

3: DESCRIPTION

3.1: General information

3.1.1: Location and site boundaries

Location – The park is located in the Parish of Colgate (appendix 8.1).
Ordnance Survey National Grid reference (main entrance): TQ 246348
Main entrance postcode: RH11 9HQ

Boundaries - To the north the park is bounded by the A2220 and to the north-east by WSCC owned grazing land. To the east the park is bounded by Crawley Borough Council (CBC) land. To the west wooden posts mark the boundary with Holmbush estate. Cottesmore golf course lies on the southern boundary.

3.1.2: Land ownership/tenure (appendix 8.2)

Buchan Country Park is owned freehold by WSCC. Numbers 1 and 2 Laundry Cottages, which are rented to staff, are also owned by WSCC and 55 metres of the drive leading to private houses. WSCC also owns the freehold of the field at the park entrance. This land is not currently part of the park.

WSCC has an agreement on 4.2 hectares of CBC land at Target Hill, on the eastern boundary. Following the expiry of a ten year agreement in October 2010 the agreement continues on an annual basis with a twelve month period of notice for either party.

A small area of the park (0.138 ha) is leased to Cottesmore golf course.

Buchan Country Park has a 10 year Higher Level Stewardship Agreement (AG00427901) with NE. The agreement commenced on 1 December 2012 and expires on 30 November 2022.

Crawley Angling Society (CAS) has a license to fish on Douster Pond SSSI. The license is for 10 years covering the period 16 June 2011 – 15 June 2021. There is a permissive path licence agreement between WSCC and Holmbush Estate enabling access from the park to public bridleway 1550/1.

WSCC has the following wayleaves (see glossary) in force

- grantee BT for an underground BT cable in the car park (property reference DP file 2455 and placed with D4875)
- grantee Southern Water for underground water main (property reference DP file 2455/PR/L/2455)
- grantee UK Power for cutting of trees/hedges adjacent to installed electric lines

3.1.3: Legal status

In 1980 the park was designated a Country Park under the 1968 Countryside Act. The park was officially opened on 20th May 1982. By-laws apply and new by-laws, having been approved by the Department for Environment, Food and Rural Affairs, were adopted in 2013.

15 hectares of the park are designated a SSSI as part of the Buchan Hill Ponds SSSI (appendix 8.3). Under the Countryside and Rights of Way Act 2000 (CRoW – see glossary) any potential damaging operations within the SSSI and within 200 metres of the SSSI boundary require the consent of NE.

Parts of the park are classed as heathland and are open access land under the CRoW Act.

Douster Pond is classed as a Reservoir under the Reservoirs Act (1975).

3.1.4: Management/organisational infrastructure

The park is currently managed by the WSCC Countryside Services with the help of a team of regular volunteers. For management projects where WSCC does not have the expertise or resources, work is contracted out under the WSCC contractors framework.

Staff and volunteers make use of the office facilities at the visitor centre, the workshop and storage space.

Inspections required under the Health & Safety Act such as quarterly emergency lighting tests, annual electrical safety check, portable appliance testing, annual fire extinguisher test and annual water hygiene test are co-ordinated by WSCC facilities management.

Two WSCC Countryside Rangers are live on site.

3.1.5: Site infrastructure

The visitor centre, car park, boiler house, workshop, storage sheds, sewage treatment works and two staff houses are situated in compartment 1. The car park has spaces for 90 vehicles including 2 disabled bays and parking for motorbikes, and is accessible to coaches. The visitor centre houses displays, sales goods and public toilets and provides a venue for meetings as well as facilities for events and education visits

This area is separated from the remainder of the park by the A264. A substantial highway maintainable bridge suitable for heavy vehicles allows access over the bypass.

The site includes an extensive network of paths. Public footpath Colgate 1545 passes through the park linking Broadfield estate to the northeast and Cottesmore golf course in the south. There is also a permissive path enabling access from the park to Public bridleway 1550/1 on adjacent land owned by Holmbush Estate. A system of surfaced paths forms a short (1 km) and a long (2 km) walk and are predominately suitable for wheelchairs and push chairs. More informal woodland paths are also present.

Two earth fill embankments retain the water creating Douster and Island ponds. By the lakes are a boathouse and castellated spillway.

