertianum Hedera helix Holcus lanatus Hypochaeris radicata Lolium perenne Molinia caerulea Nardus stricta Plantago major Prunus laurocerasus Pteridium aquilinum Quercus petraea Quercus sp	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape Herb robert lvy Hawkweed Yorkshire fog Cat's-ear Perennial rye-grass Purple moor-grass Mat-grass Greater plantain Cherry laurel Bracken Sessile oak Oak	F, L/A F, L/A A O, L/A O, L/A O, L/A A R R R R R R(P) R (P) R R R R R, L/A (P) R R R R R R, L/A (P) R R R R R R P) R R R R R R R R R R R	V V V	y houses)	
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas Geranium cv Geranium robertianum Hedera helix Hieracium vagum Holcus lanatus Hypochaeris radicata Lolium perenne Molinia caerulea Nardus stricta Plantago major Prunus laurocerasus Peteridium aquilinum Quercus petraea Quercus sp Rhododendron ponticum agg	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape Herb robert Ny Hawkweed Yorkshire fog Cat's-ear Perennial rye-grass Purple moor-grass Mat-grass Greater plantain Cherry laurel Bracken Sessile oak Oak Rhododendron	F, L/A F, L/A A O, L/A O, L/A O, L/A A R R R R R R R R R R R R R R R R R R	V V V	y houses)	
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P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas Geranium cv Geranium robertianum Hedera helix Hieracium vagum Holcus lanatus Hypochaeris radicata Lolium perenne Molinia caerulea Nardus stricta Plantago major Prunus laurocerasus Pteridium aquilinum Quercus petraea Quercus sp Rhododendron ponticum agg Rubus fruticosus agg Rumex acetosella Senecio sylvaticus	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape Herb robert My Hawkweed Yorkshire fog Cat's-ear Perennial rye-grass Purple moor-grass Mat-grass Greater plantain Cherry laurel Bracken Sessile oak Oak Rhododendron Bramble Sheep's sorrel	F, L/A F, L/A A O, L/A O, L/A O, L/A P A R R R R R(P) R R R R R R R R R R R R R R R R R R R	V V V	y houses)	
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas Geranium cv Geranium robertianum Hedera helix Hieracium vagum Holcus lanatus Hypochaeris radicata Lolium perenne Molinia caerulea Nardus stricta Plantago major Prunus laurocerasus Pteridium aquilinum Quercus petraea Quercus sp Rhododendron ponticum agg Rubus fruticosus agg Rubus fruticosus agg Rumex acetosella Genecio sylvaticus Gonchus arvensis	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape Herb robert Ny Hawkweed Yorkshire fog Cat's-ear Perennial rye-grass Purple moor-grass Mat-grass Greater plantain Cherry laurel Bracken Sessile oak Oak Rhododendron Bramble Sheep's sorrel Heath groundsel	F, L/A F, L/A A O, L/A O, L/A O, L/A R R R R R R R R R R R R R R R R R R R	V V V	y houses)	
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas Geranium cv Geranium robertianum Hedera helix Hieracium vagum Holcus lanatus Hypochaeris radicata Lolium perenne Wolinia caerulea Nardus stricta Plantago major Prunus laurocerasus Pteridium aquilinum Quercus petraea Quercus sp Rhododendron ponticum agg Rubus fruticosus agg Rumex acetosella Senecio sylvaticus Sonchus arvensis Sorbus aucuparia	Ing size, SM = semi-mature, M=I Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape Herb robert Ny Hawkweed Yorkshire fog Cat's-ear Perennial rye-grass Purple moor-grass Mat-grass Greater plantain Cherry laurel Bracken Sessile oak Oak Rhododendron Bramble Sheep's sorrel Heath groundsel Perennial sow-thistle	F, L/A F, L/A A O, L/A O, L/A O, L/A P A R R R R R R(P) R R R R R R R R R R R R R R R R R R R	V V V	y houses)	
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas Geranium cv Geranium robertianum Hedera helix Hieracium vagum Holcus lanatus Hypochaeris radicata Lolium perenne Molinia caerulea Nardus stricta Plantago major Prunus laurocerasus Pteridium aquilinum Quercus petraea Quercus sp Rhododendron ponticum agg Rubus fruticosus agg Rumex acetosella Senecio sylvaticus Sonchus aucuparia Stellaria media	Ing size, SM = semi-mature, M=I Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape Herb robert lyy Hawkweed Yorkshire fog Cat's-ear Perennial rye-grass Purple moor-grass Mat-grass Greater plantain Cherry laurel Bracken Sessile oak Oak Rhododendron Bramble Sheep's sorrel Heath groundsel Perennial sow-thistle Rowan	F, L/A F, L/A A O, L/A O, L/A O, L/A A R R R R R R(P) R (P) R R R R R, L/A (P) R R R R R R R R R R R R R R R R R R R	V V V	y houses)	
P = Path Weather conditions: damp, cloud Calluna vulgaris Erica cinerea Ulex europaea Ulex gallii Agrostis capillaris Betula pendula Betula x aurata Carex pilulifera Chamaenerion angustifolium Cytisus scoparius Dactylis glomerata Danthonia decumbens Deschampsia flexuosa Digitalis purpurea Dryopteris filix-mas Geranium cv Geranium robertianum Hedera helix Hieracium vagum Holcus lanatus Hypochaeris radicata Lolium perenne Molinia caerulea Nardus stricta Plantago major Prunus laurocerasus Peteridium aquilinum Quercus petraea Quercus sp Rhododendron ponticum agg Rubus fruticosus agg Rumex acetosella Senecio sylvaticus Sonchus arvensis Sorbus aucuparia Stellaria media Tamus communis	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape Herb robert Iny Hawkweed Yorkshire fog Cat's-ear Perennial rye-grass Purple moor-grass Mat-grass Greater plantain Cherry laurel Bracken Sessile oak Oak Rhododendron Bramble Sheep's sorrel Heath groundsel Perennial sow-thistle Rowan Common chickweed	F, L/A F, L/A A O, L/A O, L/A O, L/A O, L/A R R R R R R R R R R R R R R R R R R R	V V V	y houses)	
P = Path Weather conditions: damp, clou Calluna vulgaris Erica cinerea Ulex europaea	ing size, SM = semi-mature, M=i Judy, cool Heather/ling Bell-heather European gorse Western gorse Common bent Silver birch Hybrid birch Pill sedge Rosebay willowherb Broom Cock's-foot grass Heath-grass Wavy hair-grass Foxglove Male fern Geranium garden escape Herb robert My Hawkweed Yorkshire fog Cat's-ear Perennial rye-grass Purple moor-grass Mat-grass Greater plantain Cherry laurel Bracken Sessile oak Oak Rhododendron Bramble Sheep's sorrel Heath groundsel Perennial sow-thistle Rowan Common chickweed Black bryony	F, L/A F, L/A A O, L/A O, L/A O, L/A R R R R R R R R R R R R R R R R R R R	V V V	y houses)	

