Leicestershire
& Rutland
Wildlife Trust

Report on a survey of Longcliffe Golf Course

Surveyed by Sara Botterell of Leicestershire & Rutland Wildlife Trust, accompanied by Rachel Miller of Longcliffe Golf Course on 23/08/2019 & 28/08/2019

Written by Sara Botterell, January 2020

Gird Reference: SK 496 174

1. Summary

Longcliffe Golf Course lies within the Charnwood forest Living Landscape area and supports some of the best remnants of important Charnwood Forest habitats found outside of legally protected sites. The mosaic of different habitats found at the site are of high value to wildlife. The major components are grassland and woodland. Also present are ponds, mature trees, rock outcrops, bracken, ditches and scrub. The grassland is predominantly intensively managed, close mown grass, but there are significant areas of less intensively managed long grassland known as the rough. The rough in large part supports a species rich community of acid and heath grassland plants. A number of species are present which are typical of and largely limited to the acid soils of Charnwood Forest.

The site was notified as a Local Wildlife site (LWS) in 2003 due to its high value for wildlife on the basis of habitat quality, habitat diversity and the presence of Red Data Book (RDB) species (Ref no: CBC W 4917/1). **The current survey identified that the site continues to qualify as a LWS meeting primary criteria for acid grassland, neutral grassland, mixed grassland, woodland and mature tree and also for the presence of the RDB species Cross-leaved Heath (*Erica tetralix*) and Heath Rush (*Juncus squarrosus*).**

The following habitats are of particular value to wildlife as they are either LLRBAP (Leicester, Leicestershire and Rutland Biodiversity Action Plant) and/or UKBAP (UK Biodiversity Action Plan).

- Grassland
    - Acid / heath grassland – UKBAP
    - Neutral grassland – LLRBAP, UKBAP
- Ponds – LLRBAP, UKBAP
- Mature Trees – LLRBAP
- Scrub and woodland – LLRBA, UKBAP

The continued maintenance of the site as a LWS indicates the excellent management already taking place. Future management should aim to retain and enhance these LWS and BAP habitats with particular emphasis on the acid and heath grassland.

The key recommendations would be

- to improve and increase the area covered by acid and heath grassland with emphasis on those areas containing a number of notable species typical of the Charnwood Forest area

- to remove trees (in particular Turkey Oak) and scrub (bracken and bramble) where they threaten to overwhelm these habitats.

2. Introduction

2.1. Site and situation

Longcliffe Golf Course is an 18 hole course established at the beginning of the 20th century. It covers 60 ha and is situated at the northern edge of Charnwood Forest, immediately to the east of the M1 motorway and 500m to the west of Nanpantan which is continuous with Loughborough. Several other LWSs, including Holywell Wood, Burleigh Wood and Buck Hill, are located within 1km of the site. The Outwoods Site of Special Scientific Interest (SSSI) is approximately 1.5km to the southeast and Charnwood Lodge SSSI is approximately 3km to the southwest. Immediately to the south is an area of woodland also containing a disused quarry pit that currently contains water. The remainder

of the site is bordered by intensively managed farmland and a narrow strip of woodland separating it from the M1.

2.2. Background: Habitat and Connectivity

Habitats with a greater diversity of plant species will support a greater number of invertebrates, and subsequently, birds, mammals, amphibians and reptiles. Different types of habitat, for example grassland, scrub, standing or fallen deadwood or a pond, or indeed different components within a habitat will support different assemblages of species. Therefore, a site with many different habitats, or a 'mosaic' of habitats will contain more species than a site with fewer high quality habitats. Close association of different habitats also allows species to readily access the different requirements they may have at different stages of their life cycles. For example, grassland supports insects, providing feeding areas for birds and bats that roost and nest in the woodland.

Corridors of habitat or stepping stones of habitat between larger habitat patches provide connectivity between areas of habitat. This may be a wide grassy border, a series of ponds, a woodland belt or a hedgerow. Connectivity between habitats / habitat mosaics will allow movement of species around the landscape which will therefore have more robust populations that can react to changes in their habitat better. Changes could be a pollution event, management such as mowing or climate change. If species / populations can move to another area of habitat, they will survive these changes and the diversity of a site or landscape will be maintained.

3. Methods

The site was surveyed in July 2019 by Leicestershire & Rutland Wildlife Trust to assess habitat quality and to give advice on how the site may be better managed for wildlife. This was primarily a botanical survey, but casual records of animal species were made where they were seen and cameras traps were utilised. A bat survey was also performed which is described in a separate report (Cossa, 2019). The site was assessed against the Guidelines for the selection of Local Wildlife Sites in Leicester, Leicestershire and Rutland (2011, 4th edition). This gives a benchmark which shows if a habitat is of high value for wildlife. Maps are provided in Appendix 1. Where features of particular importance for wildlife were observed Target Notes (TNs) were made and these are described in Appendix 2 and their location illustrated on Map 1 & 2 in Appendix 1. Species lists for the site are given in Appendix 3. Appendix 4 gives more information about LWSs.

The report splits the site into its key habitats. For each habitat, the conservation value of the habitat is explained and areas of this habitat are described then management recommendations made to improve or maintain the habitat for wildlife.

Due to the large area of the site and limited time to perform the survey, the complete site could not be surveyed and mapped in detail. Additional areas of importance to wildlife are present that are not covered by the TNs, but these should be covered by the general descriptions of habitat types.

4. Results

4.1. Habitats

4.1.1. Grassland/Heath

Species-rich grassland is suffering one of the highest rates of decline of any habitat in Leicestershire and Rutland. In England and Wales, it is estimated that this habitat has decreased by 98% since 1930 as a result of development, changes in farming practice (e.g. drainage, ploughing, reseeding and the use of artificial pesticides, herbicides and inorganic fertilisers) and neglect. In general, unimproved

herb-rich grassland is a rare habitat in Leicestershire and Rutland. It supports a rich invertebrate fauna and provides an important feeding area for birds, bats and small mammals.