Benches, picnic tables and a number of wooden sculptures are sited around the park.

3.1.6: Map coverage

1:50000 - Landranger 187 (Dorking and Reigate)

1:25000 - Explorer 134 (Crawley and Horsham)

3.1.7: Photographic coverage

Aerial photographs, held at the county records office, have been taken since 1940. Recent low-level aerial photographs are held at the park. There is an ad-hoc collection of ground photography held at the park. Lidar (see glossary) records from an aerial survey of the Weald forest ridge are held by the county archaeologist.

3.1.8: Compartments

Buchan Country Park is divided into 9 compartments and 3 SSSI units as shown in appendices 8.3 and 8.4 (pages 42/43). These are based on the Higher Level Stewardship compartments.

Compartment 1 – Visitor centre woodland

Compartment 2 – Spruce Hill

Compartment 3 - Plantation

Compartment 4 - The Meadow

Compartment 5 – The Common

Compartment 6 - Douster & Island Ponds

Compartment 7 – Middle Covert

Compartment 8 – Target Hill Heath

Compartment 9 - Entrance and Wild Garden

3.2: ENVIRONMENTAL INFORMATION

3.2.1: Physical

3.2.1.1: Geology and soil

The park is situated on deposits of fine Upper Tunbridge Wells Sand with small areas of coarser sands and clay. From visual assessment the soils appear to be virtually all Podsol (see glossary) except in the valley floor where alluviation has taken place.

3.2.1.2: Topography

The park is sited largely in the valley of Douster Brook, which runs south to north. The hill ridge to the west is Spruce Hill (maximum elevation 110m AOD) and to the east is Target Hill (maximum elevation 120m AOD).

3.2.1.3: Hydrology

The importance of the hydrology is reflected in the SSSI status. The park includes two ponds, Douster (2.2 hectares) and Island (1.2 hectares), which together with Boundary Pond on the western boundary form the best example in West Sussex of ponds on acid Tunbridge Wells' sands.

The immediate catchment area for the lakes consists of Cottesmore golf course, Target Hill and Spruce Hill. The soils in the catchment area are acidic and nutrient poor. The water quality reflects this. Following water analysis, the EA have stated that the water is among the most acidic and nutrient poor in the area. All ponds maintain their healthy mesotrophic (see glossary) condition. Douster Brook flows from Douster Pond over a castellated spillway into the River Mole and onto the River Thames.

Douster Pond is designated as a reservoir. The reservoir and dam, excluding the western end of the downstream face, are in the SSSI.

3.2.2: Biological

Buchan Hill Ponds is designated a SSSI for its dragonfly assemblage. This includes two nationally uncommon species, hairy dragonfly (*Brachytron pratense*) and brilliant emerald (*Somatochlora metallica*). The downy emerald (*Cordulia aenea*) is another notable dragonfly found at the park. Twenty two species of dragonfly have been recorded at the park. The remainder of the park is designated a SNCI. A map showing the main habitats is at appendix 8.6.

Compartment 1 Visitor Centre Woodland (SSSI Unit 2)

This block is the most diverse area in the park for native tree species and includes a small area of acidic semi-natural grassland. Much of the area is silver birch (*Betula pendula*) woodland. On the northern boundary there is a holly (*Ilex aquifolium*) thicket which, ignored by browsing deer, is spreading. Also present is scattered beech (*Fagus sylvatica*), common lime (*Tilia x europaea*), hawthorn (*Crataegus monogyna*), hazel (*Corylus avellana*), hornbeam (*Carpinus betulus*), mountain ash (*Sorbus aucuparia*), oak, and sweet chestnut. Sycamore (*Acer pseudoplatanus*) is confined to the northeast corner and due to browsing of seedlings is not invasive. In the southwest corner there is a block of aspen (*Populus tremula*). Aspen support a rich insect fauna and have been encouraged by removing *Rhododendron ponticum* and competing silver birches.

The under-storey is dominated by bracken (*Pteridium aquilinum*) with patches of bluebell (*Hyacinthoides non-scripta*) and honeysuckle (*Lonicera periclymenum*). Wood sage (*Teucrium scorodonia*) and heath bedstraw (*Galium saxatile*) are present. Damp patches contain broad buckler fern (*Dryopteris dilatata*) and lady fern (*Athyrium filix-femina*). Wood sorrel (*Oxalis acetosella*) grows on the stream banks.