Cladonia pyxidata	Pixie cup lichen	0		
Hypnum cupressiforme	Cypress-leaved plait-moss	O,LA		
,	`Hair-point moss'	0		
	`star moss'	Ō		
moss specimens taken, to be ID		0		
moss specimens taken, to be in	, <u> </u>			
01 41:	0 " 11 1			
Chorthippus brunneus	Common field grasshopper			
Bare ground with mining bee (A	ndrena) holes	R		
Fox latrine, and 2 holes (disused	d fox holes?)			
NOTES				
Birch (Betula) felled and bracket	n (Pteridium aquilinium) nulled			
GPS taken in old fire patch - gro				
GF 3 takerrin old life paterr- gre	Willig back well			
Compartment 12 - Private land - no	tsurveyed			
Compartment 13 - Heathland	- SJ 2623 8193 - 17/8/2020 (HA	, MBS, AB, AI,	JM, NM)	
(Dwarf shrubs: V = Vigorous, I=	Intermediate, M = Moribund)			
Trees: J=iuvenile=whips to sapli	ng size, SM = semi-mature, M=m	ature		
P = Path				
Calluna vulgaris	Heather/ling	A, L/D	V (few I)	
U	-			
Erica cinerea	Bell-heather	F, L/A	V	
Ulex europaea	European gorse	F, L/A	V	
Ulex gallii	Western gorse	0	V	
Vaccinium myrtillus	Bilberry	O,L/A	V	
Agrostis capillaris	Common bent	R (P)		
Arrhenatherum elatius	False oat-grass	R (P)		
Betula pendula	Silver birch	F, L/A		
Betula x aurata	Hybrid birch	F, L/A		
Castanea sativa	Sweet chestnut	R (J)		
Chamaenerion angustifolium	Rosebay willowherb	O, L/F		
Deschampsia flexuosa	Wavy hair-grass	O, L/A		
Digitalis purpurea	Foxglove	O, L/A		
Epilobium montanum	Broad-leaved willowherb	R (P)		
Hypochaeris radicata	Cat's-ear	R		
llex aquifolium sapling	Holly sapling	R (J)		
Lonerica periclymenum	Honeysuckle	R		
		0		
Molinia caerulea	Purple moor-grass			
Nardus stricta	Mat-grass	R		
Phragmites australis	Reed grass	R, L/A		
Pinus nigra	Black pine	R (on garder	n edge)	
Pinus sylvestris	Scots pine	R (2 trees)		
Pteridium aquilinum	Bracken	A, L/D		
Quercus petraea	Sessile oak	R (J)		
Rubus fruticosus agg	Bramble	O		
Senecio sylvaticus	Heath groundsel	O, L/A		
Sorbus aucuparia	Rowan	O (J)		
σοιράδ αυσυραίτα	NOWAII	J (0)		
Lhannum our receifer	Cymrono le syrad wielt	01.4		
Hypnum cupressiforme	Cypress-leaved plait-moss	O,LA		
	Fruiting moss	0		
	hair-point moss	O,LA		
Cladonia sp	Curly lichen	R		
Cladonia pyxidata	Pixie cup lichen	0		
	·			
Zootoca vivipara	Common lizard		1	
			-	
Capaea nemoralis	brown-lipped banded snail	0.174		
Andricus kollari	Marble galls on oak regrowth	O, L/A		
Garden shrub (no ID)		R		
Fox latrine				
NOTES				
NUIES				
NOTES				
	older hurn approx 3 vears ago Ra	re around		
Fire on part 2/20 and traces of c	older burn approx 3 years ago. Ba			
		ore ground O, L/A		

Dwarf shrubs: V = Vigorous, I = I						
, , , , ,	g size, SM = semi-mature, M=mat	ture				
= Edge						
alluna vulgaris	Heather/ling	F,L/A	V			
rica cinerea	Bell-heather	Α	V			
llex europaea	European gorse	F,L/A	I			
llex gallii	Western gorse	Α	V			
accinium myrtillus	Bilberry	F,L/A	I			
grostis capillaris	Common bent	0				
etula pendula	Silver birch	O, L/D				
hamaenerion angustifolium	Rosebay willowherb	F				
ytisus scoparius	broom	R (E)				
Deschampsia flexuosa	Wavy hair-grass	F, L/D				
pilobium hirsutum	Great willowherb	R				
ledera helix	ly	R				
lypochaeris radicata	Cat's-ear					
7.		L/F (E)				
ex aquifolium	Holly	R (J) (E)				
lolinia caerulea	Purple moor-grass	F (F)				
lantago lanceolata	Ribwort plantain	R (E)				
teridium aquilinum	Bracken	A,L/D				
luercus petraea	Sessile oak	R				
ubus fruticosus agg	Bramble	F				
orbus aucuparia	Rowan	R(SM)				
orbus aucuparia	Rowan	R (J)				
araxacum sp	Dandelion	R				
•						
lypnum cupressiforme	Cypress-leaved plait-moss	0				
olytrichum sp	Haircap moss	R				
organorium sp			To be ID			
	Moss	O, L/D	10 be ID			
	Fungi	R				
epaea nemoralis	Brown lipped snail	R				
OODLAND - preliminary list.	17/8/20, (HA, MBS, AB, AI, JM,	NM)				
Canopy						
etula pendula	Silver birch	F,LA				
Quercus petraea	Sessile oak	O,M				
Sorbus aucuparia	Rowan	0				
orbus aucuparia	Nowali	U				
l						
Inderstorey - none						
Ground layer						
Calluna vulgaris	Heather/Ling	R				
eschampsia flexuosa	Wavy hair-grass	0				
ledera helix	lvy	0?				
1olinia caerulea	Purple moor-grass	0				
inus sp	Pine	R (J)				
teridium acquilinum	Bracken	A				
accinium myrtillus	Bilberry	0				
accirium myruius	Bliberry	0				
fore wooded in upper areas. The	fow boothland plants only are on	o otoon rook h	luff at the lawer	and		
iore wooded in upper areas. The	few heathland plants only are on	a sieep iock D	iuii ai iiie iower	GIIU		
SENERAL NOTES SOROS	(F: 0)					
GENERAL NOTES - 8/9/2020 - (Eric Greenwood)					
	<u> </u>					
had a trip to the Dales today and	made a few observations of inter	est.				
can confirm Hieracium vagum. I d	only found three or four plants and	they were sligh	ntly different to t	he ones in the	lane hedge ba	nks, in
nat there were a few glands at the	base of the involucre and the pla	int was general	lly less hairy tha	n usual. Appa	rently it is a con	nmon
orm in Yorkshire.						
he birches were interesting. Both	n species were present, plus one	with B. pendula	shaped leaves	and indentati	on, but densly h	nairy. If
	don't occur I would say this was a					
		J				
he oaks were mostly Ouercus vir	osacea, but some, particularly sa	anlings were o	lose to or were	O petraea la	saw no O robu	r
Jane 1100 moony Quorous Al				3. policion. 13	Q. 100UI	
rather fine whiteheam turned are	t to be Sorbus latifolia. I notice the	are is a record	for the tetrad by	It this was now	v to me	
radiei iire willebeam tumed ou	เ. เอ มอ ออกมนจ เสนาบแส. THOUCE (Ne	טוכ ום מ ופנטום	ioi uic icildu Di	at uno was new	, wille.	
ahuana laak siddaa a 11	ama and lives set di	I for most the	anto of D	min aff:!- '	final H-1- ! !!	
	erns and I was not disappointed.			rıs aπınıs s.s. l	ting this is the	most
ommon in Wirral, with D. borreri	being quite rare. I have yet to find	ப. cambrensis	5.			
	nd Equisetum x litorale. It is a large					
ut the stem is 50% hollow. Unfort	unately there was not much of it, a	and I could not	quite convince i	myself that the	stem really was	s more
r less hollow.						
is years since I visited the Dales	, and i was struck by how invasive	the woodland	has become.			
Daks - Hilary Ash						
					1	
a SSSI citation montions Occasion	hur but not aither O netrose or the but	rid This must be	an arror in the cit	ation The bubel-		
	bur, but not either Q. petraea or the hyb SSI citations were last checked in					ough