Lowland acid grassland and heath grassland (areas supporting dwarf shrubs such as Heather) is no exception to this and has undergone a substantial decline across the UK as a result of agricultural improvements. Remaining acid grassland is under threat from under-grazing and abandonment which leads to scrub and bracken encroachment. It is a UK Biodiversity Action Plan (BAP) habitat. In Leicestershire and Rutland, it is naturally poor in the number of plant species present, but it does support specialist plant communities and associated invertebrates.

The areas of acid and mixed heath grassland described in this report are therefore of high conservation value. The conservation and suitable management of the last few remaining examples of this habitat are a priority both locally and nationally.

At Longcliffe Golf Course most of the grassland is intensively managed and close mown and was not included in the survey. There are however, significant areas, known as the rough, which are uncut or less frequently cut over the summer months and support a species rich community of heath and acid grassland plants. The sward height varies and conditions range from the wetter soils found around drainage ditches and other damper areas of the course to dry well drained places provided by the banks found around bunkers, around outcrops and on walls. The variety of microhabitats thus produced can provide habitats for different assemblages of species. Grass species are typical of acid and heath grassland. They include frequent Common Bent (*Agrostis capillaris*) and Wavy Hair-grass (*Deschampsia flexuosa*) with Purple Moor-grass (*Molinia caerulea*), and Mat-grass (*Nardus stricta*) also present. Particularly noteworthy species include a number of plants that are now apparently confined or almost confined to the acid soils of Charnwood Forest, (Jeeves, 2011):

- Heather (*Calluna vulgaris*)
- Green-ribbed Sedge (*Carex binervis*)
- **Cross-leaved Heath (*Erica tetralix*) - Scarce**
- **Heath Rush (*Juncus squarrosus*) – Scarce**
- Wood Sage (*Teucrium scorodonia*)
- Western Gorse (*Ulex gallii*) – Nearly scarce
- Brown Bent (*Agrostis vinealis*)

Cross-leaved Heath and Heath Rush are both plants of wet heath-grassland and are Red Data Book (RDB) species being recorded as scarce in Leicestershire and Rutland in the latest Checklist and Rare Plant Register (Jeeves, 2011). The presence of RDB species qualifies the site as a LWS. Cross-leaved Heath was only recorded at TNA where Heath Rush was also present. Heath Rush was also recorded at TNV**.** Heather is present scattered across the acid grassland sometimes forming dense patches and ranges in age from young shoots to more mature specimens (approximately 50cm).

Additional interesting plants present at the course, that thrive on more acid soils, but are not confined to Charnwood Forest, include Sneezewort (*Achillea ptarmica*) which prefers wet acid soils and is becoming scarce, Tormentil (*Potentilla erecta*), Sheep's Sorrel (*Rumex acetosella*), Heath Bedstraw (*Galium saxatile*), Heath Groundsel (*Senecio sylvaticus*) and Slender St John's-wort (*Hypericum pulchrum*) which is also nearly scarce.

There are some areas that also support species more typical of old grassland on neutral soils. These include Devil's-bit Scabious (*Succisa pratensis*), Lady's Bedstraw (*Galium verum*), Common Bird's-foot-trefoil (*Lotus corniculatus*) and Autumn Hawkbit (*Scorzoneroides autumnalis*), but these species

are rare at the course. Harebell (*Campanula rotundifolia*) grows on both well drained acidic or basic soils and is found occasionally scattered across the course.

In total there are 10 LWS criteria species of neutral grassland, 7 LWS criteria species of wet grassland and 10 LWS criteria species of acid grassland (27 LWS species combined). The site exceeds the size criteria for grassland sites. It therefore meets primary LWS criteria for acid, neutral and mixed grassland.

Bracken is also occasional in the grassland areas, but where it occurs it forms dense patches.

See Appendix 3 for a site species list and Appendix 2 for areas of particular interest and value.

4.1.2. Woodland/Scrub/Scattered trees

In Leicestershire and Rutland woodland is a rare habitat extending over about 4% of the counties. Woodland with high biodiversity and hence conservation value is diverse in structure supporting, in addition to canopy trees, both a varied ground flora and a species rich understorey of shrubs and developing trees. This provides a range of habitats supporting a diverse range of species including invertebrates, birds and bats. A dense ground flora and understorey also provides shelter for animals such as hare and deer and where trees are planted in belts it provides a corridor along which wildlife can move. This allows connectivity between different habitats. Deadwood provides important sites for hole-nesting birds and good habitat for saproxylic invertebrates and fungi. Similarly, to woodland scrub is of value for wildlife in a variety of ways such as a refuge for badgers or hares, habitat for nesting and roosting birds and shelter for invertebrates. It also provides a rich source of berries.

The area covered by woodland is extensive and is composed mostly of wide belts and blocks of semi natural woodland that form a network across the course interrupted by the fairways. This provides a very valuable wildlife habitat. It was not surveyed in detail due to the time of year. It has developed by natural regeneration and contains mostly native species with Pedunculate Oak and Birch the most abundant. Turkey Oak (*Quercus cerris*) is also present and a large number of self set Turkey Oak are present. The larger blocks of woodland are dense with good structure containing a relatively dense understorey of young trees and scrub. The ground flora is dominated by Bracken and Bramble. There are also some belts of scattered trees where the understorey is largely absent and the ground flora is composed of acid grassland. One ancient woodland indicator species, Wood-sorrel (*Oxalis acetosella*) was observed, but it was rare. Dead wood is present. **The site meets the primary LWS criteria for Woodland as it contains blocks of naturally regenerated woodland which exceed 5ha in total.**

4.1.3. Mature trees

Mature trees are a priority habitat within the LLRBAP. Deadwood found in mature trees is particularly beneficial to wildlife providing important sites for hole-nesting birds, roosting sites for bats and also great habitat for saproxylic invertebrates and fungi. Previous surveys have identified 10 trees at the site that met LWS primary criteria for mature trees. As a full woodland survey was not undertaken it was not established if these trees are still present. However, one of the trees was identified (TNM).