The semi-improved acidic grassland although small, is the most diverse in the park. The dominant grasses are cock's-foot (*Dactylis glomerata*), common bent (*Agrostis tenuis*) and meadow fescue (*Festuca pratensis*). Also present is common spotted orchid (*Dactylorhiza fuchsii*), musk mallow (*Malva moschata*), meadow vetchling (*Lathyrus pratensis*), centaury (*Centaureum erythraea*), bugle (*Ajuga reptans*), wild strawberry (*Fragaria vesca*) and common fleabane (*Pulicaria dysenterica*). The caterpillars of two day flying moths Mother Shipton (*Callistege mi*) and burnet companion (*Euclidia glyphica*) feed on the red clover *Trifolium pratense*. A small colony of common blue (*Polyommatus icarus*) is present. Brown hairstreak eggs have been recorded on the blackthorn bounding the road. Meadow grasshopper (*Chorthippus parallelus*) and field grasshopper (*Chorthippus brunneus*) are common.

The woodland is relatively undisturbed. Roe deer (*Capreolus capreolus*) and fox (*Vulpes vulpes*) are regularly recorded. Sparrowhawk (*Accipiter nisus*) nest annually. The presence of these species is likely to be due to the fact that this is the least disturbed area of the park.

Power lines run west to east and regular pruning of the surrounding trees has created a linear glade. Bracken has been treated to improve plant diversity. This sunny strip is attractive to insects, in particular hoverflies and true flies (*Diptera*). Brimstone (*Gonepteryx rhamni*) butterflies are common due to the presence of alder buckthorn (*Frangula alnus*). Bramble (*Rubus agg*) is abundant and provides nectar for butterflies including white admiral (*Limentis camilla*) and silver-washed fritillary (*Argynnis paphia*).

The four reptile species present in the park, adder (*Vipera berus*), grass snake (*Natrix natrix*), viviparous lizard (*Lacerta vivipara*) and slow worm (*Anguis fragilis*) are regularly reported. There are two adder hibernacula.

Pipistrelle bat (*Pipistrelle pipistrellus*) is regularly recorded.

Compartment 2 Spruce Hill

A relatively open area dominated by scattered mature silver birch and exotic conifers. Beech, crab apple (*Malus sylvestris*), hawthorn, holly, oak, mountain ash, scots pine (*Pinus sylvestris*), Douglas fir (*Pseudotsuga menziesii*) and sweet chestnut are also present. The north-eastern section comprises mature sweet chestnut coppice with a small amount of silver birch scrub and isolated *Rhododendron*. Some of the sweet chestnut coppice has died probably as a result of *Phytophthora* fungus infection. A large amount of dead wood both standing and lying may explain why this area is one of the richest for fungi. The shrub layer is sparse but includes alder buckthorn and hazel. Two small ponds are located towards the centre of the compartment.

The under storey consists of patches of bluebell, wood sage and foxglove (*Digitalis purpurea*) within grass covered glades. Bramble is regularly cut to prevent it threatening the bluebell population. Extensive spraying of bracken had reduced its cover from 90% to approximately 10% of the ground flora. However it is again beginning to spread and annual spot spraying will need to continue to prevent its re-establishment. Silver-washed fritillary has been recorded annually since 2010.

Both downy emerald and brilliant emerald dragonfly hunt over the grass covered glades.

Compartment 3 Plantation and Grassland (SSSI Unit 1)

The northern part of this large compartment is sweet chestnut coppice with chestnut and occasional oak standards. A combination of probable *Phytophthora* fungi infection and deer browsing resulted in 20% of the mature trees and coppice stools dying between 2008 and 2013. The large amount of standing dead wood is attractive to woodpeckers including the declining lesser-spotted woodpecker (*Dendrocopos minor*). The loss of so many mature trees means

that more light reaches the woodland floor. Silver birch, bramble, honeysuckle and, in damper parts, rushes are colonising. There are a number of bird cherry (*Prunus padus*) saplings.