5.6 : Natural England Consent List



Heswall DalesSite of Special Scientific Interest of Merseyside ("the SSSI")

CONSENT OF NATURAL ENGLAND

Section 28E(3)(a) Wildlife and Countryside Act 1981 (as amended and inserted by section 75 and Schedule 9 of the Countryside and Rights of Way Act 2000)

To:

Dan Travis

Of:

Wirral Borough Council, Parks & Countryside Dept. - Wirral South, Warren Farm Depot, Warren Lane, Bromborough, CH62 3QQ

Natural England gives you consent to carry out, cause or permit to be carried out the operations specified below, on the land specified below:-

Specified operations:

To carry out management (maintenance and restoration works) on all land which is within Wirral Borough Council ownership and falls within the Heswall Dales SSSI boundary, though this land may fall outside the scope of current Higher Level Stewardship (HLS) Scheme Agreement (AG00380342).

Details of proposed operations:

This Consent grants permission to the Wirral Borough Council to undertake all necessary operations as detailed in the HLS Agreement (AG00380342) on all land within its ownership in the SSSI, in particular but not exclusively Part 3 (Indicators of Success and Management Prescriptions) and Part 4 (Capital Works Plan).

Consented operations include: management of scrub, trees, shrubs, undesirable species and grasses by way of cutting, and mowing with a view to achieving favourable condition of the heathland.

Consent extends to all general maintenance operations not detailed with the HLS agreement. These are as follows below:

- Maintenance and restoration of existing boundaries, including fences and wall.
- · Maintenance of existing functioning drainage.
- Use of vehicles as necessary for routine site activities, with routes chosen carefully
 and changed as necessary to avoid rutting/damage to priority habitats.
- Small-scale maintenance of existing footpaths and tracks.
- Spreading of cut material in woodland areas to reduce erosion and curtail unconsented mountain biking and BMX activities.
- The storage of a water bowser / drum on site for fire-fighting purposes

Consent also extends to the burning of cut material in appropriate safe "burn sites", as identified by the Ranger. Burning to take place on tin sheets, raised off the ground using bricks or blocks. All necessary health, safety and wildfire precautions to be taken.

Additionally, consent for trial burning of cut material outside of these identified "burn sites" where the following conditions apply:

- 1. In areas where there is no easy vehicle access to remove cut material
- In areas where the topography makes pedestrian access with tin sheets and other equipment necessary for burning prohibitively time consuming
- In areas where European gorse (not Western gorse) is dominant and current management (cut and stump treat) has made little or no different to the area of gorse dominated habitat and/or gorse density within that habitat

In the areas described above, trial burns should take place as described below. Always burn in non-sensitive areas wherever possible.

- In non-sensitive areas (areas with little or no pioneer dwarf shrub re-growth or with less than 30% maturing heathland vegetation, excluding European gorse), burning is permitted to take place directly on the ground. Burn sites must be rotated.
- In sensitive areas (areas with significant pioneer dwarf shrub re-growth or with 30% or greater maturing heathland vegetation, including Western gorse and grasses), burning is permitted to take place on tin sheets placed directly on the heathland vegetation. Burn sites must be rotated.

Land on which operations are to be carried out:

Heswall Dales SSSI - Wirral Borough Council land holding

Timing of proposed operations:

This Consent will expire alongside the expiry of the HLS (AG00380342) agreement – 28th February 2022

Signed for Natural England:

Date:

11-12-2017

If you wish to change the proposed operations or their location or to carry out additional operations for which consent has not yet been given, or if a time period set out above, has expired, you are required to give further written notice to Natural England.

Unauthorised operations may destroy, damage or disturb features of special scientific interest.

It is the responsibility of the grantee of this consent to ensure that no other consents, whether of a public or a private nature, are needed and, if needed, to secure them him/herself. The grantee is also responsible for carrying out the consented operation(s) safely and in all ways according to the law.



Natural England, 2nd floor, Arndale House, The Arndale Centre, Manchester, M4 3AG

If you have any queries or concerns over this consent, please contact Karen Rogers, at the above address.

Reference number of operations from SSSI notification documents, for Natural England's use only:

4,6,7,9,11,12,21,22,26

5.7 Environment Agency Waste Exemption Registrations

Waste exemption registration WEX262060

We confirm that the details you have entered, as shown below, are now on the exemptions register. Your registration should show on the public register within 5 days.

This document is not a permit. Exemptions may have ceased or been revoked.

To check whether these exemptions are still valid, check the company's registration WEX262060 on the public register of waste exemptions: https://environment.data.gov.uk/public-register/view/search-waste-exemptions

Business responsibilities

The business or organisation responsible for carrying out the exempt waste operations agrees to:

- · comply with all limits on waste types and quantities
- comply with all conditions governing how waste must be stored, handled and treated
- carry out the operations without endangering human health or harming the environment

For the operations to remain exempt they must be carried out without:

- · causing risk to water, air, soil, plants or animals
- causing a nuisance through noise and odours
- negatively affecting the countryside or places of special interest.