4.1.4. Rocky Outcrops and Walls

Rocky outcrops are a naturally occurring feature of Charnwood Forest and can support interesting communities of plants. Artificial stone structures such as walls can also support interesting plant communities.

There are three small outcrops at Longcliffe (see TNQ and TNU). These support a number of species that are commonly found on outcrops including Early Hair-grass (*Aira praecox*) at TNQ. Bilberry (*Vaccinium myrtillus*) has been recorded at the site previously near to an outcrop, but the species was not observed during this survey. This may be due to encroachment from Gorse and Bramble which is observed at TNU. Two walls (TNG & TNT) support interesting grassland species some of which prefer a well drained position such as Sheep's Sorrel and Mouse-ear-hawkweed. These communities are also in danger of being overwhelmed by Gorse and Bramble.

4.1.5. Pond

Field ponds are in decline with unshaded examples being relatively rare. They attract a diverse flora and fauna providing many wildlife benefits such as habitat for aquatic invertebrates, breeding sites for insects including dragonfly and damselfly, breeding sites for amphibians such as newts and feeding sites for insect eating bats and birds. Important features include wide riparian margins of emergent vegetation, areas of open water, areas that sunlight can reach and gently sloping banks. Some trees and scrub surrounding the pond can however be beneficial providing shelter for birds and mammals whilst Willow roots can provide habitat for the larvae of many insects. Most amphibians benefit from having woodland nearby. Fallen deadwood within ponds can also provide nest sites for birds such as Moorhens and egg-laying sites for dragonflies such as the Brown Hawker. This range of different features in close proximity provide a range of different microhabitats for different species to exploit at different stages of their life cycles. Two adjoining ponds (TNK) provide many of the wildlife benefits described above. A bat survey at the site (Cossa, 2019) indicated that the pond was providing a good source of invertebrates for feeding bats. There is a further area (TND) which appears to be a remnant pond.

4.1.6. Ditch

Damp ditches provide habitat for species that prefer wetter conditions and can also provide safe routes for animals such as otter to travel along. There are a number of drainage ditches across the course both through woodland and across the fairways. Some of these are described in TNJ, TNN and TNS.

4.2. Fauna

4.2.1. Camera trapping

Camera traps were set up at 3 woodland locations across the site; one to the south of fairway 7 and two at locations in the woodland block, TNL. The highest number of an individual species recorded at any one time are given it Table 1.

Table 1: Results of camera trapping

	Number of individuals recorded		
	Site 1 (SK 4962 1697)	**Site 2 (SK498 177)**	**Site3 (SK49831776)**
Muntjac	**3**	**1**	**2**
Squirrel	**1**	**1**	**1**
Rabbit	**1**	**2**	**2**
Badger	**1**	**1**	**2**
Wood pigeon	**1**	**-**	**-**
Domestic cat	**-**	**1**	**-**
Mouse	**-**	**1**	**-**
Wren	**-**	**1**	**-**
Fox	**-**	**-**	**1**

Site 1: 02/09/2019 – 09/09/2019
Site 2: 10/09/2019 – 16/09/2019
Site 3: 23/09/2019 – 02/10/2019

4.2.2 Bat survey

A bat survey was performed, the results of which are described in a separate report (Cossa, 2019). In summary 5 species of bat were identified.

4.2.3 Incidental records

Incidental records are summarised in Appendix 3. They include a frog, 4 species of bird and 7 butterfly species.

5. Management Recommendations

5.1 Habitats

5.1.1. Grassland/Heath

- The use of fertilisers and pesticides at the site should be kept to the absolute minimum required to maintain the course.
- As a general principle it is recommended that where ever possible, grassland should be allowed to grow to its natural height during the course of the summer to allow species to flower and set seed. Increasing the area of long grassland across the site would be beneficial to wildlife as described in section 4.1.1.; the larger the area the better. It would be particularly beneficial if it occurred alongside existing habitat features such as woodland edges and ponds or allowed connectivity between existing features such as ponds, woodland or scrub. Examples are given below:
    - For the ponds it is recommended to allow a wider border of long grass to surround them. This will increase the amount of food producing plants, shelter and breeding sites for invertebrates, small mammals, amphibians and reptiles that may use the pond. It will also provide an increased filter/barrier for pollutants or nutrients that could run off the surrounding areas into the water. When cutting occurs any grass clippings should be

removed as they will cause an increase in organic debris in the pond causing nutrient enrichment
  - Provide a grassland corridor between the ponds and the woodland block (TNL). This would provide a valuable connection between these habitats allowing small mammals, amphibians and invertebrates to travel between them.
  - In many cases areas of longer species rich grassland are present below the tees, such as TNA on the 7th and the ditch across the 3rd fairway (TNS). If these features could be extended and reproduced on other fairways such as the 11th where acid grassland is present (TNI) it would be beneficial.