Adjacent to the block of sweet chestnut is privately owned Boundary Pond; although not part of the park it forms part of the Buchan Hill Ponds SSSI. WSCC ownership extends to the median high water mark of the eastern shore. The pond is fringed by jointed (*Juncus articulatus*), soft rush (*Juncus effusus*) and the rare Marsh St John's wort (*Hypericum elodes*). Scot's pine dominates the area immediately to the east of the pond. To create more open habitat for hunting dragonflies the pine were thinned in 2012. The north-west corner is a dense block of exotic conifers and self- sown Scot's pine. This is a remnant of an earlier planting that was destroyed by fire in 1988. Alder buckthorn is common and brimstone butterflies are abundant in the spring.

The central section of this compartment is dominated by widely scattered, mature Scot's pine, oak and silver birch scrub. Growing on rising ground, the pines are a feature of the landscape. Crossbills (*Loxia recurvisrostra*) have been irregular breeders. Wood ant (*Formica rufa*) are abundant but are restricted to this small area. The oak were planted in the late 1980's. The seed was not of local provenance and growth has been very slow on the infertile, acidic soil. Even today the trees are growing less than 10cms per annum.

A half hectare block of poorly growing oak was cleared in the late 1990's. Purple moor grass (*Molinia caerulea*) and scattered cross-leaved heath (*Erica tetralix*) have established. The grassland has been colonised by Roesel's bush cricket (*Metrioptera roeselii*). The meadow grasshopper is also frequently seen.

Birch scrub is establishing on the western boundary. This follows bracken spraying after the area was destroyed by fire in 2004. Two other areas of established birch scrub are protected by Tenax deer netting. This also reduces disturbance from dogs and restricts walkers to the main paths. As a result four species of reptile are thriving. Until the wet summer of 2012, two pairs of Nightjar (*Caprimulgus europaeus*) bred annually.

The undisturbed thickets have proved attractive to a great variety of birds notably yellowhammer (*Emberiza citrinella*) and bullfinch (*Pyrrhula pyrrhula*). Until 2010 cuckoo (*Cuculus canorus*), tree pipit (*Anthus trivialis*), and woodcock (*Scolopax rusticola*) were regularly recorded. These losses reflect a national decline. However buzzard (*Buteo buteo*) is now regularly seen, again reflecting a national trend. Despite the losses this remains the best compartment in the park to view birds.

The southern end of the compartment consists of an undisturbed area of broadleaved trees and bracken dominated glades. Silver birch is the dominant tree but there are scattered oak, beech, sycamore, hawthorn, mountain ash, willow, sweet chestnut, a number of exotic conifers and scattered *Rhododendron*. The conifers and *Rhododendron* will be removed. Elder (*Sambucus nigra*) is common in the south-west corner. An avenue of ornamental red oak (*Quercus rubra*) was felled in 2012. Wood Anemone (*Anemone nemerosa*) is occasional and is restricted to this compartment.

Bracken, bluebell and grasses dominate the ground layer. There is a significant amount of windblown timber.

This is an excellent area for fungi with *Boletus* species especially common in some years.

A small stream and surrounding wet 'flush' are important for a variety of birds particularly redpoll (*Carduelis flammea*) and siskin (*Carduelis spinus*).

The four reptile species present in the park are seen regularly.

Fallow deer (*Dama dama*) is frequently seen in winter. Noctule bat (*Nyctalus noctula*) is seen annually. Unidentified bats, likely to be Pipistrelle (*Pipistrellus pipistrellus*), have been seen exiting bat boxes.

Compartment 4 The Meadow

Until 1985 this area of grassland was part of Cottesmore golf course. It has few flowering plants. Common vetch (*Vinca sativa*), creeping buttercup (*Ranunculus repens*), hawkbits (*Leontodon sp*), lesser stitchwort (*Stellaria graminea*), meadow vetchling (*Lathyrus pratensis*), sheep's sorrel (*Rumex acetosella*) and white clover are present. The dominant grasses are Yorkshire fog and cocksfoot. Other common species are perennial rye (*Lolium perenne*), common bent, creeping bent (*Agrostis stolonifera*), timothy grass (*Phleum pratense*), and rough meadow grass (*Poa trivialis*). Less frequent are false oat grass (*Arrhenatherum elatius*) and red fescue (*Festuca rubra*). There are two significant beds of stinging nettle (*Urtica dioica*) on the margins.