In sensitive locations, extra controls may be needed over and above those set out in the exemptions to make sure this happens.

Registration details

Registration details

Reference Number	WEX262060	
Date registered	13 January 2021	

Exemptions

Your contact details

Your name	Josef Hanik	
Your telephone number		
Your email address	josefhanik@wirral.gov.uk	

Waste operator details

Business or organisation type	Local authority or public body	

Waste exemption registration WEX295554

We confirm that the details you have entered, as shown below, are now on the exemptions register. Your registration should show on the public register within 5 days.

This document is not a permit. Exemptions may have ceased or been revoked.

To check whether these exemptions are still valid, check the company's registration WEX295554 on the public register of waste exemptions: https://environment.data.gov.uk/public-register/view/search-waste-exemptions

Business responsibilities

The business or organisation responsible for carrying out the exempt waste operations agrees to:

- · comply with all limits on waste types and quantities
- · comply with all conditions governing how waste must be stored, handled and treated
- carry out the operations without endangering human health or harming the environment

For the operations to remain exempt they must be carried out without:

- · causing risk to water, air, soil, plants or animals
- · causing a nuisance through noise and odours
- · negatively affecting the countryside or places of special interest

In sensitive locations, extra controls may be needed over and above those set out in the exemptions to make sure this happens.

Registration details

Registration details

Reference Number	WEX295554	
Date registered	22 January 2022	

Exemptions

U1: Use of waste in construction	Expires on 21 January 2025	
U12: Using mulch	Expires on 21 January 2025	
U13: Spreading plant matter to provide benefits	Expires on 21 January 2025	

Your contact details

Your name	Josef Hanik	
Your telephone number	+447776464294	
Your email address	josefhanik@wirral.gov.uk	

Waste operator details

Business or organisation type	Local authority or public body	
-------------------------------	--------------------------------	--

5.8 5 Year Action Plan

Action	Lead Officer	Target date	Funding source	Completed
Maintain/Improve Condition status of the SSSI	Manager/ Rangers	2022	Wirral Council and HLS grant	2020 2021 2022
Continue to remove invasive species such as Spanish bluebell	Friends Group/ Ranger	2022	Wirral Council	2020 2021 2022 2023 2024 2025
Renew/Install noticeboard near to Dale Farm entrance	Friends Group	2020	Grant funding	2020
Purchase of new machinery to assist with HLS management	Friends Group	2021	Grant funding	2021
Install another 3-finger signpost to promote easier movement around the Dales	Friends Group/Rangers	2020	Grant funding	2020
Create a longer-term plan/agreement with Rural Payments Agency to start after 2023	Manager and Rangers	2022	Wirral Council and any available grant funding	2022 2023 2024 2025
Develop opportunities for partnership working with Dale Farm Trust	Manager and Rangers	2020	Whistle Stop Café (Bee Wirral CIC) and 'Grow Wirral' initiative	2020* 2021 2022 2023 2024 2025
Update council website on Heswall Dales	Manager and Comms Leader	Ongoing	Wirral Council	2020 2021 2022 2023 2024 2025
Path improvements to improve disability access	Manager and Rangers	2022	PPM and HLS Grant	2022

^{*} Not completed due to Covid restrictions

5.9 : Wirral Parks and Countryside – Sustainability Statement

WIRRAL PARKS & COUNTRYSIDE TEAM

WIRRAL PARKS & COUNTRYSIDE SERVICE — SUSTAINABILITY

Aim : Wirral Parks & Countryside teams putting sustainability at the heart of decision making and service delivery.

Key Commitments:

In all our activities, We will:

- Improve our sustainable performance review, annually report, and continually improve our sustainability performance, including progressing on carbon reduction.
- Comply with environmental legislation, regulations and relevant codes of practise.
- Purchase sustainability. Select and promote goods and services, using purchasing criteria which balance economic, social and environmental factors, requiring our suppliers to address similar issues.
- Use Natural resources sustainably.
 Implement an efficiency programme to reduce energy and water demand and promote and install low carbon technologies in our buildings/ other constructions where possible, requiring contractors to address similar issues e.g. supplier miles, procurement, local labour etc.

- Travel sustainably. Encourage sustainable travel by staff, service users, contractors, residents and visitors.
- Minimise waste. Reduce, re-use and recycle resources, as far as is practicable, and ensure responsible disposal of all its residual waste.
- Manage land sustainability. Protect, conserve and enhance our natural and built environment, safeguarding heritage, enhancing habitats and biodiversity and the amenity value of the parks and countryside.
- Raise awareness of this policy and related sustainability issues amongst employees, contractors, service users, residents and visitors.
- Work In partnership with other organisations to promote wider responsibility towards sustainability, highlight best practice, share information and encourage joint working.



5.10 Response to Green Flag Judge's Comments



Green Flag Award 2020

Name of Site: Heswall Dales Managing Organisation: Wirral Council

Desk Assessment Feedback (Management Plan and supporting documentation)

Criteria	Strengths	Recommendations	Manager Comments
Presentation	A reasonable presented document that someone use to the site could follow	3	
Health, Safety & Security	Generally, we know what your councils overall	Annual inspection undertaken the judges feel that this should be more often	6 Monthly Inspection Regime currently being investigated Inspections included in Appendix
Maintenance of	1 1	Should mention that the	This section of the management
equipment, buildings	Landscape cover well	council uses either their own maintenance team or	plan has been expanded
& landscape	other	approved contractors	
	categories no so well		

	1		
Litter, cleanliness, vandalism	This needs expansion with definite targets set	Please include the council figure of how much waste goes to landfill on an annual basis to show if there has been a reduction	
Environmental Management	Good	May be to much but considering it is a 'SSSI'	Stewardship now in appendix rather than main focus of the management plan
Biodiversity, Landscape and Heritage	Good use of photographs, and links to appendixes in this section.	Explain in more detail what is the historical context of the site and what would be the benefit of returning it to the original condition	Historical context added
Community Involvement	There is strong links with the local people and a very dedicated Friends Group has been formed.	Just keep this up	
Marketing & Communication	This is covered well by the council but more so by the Friends Group	None	
Overall management	This is good in regards of the conservation of this site	None	

Additional comments

Explain in a simple paragraph why this site is a SSSI site and so important to the area.

Your statement on dealing with graffiti and other issue are a bit ambiguous the need to be more specific i.e. graffiti if offences should be removed in 24hrs and others when within a week. Likewise, with the Litter, Graffiti and Fly tipping 'as soon as possible' is not good.