- To maintain and improve the areas of long grassland already present at the course the grassland should be managed as a hay meadow:
  - **A regular hay cut should be performed in late summer** after plants have set seed (late July - early September) leaving some areas, such as borders and islands, uncut every year to allow later flowering plants to flower and set seed and to provide refuge for animals. Borders that aren't cut during the annual cut could be cut on a 3y rotational basis to prevent scrub encroachment. Good ecological grasslands are nutrient poor; therefore, **all cuttings should be removed** before they rot down and release nutrients. This will prevent more competitive rank grasses and weeds, such as nettles, becoming dominant. This will also prevent leaf litter from suppressing the growth of smaller plants. Further maintenance cuts could be made from September to February if required, but **no cutting should take place between March/April and late summer.**
  - No application of fertilisers or pesticides should take place and care should be taken to avoid drift if it is necessary to apply these to nearby fairways or greens.
- To maintain and improve the areas where Heather is present it would be good to mow around the plants where possible (as is already done in places such as at TNP) to encourage more mature growth.
- For TNA where heathland plants have been seeded in a scrape the current cutting regime appears to be successful, although if possible, in part it could be allowed to mature further by longer cuts that would be beneficial.
- The generation of further scrapes, like that at TNA, at other suitable locations would be beneficial to increase the area covered by rare heathland plants, providing they are made at sites that do not already contain important species. The Wildlife Trust would be happy to perform a survey. Cut material from TNA could be used as the source material for further scrapes.
- The main threat to the existing acid and heath grassland is from encroachment by scrub and the growth of planted and self-seeded trees. This will eventually cause the grassland to become too shaded and also enriched by leaf fall. Examples of this are seen at TNP where Turkey Oak are growing amongst dense Heather, TNV where planted trees are present amongst the acid grassland containing the RDB Heath Rush and at TNE where Bramble is encroaching into the grassland from the block of woodland between the 3rd and 4th fairways. This should be addressed by the removal of scrub and small trees from these areas. Cut stumps can be treated with a suitable tree stump and root killer.
- A further threat to the acid grassland is from Bracken encroachment. This is not a widespread threat, but was noted at TNI. Hand pulling or cutting by hand or strimmer is recommended with **all pulled material or cuttings removed from site** to prevent the litter suppressing smaller plants and nutrients building up in the soil. Removal of cuttings will also expose the rhizomes to frost which will suppress the plants vigour. Although not likely at this site, **to avoid disturbing ground**

nesting birds cutting or pulling should be performed in mid-July and a visual check should be performed before cutting. The cut will cause the plant to put up new fronds so a second cut should be performed 6 weeks later. This double cut should be performed for at least three years (possibly a third cut may be required in the second year). Alternatively, a single cut could be performed in **late July** and repeated for at least 5 years.

5.1.2. Woodland/ Scrub/ Scattered trees

- Minimal maintenance is required.
- Unless causing a safety hazard all standing and fallen deadwood should be left in place.

5.1.3. Mature trees

- Minimal maintenance is required.
- Unless causing a safety hazard all standing and fallen deadwood should be left in place.

5.1.4. Outcrops/Walls

- Bramble, Gorse and small trees should be removed. Care should be taken not to clear Western Gorse which is a smaller more delicate shrub that is becoming scarce in the county. If in doubt advice can be obtained from the Wildlife Trust.

5.1.5 Pond

- It is important to maintain the current levels of sunlight that reach the ponds if they are to retain their high existing wildlife value. Therefore, aim to control scrub.
- Ponds should be managed (if it is needed) on a rotational basis to allow a range of successional stages to maximise diversity over the site as a whole.
- Certain vegetation such as Bulrush has the potential to completely overgrow a pond causing it to dry out and lose its wildlife benefit. This should be monitored and vegetation cleared if required. When clearing pond vegetation, a little and often approach is best adopted. Aim to remove 1/5 (and no more than ¼) of vegetation in any one year between November and February from across a range of water depths (removing a strip or wedge). Leave removed material alongside the pond for a day or two to allow displaced aquatic animals to return to the pond before removing the material completely and composting.

5.1.6 Ditch

- Minimal maintenance is required. Open sunny ditches should be maintained as for long grassland.

6. References

Jeeves, M. (2011). *The Flora of Leicestershire and Rutland: Checklist and Rare Plant Register*. Leicestershire and Rutland Wildlife Trust, Leicester.

Guidelines for the Selection of Local Wildlife Sites (previously known as Sites of Importance for Nature Conservation or SINCs) in Leicestershire and Rutland. 4th Edition (revised 2011).

You can download the Guidelines for the selection of Local Wildlife Sites from https://www.leicestershire.gov.uk/sites/default/files/field/pdf/2016/8/22/Guidelines_LWS.pdf

Cossa, N. (2009) Bat Survey, Longcliffe Golf Course.

7. Recommendations for future surveys

- Woodland survey including mature trees in spring
- Invertebrate survey
- Possible butterfly transect.