To the south and west, the meadow is bounded by a hedge planted in the late 1980's and contains a range of native woody species. Aspen and oak are present as standards and there is a developing thicket of aspen suckers. A 3 metres wide strip of bramble and wild raspberry runs along the north and west boundaries. The hedge provides a breeding and food resource for birds. Bullfinch and yellow hammer have bred and the rare brown hairstreak butterfly has been recorded.

Butterflies present include large skipper (*Ochlodes sylvanus*), small skipper (*Thymelicus sylvestris*), meadow brown (*Maniola jurtina*) and ringlet (*Aphantopus hyperantus*). Day flying moths recorded are Mother Shipton and burnet companion. Common wainscot (*Mythimna pallens*) and smoky wainscot (*Mythimna impura*) moths, whose larvae feed on grasses, are abundant.

The most significant trend is the increase in both abundance and species of grasshopper and cricket now found in the grassland. Of particular note is the colonisation by Roesel's bush cricket and long-winged conehead (*Conocephalus discolor*).

The meadow is an important hunting area for dragonflies.

Compartment 5 The Common

The area is dominated by silver birch scrub with scattered mature oak, mountain ash, holly, silver birch, willow, scots pine and sycamore. Many of the trees have climbing honeysuckle. Turkey oak (*Quercus cerris*) is present on the boundary with the meadow. Bracken is common. Bluebell, foxglove, wood sage and heath

bedstraw comprise the field layer. A narrow stream flows from a pond in the centre of the compartment and is edged with purple moor grass, rushes and *Rhododendron*. This is the only site where Royal fern (*Osmundia regalis*) can be found.

Self-sown silver birch is regularly coppiced. The varied structure is attractive to wildlife. Willow warbler (*Phylloscopus trochilus*) is common in the summer. Nightjar and yellowhammer have bred. Tree pipit (*Anthus trivialis*) formerly bred but has not done so since 2009. This reflects a national decline. Woodcock are recorded annually in the winter.

The four reptile species present in the park, adder, grass snake, viviparous lizard and slow worm have been recorded. There are two adder hibernacula.

Bats frequently hunt over the common. The main threat to the diversity of this compartment is increased browsing by rabbit (*Oryctolagus cuniculus*) and deer.

Compartment 6 Douster/Island Ponds and SSSI Woodland (SSSI Units 2 and 3)

This compartment forms part of the Buchan Hill ponds SSSI, notified for its outstanding dragonfly assemblage. Douster Pond is fringed by an alder, oak, scots pine and silver birch canopy. To the north lies the retaining earth fill embankment.

A small block of great reed-mace (*Typha latifolia*) and great willow-herb (*Epilobium hirsutum*) grows in the northwest corner. Floating vegetation consists of patches of white water-lily (*Nymphaea alba*) and yellow-water lily (*Nuphar lutea*). The white water-lily is stable. The yellow water-lily distribution on the water can change markedly from year to year.

Following *Rhododendron* removal, grasses, rushes, bracken and heather are recovering. Gorse and birch seedlings are also colonising. Ferns are increasing and include hart's-tongue (*Asplenium scolopendrium*). This area is the busiest in the park and vegetation is suppressed by compaction. There are a number of exotic conifers including Chile pine (*Araucaria araucana*), Douglas fir, Lawson cypress, (*Chamaecyparis Lawsoniana*), Japanese cedar (*Cryptomeria japonica*) and western red cedar (*Thuja plicata*).

An area of dry lowland heath on the north-west side includes the main picnic area for the park. The grassland is bounded by a mixture of heather, young birch and established birch woodland. Evidence of the area's industrial past is shown by several bell pits. These shallow depressions are all that remain of a shaft that was worked for iron ore.

Many of the wide range of dragonfly and damselfly species found in the ponds are listed on the Sussex Rare Species Inventory. These include golden ringed (*Cordulegaster boltonii*), downy and brilliant emerald, ruddy darter (*Sympetrum sanguineum*) and white legged damselfly (*Platycnemis pennipes*). The adult dragonflies range widely over the park and the habitat improvement work of recent years, notably the heathland restoration, will have benefited these species.