The plan needs definite statements with time limitation given on achieving the goal.

Field Assessment Feedback

Criteria	Strengths	Recommendations	
A Welcoming Place	Particularly good signage at the main entrance to site of Oldfield Road	A warning that the site is not suitable for wheelchair access this should also be stressed on the web site.	We do not judge people's ability to use mobility aids. A site survey has been requested through Accessible.Website updated
Healthy, Safe and Secure	Some pathways how been opened up with good opened views across the Dee Estuary	Some of the pathways are very scary with high of the gorse and trees encroaching on the pathways Pathway markers/post should be in place. Path edges should be cleared a least a meter on each side where possible.	This work is being undertaken
Well Maintained and Clean	Pathways have been rebuilt and repaired and there is a program to continue this across the site. Only approved stone (by Natural England) is used on the paths.	Dog fouling is an issue on this site, and everything is being done to reduce it. Perhaps by putting the dog symbol on the waste bins and reminder also the standard dog waste symbol should be more frequently displayed throughout the site	Noted

-			
Environmental Management	This is good every effort is being made with the limitations they have to achieve the targets set. The site provides natural habitats places and breeding places for many Flora and Flora.	None, this is being handled very well.	
Biodiversity Landscape and Heritage	Every care is being taken to preserve and encourage all-natural flora and forna	What is the Heritage nothing shown about the quarry or the grazing	Now included
Community Involvement	This is very strong and is active in helping in the management of the site	Please keep up the good work	
Marketing and Communication	This all goes through the council's social media channels but there is a second string to this bow, with the Friends Group promoting the site as well	Interpretation boards Need to be placed strategically across the site to show the public what could be seen especially where vista have been created, what are they looking at	Noted and boards being installed at Entrances with QR codes for links to information on flora and fauna and landscape features. More are proposed

Additional Comments The site is not suitable for people with mobility problems, this is due to topography of the site and the split levels the path, it was a felt that a sign saying 'the site is not suitable for wheelchair access' at the main entrance.

Many people with mobility problems are able to negotiate steps, stiles etc and we think that by providing good information about the site people with mobility issues can decide themselves if it is accessible to them.

In certain parts of the site where the terrain and vegetation are so dense marker/ marker post should be installed to ensure the public do not get lost or scared.

To return this site to its former state it requires more people working on it and some machinery brough in to keep the gorse kept short.

Under a recent Council restructure a team of Rangers based at Wirral Country Park will now assist in the management of the site. New machinery has been purchased new fingerposts have been installed

It is hard to arrange for local schools of organised public groups to visit the site because of the lack of facilities (understandable) however if the farm could be incorporated into the site there are facilities for smaller groups to come along and it also ticks more of the boxes regarding the Green Flag requirements

Dale Farm is now included in the management plan as a major stakeholder. We will continue to work with Dale Farm and look at opportunities for providing facilities

By returning this site to the heathland of previous years, is returning to one of its stages of how it was once managed. The site is now going through a new stage of becoming a wood land, should it not be left to follow its natural progression.

Natural England are aware of the challenges of restoring and maintaining areas of open lowland heath. We will work with them to create a longer-term plan/agreement

Appendix 19: Annual Parks Safety Inspection Checklist

Parks and Open Spaces Annual H&S Inspection

SITE		
Date of inspection:		Signed:
Inspector (1):		
Inspector (2):		
Items referred to (Asset Department) / (External Contract	or) for I	repairs:
General comments/observations/recommendations:		
Items for Managers attention:		
Manager name:		Signed:
Date checked:		
Manager's comments:		

ENVIRONMENT	Ø	×	N/A	FURTHER ACTION
Is the tree canopy above footpaths and play areas				
visibly free of dead, dying, diseased or loose branches?				
Is the tree canopy above surrounding pavements/roads				
visibly free of dead, dying, diseased or lose branches?				
Are all footpaths clear of overhanging				
vegetation/branches that could make contact at head				
height or below?				
Are all invasive or poisonous plant species identified				
with the team and either cordoned off, due to be				
removed or on a treatment plan?				
Have all known hotspots been checked for				
sharps/needles/drug paraphernalia or broken glass?				
Are there clear sightlines that enable people and				
vehicle users to see what's ahead and around them?				
INFRASTRUCTURE		×	N/A	FURTHER ACTION
Are footpaths in a safe condition and free of trip				
hazards?				
Are steps in a safe condition and free of trip hazards?				
Are bridges in safe condition with no visible subsidence				
of the balustrades, walking surfaces safe and railings				
securely fitted?				
Are fencing and gates safe with no gaps, sharp edges,				
or protruding fixings?				
Are culvert grills safe, clear, adequately fixed, and free-				
flowing?				
STREET FURNITURE	V	×	N/A	FURTHER ACTION
Are the benches safe to sit on with no cracks or visible				
signs of damage? Are the legs free from cracks and have no visible sign of damage?				
Are the bins set in the ground correctly? Are the frames				
free from visible signs of damage? Does the bin have a				
liner in it?				
Are the lampposts/Telegraph poles structurally sound				
(free of cracks/splits), free of damage and access hatch				
securely fastened?				
Are the feeder pillars free of paint damage, structurally				
sound (free of cracks/splits), and door secure and				
locked?				
Are CCTV camera poles structurally sound (free of				
cracks/splits), free from damage? Are the cameras/LED				
units damaged at all?				