Appendix 1: Maps

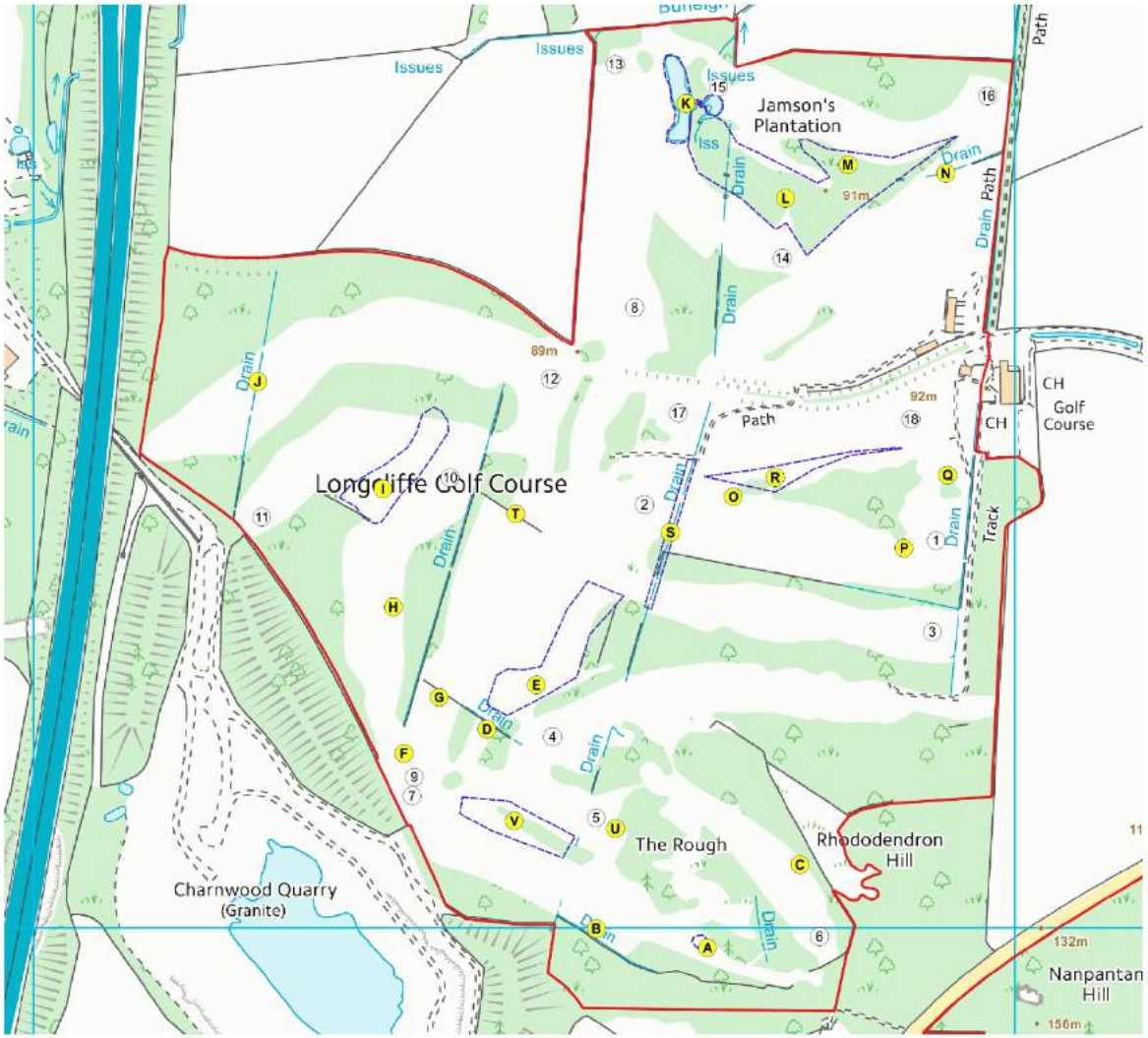
Longcliffe Golf Course

Leicestershire & Rutland Wildlife Trust

Legend

- Target Note (TN)
- Green
- TN boundary
- Local Wildlife Site boundary

Map2: OS background map



Longcliffe Golf Course

Leicestershire & Rutland Wildlife Trust

Legend

- Target Note (TN)
- Green
- TN boundary
- Local Wildlife Site boundary

Appendix 2: Target Notes (TNs)

TNA (SK4965 1700): acid grassland

This is an area of acid grassland/heath that has developed in a manmade scrape to the west of the 7th tee. It was not clear where the material used to seed the scrape was obtained from, but it was of local origin, either derived from Charnwood Forest Golf Club (SSSI) or from the Longcliffe Golf Club site itself. This was the only site were **Cross-leaved Heath** and Western Gorse were seen. Also present of note were **Heath Rush**, Heather, Green-ribbed Sedge, Heath Bedstraw and Tormentil. This area is periodically cut to keep the height of vegetation a level that doesn't impede play as it is on the fairway.

TNB (SK4958 1701: acid grassland

There is a small mound on the left-hand side of the 7th fairway with Harebell, Heather, Tormentil and Purple Moor-grass. Also present are grassland fungi species.

TNC (SK 4977 1706): acid grassland

A bank at the edge of the 6th fairway on the left-hand side. This bank is covered with locally abundant Sheep's Sorrel (*Rumex acetosella*).

TND (SK 4946 1720): remnant pond

A wet dip containing Yellow Iris *(Iris pseudacorus*), Greater Bird's-foot-trefoil (*Lotus pedunculatus*) Rosebay Willowherb (*Chamerion angustifolium*) and Nettle (*Urtica dioica*). There is potential to reinstate this area as a pond.

TNE (SK 4951 1723): acid grassland

An area of acid grassland below the 8th tee, mainly on the right-hand side of the fairway extending down to the 3rd tee. This area is notable in containing Sneezewort mainly in the southern part of the TN area. The main patch is approximately 15m x 15m (SK 4951 1723), but other patches are also present at SK4948 1722, SK4947 1722 and SK4955 1726. Other species present in this area include Harebell, Wavy Hair-grass and Heather some of which is mature. In the section adjoining the woodland that separates fairway 4 and 3 encroachment from Bramble is occurring into the grassland and species indicating nutrient enrichment such as coarser grasses are present. This area would benefit from removal of Bramble and grassland management.

TNF: acid grassland

A bank on the first right hand bunker in front of the 9th green. This bank is an example of good, well drained acid grassland habitat that is provided by the banks adjoining bunkers. Common Bent is abundant and Harebell, Common Sorrel (*Rumex acetosa*) and Mouse-ear-Hawkweed (*Pilosella officinarum*) are also present.