SITE SIGNAGE	V	×	N/A	FURTHER ACTION
Are water safety warnings visible and free of				
surrounding vegetation?				
Are fence notice boards or signage in a safe condition				
with no damage, securely fastened, with no sharp				
edges or protruding fixings?				
Are interpretation lecterns in a safe condition with no				
damage, securely fastened, with no sharp edges or				
protruding fixings? Are they eligible and free of graffiti?				
Are upright notice boards/interpretations in a safe				
condition with no damage, securely fastened, with no				
sharp edges or protruding fixings? Are they eligible and free of graffiti?				
Are entry signs in a safe condition with no damage,				
securely fastened, with no sharp edges or protruding				
fixings?				
Fire assemble points are present, and are the signs				
visibly clear and in the correct position?				
Vehicle restrictions - are they in the correct place and				
are clear to read?				
Service yard site safety signages - are they in the				
correct place and are clear to read?				
MONUMENTS AND SCULPURES	V	×	N/A	FURTHER ACTION
·	I	×	N/A	
MONUMENTS AND SCULPURES		×	N/A	
MONUMENTS AND SCULPURES Do monuments, bandstands, flagpoles, and sculptures appear structurally sound? Are they free from		×	N/A	
MONUMENTS AND SCULPURES Do monuments, bandstands, flagpoles, and sculptures appear structurally sound? Are they free from damage/graffiti? Do walls appear structural sound: free from bowing, large mortar cracks, loose/missing bricks, or copings.				ACTION
MONUMENTS AND SCULPURES Do monuments, bandstands, flagpoles, and sculptures appear structurally sound? Are they free from damage/graffiti? Do walls appear structural sound: free from bowing,	N N	X	N/A N/A	
MONUMENTS AND SCULPURES Do monuments, bandstands, flagpoles, and sculptures appear structurally sound? Are they free from damage/graffiti? Do walls appear structural sound: free from bowing, large mortar cracks, loose/missing bricks, or copings.				ACTION
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MONUMENTS AND SCULPURES Do monuments, bandstands, flagpoles, and sculptures appear structurally sound? Are they free from damage/graffiti? Do walls appear structural sound: free from bowing, large mortar cracks, loose/missing bricks, or copings. SPORTS AND PLAY FACILITIES Are tennis court surfaces, signage, nets, fencing, gates				ACTION
MONUMENTS AND SCULPURES Do monuments, bandstands, flagpoles, and sculptures appear structurally sound? Are they free from damage/graffiti? Do walls appear structural sound: free from bowing, large mortar cracks, loose/missing bricks, or copings. SPORTS AND PLAY FACILITIES Are tennis court surfaces, signage, nets, fencing, gates and surrounds safe and in visibly good condition?				ACTION
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MONUMENTS AND SCULPURES Do monuments, bandstands, flagpoles, and sculptures appear structurally sound? Are they free from damage/graffiti? Do walls appear structural sound: free from bowing, large mortar cracks, loose/missing bricks, or copings. SPORTS AND PLAY FACILITIES Are tennis court surfaces, signage, nets, fencing, gates and surrounds safe and in visibly good condition? Are MUGA surfaces, signage, fencing, gates and surrounds, goalmouths, and basketball hoops safe and in visibly good condition? Are Outdoor Gym surfaces, signage, and equipment safe and in visibly good condition? Are Play Area landscape features: Shelters, fencing, trees and vegetation safe and in visibly good condition?				ACTION
MONUMENTS AND SCULPURES Do monuments, bandstands, flagpoles, and sculptures appear structurally sound? Are they free from damage/graffiti? Do walls appear structural sound: free from bowing, large mortar cracks, loose/missing bricks, or copings. SPORTS AND PLAY FACILITIES Are tennis court surfaces, signage, nets, fencing, gates and surrounds safe and in visibly good condition? Are MUGA surfaces, signage, fencing, gates and surrounds, goalmouths, and basketball hoops safe and in visibly good condition? Are Outdoor Gym surfaces, signage, and equipment safe and in visibly good condition? Are Play Area landscape features: Shelters, fencing, trees and vegetation safe and in visibly good condition? Are games greens fencing, surrounds, gates, and				ACTION
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MONUMENTS AND SCULPURES Do monuments, bandstands, flagpoles, and sculptures appear structurally sound? Are they free from damage/graffiti? Do walls appear structural sound: free from bowing, large mortar cracks, loose/missing bricks, or copings. SPORTS AND PLAY FACILITIES Are tennis court surfaces, signage, nets, fencing, gates and surrounds safe and in visibly good condition? Are MUGA surfaces, signage, fencing, gates and surrounds, goalmouths, and basketball hoops safe and in visibly good condition? Are Outdoor Gym surfaces, signage, and equipment safe and in visibly good condition? Are Play Area landscape features: Shelters, fencing, trees and vegetation safe and in visibly good condition? Are games greens fencing, surrounds, gates, and				ACTION

EXTERNALS OF BUILDINGS	V	×	N/A	FURTHER ACTION
Are building roofs visibly in good condition with no missing tiles or lead?				, and the same of
Are building walls visibly in good condition? (Timber cladding, brick, plaster)				
Are gutters, downpipes and surface water drains visibly clear?				
Are manholes sitting flush and secure to the frame? Is drainage from buildings free from issues?				
EXTERNAL ACCESS AND EGRESS	V	×	N/A	FURTHER ACTION
Are all access routes kept clear of combustible materials?				
Are external access and exit routes clear, in good order and free from trip and slip hazards?				
EXTERNAL AREAS	Ø	×	N/A	FURTHER ACTION
Are structures, i.e., sheds, containers, and external storage, in good repair and secure?				
Are fragile roofs adequately safeguarded and signed?				
Are adjoining walls, fences, and gates in good condition?				
Are service yard materials stored safely and secure? Are walking/driving surfaces free from slip/trip/puncture hazards?				

Facility Address			Po	ostcode:
1. Servicing, Testing		-	en put N/A in	the box.
	inse	rt Company name or perso	ons name	Date:
ire Alarm system				
re Co-ordinator & 6 monthly dri	II			
mergency Lights				
ICEIC certificate				
AT certificate	Test:	Visual:		
oiler/s Serviced/Maintained by				
Zurich Inspection				
Serviced/Maintained by	,			
Zurich Inspection:				
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sbestos 6 monthly to Tech Serv				
Vater Hygiene – Temps				
hower heads last disinfected				
ightning Conductors				
ir conditioning Units				
2. Energy Monitoring		Motor rof Number		Pooding
		Meter ref Number		Reading
2. Energy Monitoring Electricity		Meter ref Number		Reading
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Electricity		Meter ref Number		Reading
		Meter ref Number		Reading
Electricity		Meter ref Number		Reading
Electricity		Meter ref Number		Reading
Electricity Gas		Meter ref Number		Reading
Electricity Gas		Meter ref Number		Reading
Electricity Gas		Meter ref Number		Reading
Electricity Gas Water		Meter ref Number		Reading
Gas Water 3. Declaration This is to confirm that the above	servicing	test and inspections have t		ut by a compete
Gas	servicing,	test and inspections have t		ut by a compete

Appendix 21: Workplace Annual Inspection Checklist



WORKPLACE ANNUAL INSPECTION CHECKLIST (ANNUAL)

Guidance on completing this form is available in the Health & Safety Management Arrangements for Risk Assessments

Name of building/workplace:		Click or tap here to enter text.		
Date inspection undertaken:		/ /		
Building / workplace description (including old or new, location, number of floors, approx. number of rooms, etc.)				
Click or tap here to enter text.				
Usage (office, Childrens Centre, workshop, library, Leisure Centre, Community Centre, etc)	Click or tap h	ere to enter text.		
Public footfall (high medium or low)	Click or tap h	ere to enter text.		
Additional risks (frequented by young children, elderly, people with special needs, etc)	Click or tap h	ere to enter text.		
Level Of Risk (based on use or occupancy - see below)				