TNG: wall

This wall supports a species rich community of grassland species including locally abundant Sheep's Sorrel. Also present are Harebell, Heath Bedstraw, Common Bird's-foot-trefoil, Mouse-ear-hawkweed, Tormentil, Common Sorrel, and Autumn Hawkbit. Grass species include, as well as Common Bent and Wavy Hair-grass, Brown Bent which is another old heath grassland species. However, Gorse and Bramble are also present and there is a danger that these will overwhelm the more interesting grassland species.

TNH: acid grassland

A small area of acid grassland supporting Heather and Mat-grass (*Nardus stricta*) a heathland grass that is now almost confined to Charnwood Forest.

TNI: acid grassland

An area of acid grassland supporting Heather, Mat-grass and Devil's-bit Scabious (*Succisa pratensis*) between the 10th and 11th fairways that extends across the 11th fairway and into the woodland where Heather and Bifid Hemp-nettle (*Galeopsis bifida*) are present. Dense Bracken (*Pteridium aquilinum*) is also present between the 10th and 11th fairways. If the Bracken is allowed to grow unchecked it could overwhelm the grassland species.

TNJ: Ditch

This damp ditch is one of several drainage ditches across the course. Its supports a number of species including Slender St John's-wort, False Fox-sedge (*Carex otrubae*), Musk-mallow (*Malva Moschata*) and Common Figwort (*Scrophularia nodosa*).

TNK: Ponds

There are two linked man-made ponds. The larger pond is roughly a long thin oval in shape and covers an area of approximately 0.16ha. The smaller pond covers approximately 0.03ha. For both ponds there is very little open water due to the presence of dense non-native Water-lily (*Nymphaea* sp.) and abundant Canadian Waterweed (*Elodea canadensis*). Fish were observed gathered in small patches of open water. The water is largely unshaded although some mature trees are present nearby and young Oak and coppiced Willow are present along the west border of the larger pond. The larger pond has wide margins of emergent vegetation containing frequent Bulrush (*Typha latifolia*) and Galingale (*Cyperus longus*) with occasional Yellow Iris (*Iris pseudacorus*). Also present at the pond margins are Water Mint (*Mentha aquatica*), Hard Rush (*Juncus inflexus*) and Water Figwort

(*Scrophularia auriculata*). Approximately half of the smaller pond is surrounded by a wall with the surrounding area above the level of the pond and supporting close mown grass. There is little emergent vegetation at the margins of the smaller pond. A few additional species were recorded at the edges including Wild Angelica (*Angelica sylvestris*), Bittersweet (*Solanum dulcamara*) and Montbretia (*Crocossmia* sp.).

TNL: Woodland

This area, situated around the 15th tee, is typical of the semi-natural woodland blocks seen across the site. Pedunculate Oak (*Quercus robur*) is the dominant canopy tree and Birch are frequent. Bramble is frequent in the ground flora, but also present are occasional Bluebell (*Hyacinthoides* sp.). Due to the season it was not possible to determine which species of Bluebell are present, but they are likely to be native. Other ground flora species include Wood Sage, Foxglove (*Digitalis purpurea*), Hogweed (*Heracleum sphondylium*), Broad-leaved Dock (*Rumex obtusifolius*) and Common Chickweed (*Stellaria media*). This area of woodland is situated on a small hillock with the 15th tee situated at its summit. It also contains an active badger sett and a mature Pedunculate Oak (TNM).

TNM: Mature tree (SK4983 1776)

This mature Pedunculate Oak significantly exceeds 3.77m and therefore qualifies as a LWS in its own right. It contains large amounts of deadwood and fungi were growing around the base.

TNN: Ditch

The ditch is situated below the 17th tee and the banks contain a number of species of both neutral and acid grassland. These include Harebell, Common Bird's-foot-trefoil, Autumn Hawkbit, Common Sorrel, Yarrow and Lesser Stictchwort for neutral grassland and Sheep's Sorrel for acid grassland. There are also a number of species that prefer wetter conditions including Greater Bird's-foot-

trefoil, Soft-rush, Hairy Sedge (*Carex hirta*) and Water Forget-me-not (*Myosotis scorpiodes*). Could allow surrounding grassland to grow longer during the summer.

TNO: Acid grassland

Situated either side of the 2nd fairway near to the green are patches of Heather some of with is mature with adjacent younger seedling. There are some small Oak saplings that will if left unchecked shade and dry out the acid grassland.

TNP: Acid Grassland

This patch (15m x30m) of mostly Heather and Matt grass is situated between the 1st green and the second fairway. The Heather is mostly mature, but it is interspersed with small Turkey Oak that require clearing.

TNQ: Rocky outcrops

There are two rocky outcrops across the 1st fairway. The upper one, to the south, is approximately 1m high and 8m long. The lower outcrop is approximately 1.5m high and 15m long. They support a mixture of species including Sheep's Sorrel, Common Bent, Tufted Hair-grass, Heath Bedstraw, Yorkshire-fog, Wavy Hair-grass, Sheep's-fescue (*Festuca ovina*), Bluebell and Early Hair-grass. Early Hair-grass was only recorded at this site and is a grass often associated with the Rocky outcrops of Charnwood Forest. Sheep's-fescue, a heathland grass was also only recorded here, but may have been overlooked elsewhere.

TNR: acid grassland

This area of acid grassland runs up the right-hand side of the 18th fairway and supports occasional Heather and frequent Tormentil. Also present are Heath Bedstraw, Common Bent, Soft-rush and Common Sorrel. The grassland extends under scattered trees between the 18th and 2nd fairways where the shading is not too high; a fungi species called The Blusher (*Amanita rubescens*) was recorded here. Bryophyte cover of the ground was also high.