Low □	Medium/Moderate □	High □	Very High □
	RISK VALUE	RISKS	
	Low	Primarily used as offices	
	Medium/Moderate	General access for the public or other workshops, etc	
	High	Part or whole of premises primarily or routinely used by vulnerable people, including young children (4yrs and under and elderly	
	Very High	Sleeping accommodation	

Hazard	Through observations of all areas identify the areas of control that should be in place to reduce the risk and tick either yes / no to indicate if they exist?	Yes	No	N/A	Further information required: 1) If 'yes', the measures in place, or 2) If 'no', any further action, which is to be included in the action plan below
Slip Trip Fall (Internal - public, communal rooms & areas, and	Are all walkways, entrances and exits free from obstructions?				Click or tap here to enter text.
unoccupied rooms) Failure to ensure that slip, trip, fall hazards could lead to accidents that result in injuries such as broken bones, bruising, etc					Click or tap here to enter text.
	hoxes files or hans on the floor?				Click or tap here to enter text.
	Are the floors and surfaces clean, tidy and in good condition? Note: this includes mats, floorboards and carpets and examples include uneven floors, loose floors, bubbled area's on the carpets				Click or tap here to enter text.

Hazard	Through observations of all areas identify the areas of control that should be in place to reduce the risk and tick either yes / no to indicate if they exist?	Yes	No	N/A	Further information required: 1) If 'yes', the measures in place, or 2) If 'no', any further action, which is to be included in the action plan below
	Are there sufficient areas to hang coats and store personal belongings so as not to cause slip or trip hazards?				Click or tap here to enter text.
	Are the barrier mats near to entrances in good condition including not curling at the ends thereby posing trip hazards?				Click or tap here to enter text.
	Is slip resistant flooring installed in appropriate areas such as toilets, showers, etc?				Click or tap here to enter text.
	Is Slippery Floor signage used when surfaces are wet to cordon the area until safe?				Click or tap here to enter text.
	Where possible, is the workplace cleaned early and late in the working day to prevent floor contamination throughout high footfall?				Click or tap here to enter text.
	Are there any other slip trip fall hazards within the workplace?				If 'yes' provide details: Click or tap here to enter text.
Storage Failure to store items	Is there sufficient purpose made storage space to avoid using the floor?				Click or tap here to enter text.
correctly could result in an accident of failing items or staff falling whilst collecting	Are all items securely stored / stacked? Note: items should NOT be stored on top of shelves, all items should be stored on the actual shelves and shelves should not be overloaded.				Click or tap here to enter text.
resulting in head or body injuries	Are heavy items should be stored at waist height?				Click or tap here to enter text.

Hazard	Through observations of all areas identify the areas of control that should be in place to reduce the risk and tick either yes / no to indicate if they exist?	Yes	No	N/A	Further information required: 1) If 'yes', the measures in place, or 2) If 'no', any further action, which is to be included in the action plan below
	Are the shelving/racks/cabinets safe and secure with no missing bolts, no cracks/splits in the shelving, etc and, also not overloaded?				Click or tap here to enter text.
	Is correct equipment available to access items stored at height e.g. mini steps / climbing stool?				Click or tap here to enter text.
	Are there any other storage hazards within the workplace?				If 'yes' provide details: Click or tap here to enter text.
Offices, rooms & receptions	Sufficient areas to hang coats and store personal belongings so as not to cause slip or trip hazards?				Click or tap here to enter text.
Failure to safely manage offices, rooms and receptions could lead to injuries and ill	Is there sufficient natural light to carry out the work safely together with measures to protect against any glare such as blinds?				Click or tap here to enter text.
health	Are light bulbs and fluorescent tubes in good working order?				Click or tap here to enter text.
	Are there adequate welfare facilities consisting of hot and cold running water, toilet facilities, somewhere to rest and eat meals?				Click or tap here to enter text.
	Is there a system for removing waste on a daily basis?				Click or tap here to enter text.
	Is all furniture in good repair, that is undamaged and stable?				Click or tap here to enter text.

Hazard	Through observations of all areas identify the areas of control that should be in place to reduce the risk and tick either yes / no to indicate if they exist?	Yes	No	N/A	Further information required: 1) If 'yes', the measures in place, or 2) If 'no', any further action, which is to be included in the action plan below
	Are permanent fixtures in good condition and securely fastened, e.g. cupboards, display boards, shelving?				Click or tap here to enter text.
	Are windows secure, in a good condition and, where required, open and close easily?				Click or tap here to enter text.
	Is there a 'clear desk policy' for receptions?				Click or tap here to enter text.
	For Medium, High and Very High Risk Premises: Any hazardous substances, including cleaning products, kept to a minimum and locked away in a secure location? Note: there should be COSHH risk assessments for all substances used				Click or tap here to enter text.
	For High and Very High Risk Premises; Is safety glass fitted to doors and other windows or glazed areas that are lower than 80cm?				Click or tap here to enter text.
	For High and Very High Risk Premises: Are lock and security catches fitted to windows to restrict openings to 10cm or less?				Click or tap here to enter text.
	For High and Very High Risk Premises: Are finger guards fitted to the hinged areas of doors that present a risk pinching, crushing or amputating?				Click or tap here to enter text.
	Are there any other hazards relating to offices, rooms and receptions?				If 'yes', provide details: Click or tap here to enter text.

Hazard	Through observations of all areas identify the areas of control that should be in place to reduce the risk and tick either yes / no to indicate if they exist?	Yes	No	N/A	Further information required: 1) If 'yes', the measures in place, or 2) If 'no', any further action, which is to be included in the action plan below
Electricity (Internal) Failure to manage electricity in the	Are all areas free from overloaded extension cables e.g. 'daisy chaining' extension cables, additional extension plug on a 4-gang extension lead, etc?				Click or tap here to enter text.
workplace could expose staff to live electricity leading to injuries such as electric shock, heart attack or secondary injuries	Have all portable electrical appliances that are not hand-held and are moved occasionally (e.g. fan heaters, table lamps, etc.) been PAT tested within the last year with labels to show their last test date? Note: this includes all equipment which staff have brought in been tested i.e. radio's, toasters, fans, cables, etc. All equipment MUST be tested before being used. Office/IT equipment (e.g. desktops, VDU screens, MFD's, etc.) should be PAT tested within the last 4 years				Click or tap here to enter text.
	Are flexible cables secured to the baskets or to the floor?				Click or tap here to enter text.
	Staff have been informed that they are not allowed to interfere with or repair electrical equipment unless it is safe and they are authorised?				Click or tap here to enter text.
	There are arrangements for electrical equipment to be switched off when not in use?				Click or tap here to enter text.
	Are there procedures to ensure that defective equipment is removed from use?				Click or tap here to enter text.
	Staff have been informed that they are not allowed to bring in their own electrical equipment unless they have been authorised?				Click or tap here to enter text.