TNS: Ditch

This drainage ditch alternates between the woodland strips separating fairways 18, 2 & 3 and the open sunny conditions of fairways 2 and 3. The ditch contained shallow running water on a stoney substrate. Between the fairways the ditch is shaded by trees including Oak and Birch and Gorse and Rhododendron present are in the shrub layer. Bramble and Bracken are frequent. Also present are

Wood Sage, Male fern (*Dryopteris filix-mas*). In contrast the sections across the fairways support grassland plants including Slender St John's-wort, Harebell, Heather, Mouse-ear-hawkweed, Common Bird's-foot-trefoil, Sheep's Sorrel and Soft-rush. Some Gorse is also present. (possibly extend the extent of uncut grass).

TNT: Wall

This is the lower wall across the 9th fairway. It supports frequent Sheep's Sorrel as well as Heath Bedstraw, Heather and Purple Moor-grass.

TNU: Rocky outcrop

This is a small outcrop with a grassland bank situated behind the 5th green. The outcrop is becoming overgrown with shrubs and Bracken, but supports Wavy Hair-grass, Sheep's Sorrel, Heath Groundsel, Heath Bedstraw and Wood Sage. The adjoining bank supports very short grass, but contains locally frequent Lady's Bedstraw (*Galium verum*) and Parsley-piert (*Aphanes* sp.) which weren't recorded elsewhere at the course.

TNV: acid grassland

This grassland, situated to the right of the 5th fairway, is the second site identified at the course that supports **the Red Data Book species Heath Rush which is also a LWS indicator species of acid grassland**. **An area approximately 2m x 2m (SK4951817099) contained greater than 20 Heath Rush plants and a second area approximately 1.5m x 1.5m (SK4951917111) also contained greater than 20 plants.** There were also a few individual plants spread around within the target note area. Also present were other acid grassland species including **6 further LWS indicator species of acid grassland**: Heath Bedstraw, Common Bent, Wavy Hair-grass, Tormentil, Heather and Harebell. Purple Moor-grass is also present. This species rich area is under threat from young planted trees including conifer that will eventually shade out the grassland species.

Appendix 3: Species lists

Plant Site list

Local Wildlife Site (LWS) species lists as defined in the Guidelines for the selection of Local Wildlife Sites in Leicester, Leicestershire and Rutland (2011, 4th edition).
List D – Plant species of rocks and built structures
List F – Neutral grassland indicator species
List G – Wet grassland indicator species
List H – Acid grassland indicator species
List Z1 – Ancient woodland indicator
[1]Axiophyte: Considered a species of good quality habitat in Leicestershire and Rutland (Jeeves, M. (2011))
[2]Listed as Scarce in The Flora of Leicestershire and Rutland: Checklist and Rare Plant Register (Jeeves, M (2011)).

Species	Common name	Comment
List D – LWS indicator species of rocks and built structures		
Aira praecox	Early Hair-grass	
Aphanes sp.	Parsley-piert	
List F – LWS indicator species of Neutral grassland		
Campanula rotundifolia[1]	Harebell	Occasional, scattered across course
Carex binervis[1]	Green-ribbed Sedge	
Galium verum[1]	Lady's Bedstraw	
Lotus corniculatus	Common Bird's-foot-trefoil	
Luzula sp.	Heath or Field Woodrush	List G or H dependent on species
Ranunculus acris	Meadow Buttercup	
Rumex acetosa	Common Sorrel	
Scorzoneroides autumnalis	Autumn Hawkbit	
Succisa pratensis[1]	Devil's-bit Scabious	
Trifolium pratense	Red Clover	
List G – LWS indicator species of Wet grassland		
Angelica sylvestris	Wild Angelica	
Carex otrubae	False Fox-sedge	
Juncus acutiflorus	Sharp-flowered Rush	
Juncus conglomeratus	Compact Rush	
Juncus effusus	Soft-rush	
Juncus inflexus	Hard Rush	
Lotus pedunculatus[1]	Greater Bird's-foot-trefoil	
List H – LWS indicator species of Acid grassland		
Agrostis capillaris[1]	Common Bent	
Calluna vulgaris[1]	Heather	Occasional, scattered across course
Deschampsia flexuosa	Wavy Hair-grass	
Erica tetralix[1, 2]	Cross-leaved Heath	
Festuca ovina	Sheep's-fescue	
Galium saxatile[1]	Heath Bedstraw	
Juncus squarrosus[1, 2]	Heath Rush	
Nardus stricta	Mat-grass	
Potentilla erecta[1]	Tormentil	Frequent, scattered across course
Rumex acetosella	Sheep's Sorrel	
List Z1 – LWS indicator species of Ancient Woodland		
Oxalis acetosella[1]	Wood-sorrel	
Axiophyte[1] and notable species not included above		

Achillea ptarmica[1]	Sneezewort	
Agrostis vinealis	Brown Bent	
Hypericum pulchrum[1]	Slender St John's-wort	
Mentha aquatica[1]	Water Mint	
Molinia caerulea[1]	Purple Moor-grass	
Pilosella officinarum[1]	Mouse-ear-hawkweed	
Senecio sylvaticus	Heath Groundsel	
Teucrium scorodonia[1]	Wood Sage	
Ulex gallii[1]	Western Gorse	
Additional species		
Acer pseudoplatanus	Sycamore	
Achillea millefolium	Yarrow	
Apium nodiflorum	Fool's-water-cress	
Arctium minus	Lesser Burdock	
Arrhenatherum elatius	False Oat-grass	
Artemisia vulgaris	Mugwort	
Betula sp.	Birch	
Carex hirta	Hairy Sedge	
Cerastium fontanum	Common Mouse-ear	
Chamerion angustifolium	Rosebay Willowherb	
Cirsium arvense	Creeping Thistle	
Crataegus monogyna	Hawthorn	
Crocosmia sp.	Montbretia	
Cyperus longus	Galingale	
Cytisus scoparius	Broom	
Dactylis glomerata	Cock's-foot	
Deschampsia cespitosa	Tufted Hair-grass	
Digitalis purpurea	Foxglove	
Dryopteris dilatata	Broad Buckler-fern	
Dryopteris filix-mas	Male fern	
Elodea canadensis	Canadian Waterweed	
Epilobium hirsutum	Great Willowherb	
Fagus sylvatica	Beech	
Festuca rubra	Red Fescue	
Fraxinus excelsior	Ash	
Galeopsis bifida	Bifid Hemp-nettle	
Galeopsis tetrahit	Common Hemp-nettle	
Heracleum sphondylium	Hogweed	
Holcus lanatus	Yorkshire-fog	
Hyacinthoides sp.	Bluebell	
Hypericum sp.	St John's-wort	
Hypochaeris radicata	Cat's-ear	
Ilex aquifolium	Holly	
Iris pseudacorus	Yellow Iris	
Lolium perenne	Perennial Rye-grass	
Lonicera periclymenum	Honeysuckle	
Lycopus europaeus	Gypsywort	
Malva moschata	Musk-mallow	
Myosotis scorpioides	Water Forget-me-not	
Nymphaea sp.	Water lily	
Persicaria maculosa	Redshank	
Phleum pratense	Timothy	
Pinus nigra	Pine	
Pinus sylvestris	Scots Pine	