Hazard	Through observations of all areas identify the areas of control that should be in place to reduce the risk and tick either yes / no to indicate if they exist?	Yes	No	N/A	Further information required: 1) If 'yes', the measures in place, or 2) If 'no', any further action, which is to be included in the action plan below
	Have visual checks of cables, plugs and insulation been carried out to see if they are damaged or worn? Note: all cables are in an acceptable condition and not split or damaged. Wires should not be exposed. Plugs are not cracked or in unsafe condition. If unsure please isolate the equipment and speak to the relevant manager.				Click or tap here to enter text.
	For premises routinely used by young children (i.e. 4yrs and under), are there measures to prevent them coming into contact with live electrical sockets?				Click or tap here to enter text.
	Do automatic internal doors function correctly?				Click or tap here to enter text.
	Are there any other hazards relating to electricity in the workplace?				If 'yes', provide details: Click or tap here to enter text.
Asbestos (Internal) Failure to manage	Is there an Asbestos Management Plan on site and has it been kept up to date?				Click or tap here to enter text.
ACM's could result in disturbance and the release of asbestos fibres leading to chronic health issues such as	Are there arrangements for the copy of the asbestos survey and inspection report to be kept on site and be viewable to all contractors prior to any work carried out and for the contractors to sign to confirm that they have read and understood the report before any work starts on site?				Click or tap here to enter text.
mesothelioma, and asbestosis	If any staff are liable to disturb asbestos in the workplace, are there measures to prevent access and/or warn them not to touch or disturb the material?				Click or tap here to enter text.
	Are there arrangements for annual asbestos inspections and for submitting their return to Corporate Asset and Facilities Management?				Click or tap here to enter text.

Hazard	Through observations of all areas identify the areas of control that should be in place to reduce the risk and tick either yes / no to indicate if they exist?	Yes	No	N/A	Further information required: 1) If 'yes', the measures in place, or 2) If 'no', any further action, which is to be included in the action plan below
	Are there emergency arrangements to deal with potential exposure to asbestos if suspected?				Click or tap here to enter text.
General Procedures (Internal)	Are their sufficient First Aiders (see First Aid Management Arrangements)?				Click or tap here to enter text.
Failure to manage and communicate appropriate procedures could lead to delays in responding to emergencies or not following recognised	Do First Aiders ensure that first aid boxes are replenished and, if required, carry out weekly checks of defibrillators? Note: First aid box should be available with the HSE's minimum recommendation of stock (see First Aid Arrangements). The first aid box should be easily located (green sign with white cross), all stock should be within best before date				Click or tap here to enter text.
procedures	Is there signage displayed showing first aiders, fire marshals and terrorist threat procedures? Note: ideally they should be displayed together. Signage should be updated if first aiders leave etc				Click or tap here to enter text.
	Other than fire signage, where required, is other safety signage visibly displayed and in good condition including, - blue Mandatory (e.g. wear PPE), - red Prohibition (e.g. No Smoking), - green Information (e.g. social distancing, contra flow systems) and - yellow Warning (e.g. slippery surface) such as covering including				Click or tap here to enter text.
	Is the Health and Safety at Work Policy Notice displayed?				Click or tap here to enter text.

Hazard	Through observations of all areas identify the areas of control that should be in place to reduce the risk and tick either yes / no to indicate if they exist?	Yes	No	N/A	Further information required: 1) If 'yes', the measures in place, or 2) If 'no', any further action, which is to be included in the action plan below
	Are there procedures to ensure that all staff and visitors wear their visitor badges?				Click or tap here to enter text.
	Do the emergency alarms at receptions function correctly and is there a 'tried and tested' response if activated?				Click or tap here to enter text.
	Have the alarms on the disabled toilets been tested and staff aware on what to do in the event of an emergency?				Click or tap here to enter text.
	Are there procedures to ensure that all staff including new starters are aware of the emergency procedures, e.g. fire, terrorist threats, etc				Click or tap here to enter text.
	Are the fire extinguishers in the correct position and not moved or used to prop open doors?				Click or tap here to enter text.
	Are the extinguishers on an annual inspection programme (should be a sticker on the extinguisher showing the date of the last inspection)?				Click or tap here to enter text.
	Are there records that the fire alarm has been tested on a weekly basis and drills carried out every 6 months?				Click or tap here to enter text.
	Are there procedures to ensure fire exits are never blocked and are clear at all times?				Click or tap here to enter text.
External Hazards	Is there adequate lighting on the main access and egress routes (including car parks) to highlight slip, trip or fall hazards to staff?				Click or tap here to enter text.

Hazard	Through observations of all areas identify the areas of control that should be in place to reduce the risk and tick either yes / no to indicate if they exist?	Yes	No	N/A	Further information required: 1) If 'yes', the measures in place, or 2) If 'no', any further action, which is to be included in the action plan below
Failure to ensure that external hazards including, slips, trips,	Are all paving slabs secure and paths on the main access and egress routes in good condition to give a flat, even surface?				Click or tap here to enter text.
falls and traps could lead to accidents that result in injuries such as broken bones, bruising, etc	Are the parking areas free of potholes on the main access and egress routes?				Click or tap here to enter text.
	Are the main access and egress routes free from leaves, mud and algae?				Click or tap here to enter text.
	Is the nosing of steps covered in an anti-slip coating?				Click or tap here to enter text.
	In car parks, are there barriers or others means to separate vehicles from pedestrians?				Click or tap here to enter text.
	Are there arrangements for the grit bins to be checked in October to ensure that there is sufficient grit and a shovel?				Click or tap here to enter text.
	Have areas to be gritted in the event of icy periods been identified including main paths and emergency exits?				Click or tap here to enter text.
	Are there procedures to be alerted when there are going to be icy periods and for someone to grit the identified areas before the arrival of staff?				Click or tap here to enter text.
	Do automatic gates open and close correctly? Note: motion or optical sensors installed on the side will trigger the opening and closing				Click or tap here to enter text.

Hazard	Through observations of all areas identify the areas of control that should be in place to reduce the risk and tick either yes / no to indicate if they exist?	Yes	No	N/A	Further information required: 1) If 'yes', the measures in place, or 2) If 'no', any further action, which is to be included in the action plan below
	Do manual gates open and close correctly and are there measures to ensure that they do not trap fingers/hands when opened (e.g. stoppers to prevent opening fully, latches to ensure they don't swing shut, etc)				Click or tap here to enter text.
	Are there any other external hazards?				If 'yes', provide details: Click or tap here to enter text.