Plantago lanceolata	Ribwort Plantain	
Populus tremula	Aspen	
Potentilla anserina	Silverweed	
Potentilla reptans	Creeping Cinquefoil	
Prunella vulgaris	Selfheal	
Prunus avium	Wild Cherry	
Prunus spinosa	Blackthorn	
Pteridium aquilinum	Bracken	
Quercus cerris	Turkey Oak	
Quercus robur	Pedunculate Oak	
Quercus sp.	Oak	
Rhododendron ponticum	Rhododendron	
Rosa sp.	Rose	
Rubus fruticosus agg.	Bramble	
Rubus idaeus	Raspberry	
Rumex obtusifolius	Broad-leaved Dock	
Salix sp.	Willow	
Scrophularia auriculata	Water Figwort	
Scrophularia nodosa	Common Figwort	
Senecio jacobaea	Common Ragwort	
Senecio viscosus	Sticky Groundsel	
Solanum dulcamara	Bittersweet	
Sonchus arvensis	Perennial Sow-thistle	
Sonchus asper	Prickly Sow-thistle	
Stachys sylvatica	Hedge Woundwort	
Stellaria graminea	Lesser Stitchwort	
Stellaria media	Common Chickweed	
Tillia sp.	Lime	
Trifolium dubium	Lesser Trefoil	
Trifolium repens	White Clover	
Tussilago farfara	Colt's-foot	
Typha latifolia	Bulrush	
Ulex europaeus	Gorse	
Urtica dioica	Common Nettle	
Veronica chamaedrys	Germander Speedwell	

Incidental fauna

Amphibian	**Bird**	**Invertebrate**
Frog	Buzzard	Brimstone
	Jay	Common Blue
	Moorhen	Gatekeeper
	Woodpecker	Painted Lady
		Red Admiral
		Small white
		Speckled wood

Appendix 4: Explanation of LWS criteria and RDB

Local Wildlife Sites (LWS)

Local Wildlife Sites are identified and selected locally, by local authorities, nature conservation charities, ecologists and local nature experts, using robust, scientifically-determined and locally relevant criteria and detailed ecological surveys. Their selection is based on the most important, distinctive and threatened species and habitats within a national, regional and local context. This makes them some of Leicestershire and Rutland's most valuable wildlife areas.

Whilst carrying out surveys, we have assessed sites and features against the Local Wildlife Site Criteria as these will tell us if a site is of high value for wildlife. More is explained below about what it means to a landowner to have a LWS. LWS can be a range of different habitats, including individual trees, grassland, woodlands, ponds and rock outcrops. Sites or features may also meet criteria due to the presence of a Red Data Book (rare) species. There are primary and secondary criteria, where primary criteria are sites or features with a higher value for wildlife. A site or feature can be notified as a LWS if it meets primary criteria for a habitat, whereas if it meets secondary criteria it would need to contain another habitat that meets secondary criteria to be notified – this is a measure that combines quality and diversity. All designated LWSs meet the LWS criteria, some of these are of SSSI quality. Therefore, LWSs are important sites where most of our special wildlife can be found.

If a site meets LWS criteria we will tell the land owner that it does and we will also suggest management to maintain or improve the site's value for wildlife. The presence of a site or feature that meets LWS criteria shows that the land owner has managed their site in a positive way for wildlife. Without a land owner's input, these sites would eventually be lost. We would only start the process for officially notifying a LWS if a land owner indicated that they wished for their site to be notified.

Although not protected by law, LWS are recognised across the UK in national planning policies which set out requirements for protection through local policy and plans. Therefore, if a site is designated as a LWS, it will appear in searches relating to planning applications. There is no legal requirement for the owners to maintain the quality of the site.

Relevant to this report:

Grassland LWS criteria overview

To meet primary LWS criteria for neutral grassland the site should be at least 2500m^2 or 200m of linear habitat and contain at least 10 species from the LWS criteria species list for neutral grassland. To meet primary LWS criteria for acid grassland the site should be a least 1000m^2 and contain at least 5 species from the LWS criteria species list for acid grassland. To meet primary LWS criteria for mixed grassland the site should be at least 2500m2 or 200m of linear habitat and contain at least 10 species from the LWS criteria for neutral, wet and acid grassland combined.

Mature tree LWS criteria overview

To meet primary LWS criteria a tree should exceed 3.77m in girth (measured 1.3m above the roots.)

Woodland overview

To meet primary LWS criteria for Woodland a site should contain naturally regenerated woodland which exceeds 5ha in total.