Kingfishers (*Alcedo atthis*) have bred. Grey wagtail (*Motacilla cinerea*) is an annual breeder. Mallard (*Anas platyrhynchos*), moorhen and Canada goose (*Branta canadensis*) are the most common species of the pond with occasional sightings of coot (*Fulica atra*), grey heron (*Ardea cinerea*) and common sandpiper (*Actitis hypoleucos*).

From casual sightings and the use of a bat detector, bats appear to have increased. Pipistrelle, daubenton's (*Myotis daubentonii*) and noctule are recorded regularly.

The 2002 EA fish survey of Douster Pond found that 'the fish population appears healthy' and that 'significant stocking of fish would be inappropriate'. In view of the report conclusion, no stocking of the lake has been permitted. Although a difficult water to fish, anglers report favourably on the water. Several carp (*Cyprinus carpio*) are in excess of 40lbs. Bream (*Abramis brama*) and pike (*Esox lucius*) are regularly caught.

Non-native pumpkinseed fish (*Leopomis gibbosus*) are present in both waters. Electro-fishing and removal has almost eradicated them. The last electro fish in 2010 found two. In 2007, 278 fish were removed.

There is a significant colony of toad (*Bufo bufo*). Numbers of this decreasing amphibian dropped in the late 1990's but appears to have recovered. Several hundred can be seen returning to the ponds in early spring when conditions are right.

Compartment 7 Middle Covert

Middle Covert is predominantly even-aged silver birch and Scot's pine woodland with glades dominated by bracken and smaller amounts of ling heather (*Calluna vulgaris*), bilberry (*Vaccinium myrtillus*), wood sage and honeysuckle. A number of the pines are of a considerable age. Beech, holly, oak and sweet chestnut are thinly distributed and there are occasional hawthorn and mountain ash. A veteran beech towards the centre of the compartment is thought to be at least 150 years old. The larger Scot's pines are crowded by self-sown pine saplings. A number of mature exotic conifers and isolated *Rhododendron* are scattered throughout the woodland.

From poisonous *Amanitas*, to edible *Boletus* this compartment has a rich assemblage of fungi.

Tawny owl (*Strix aluco*) and green woodpecker (*Picus viridis*) breed in this compartment. The open nature of the woodland is attractive to the locally rare wood warbler (*Phylloscopus sibilatrix*). One to three birds are recorded in most years.

Pine hawk moth (*Hyloicus pinastri*) is regularly recorded. Speckled wood (*Pararge aegeria*) butterflies are frequently seen around glades.

Compartment 8 Target Hill

The majority of this compartment is restored dry, lowland heath dominated by ling- heather and silver birch saplings. A 3 metres wide strip of silver birch,

sallow (*Salix caprea*) and bramble are present along the top of the ridge. *Rhododendron* is confined to isolated shrubs growing amongst the dense heather. There are scattered clumps of gorse and bramble. Rushes are frequent along the bottom of the slope. A variety of sedges and grasses are colonising areas of bare ground. Mature specimens of silver birch, scots pine, beech, sweet chestnut and oak are widely spaced throughout.

In the centre of the southern section an area of open woodland known as Target Hill Plantation is dominated by silver birch with scattered scots pine, sweet chestnut and occasional oak and gorse.

The northern area is dominated by sweet chestnut coppice with standards on its lower slopes adjacent to a small area of acid grassland with some heather. The chestnut is declining probably due to *Phytophthora* fungus. Birch seedlings are abundant. Where chestnuts have died the more open conditions has led to the rapid establishment of birch. The ground layer is made up bluebell, bramble, wood sage and honeysuckle. There are patches of bare ground which are useful for invertebrates. A small group of wild daffodils (*Narcissus pseudonarcissus*) are growing next to the road embankment. Until the development of Broadfield this area was well known for its populations of wild daffodil.

Fly Agaric fungi (*Amanita muscari*) the red and white capped fungus of fairy tales is common.

Nightjar is recorded annually and has bred. Tree pipit, linnet (*Carduelis cannabina*), whitethroat (*Sylvia communis*) and yellowhammer are also thought to have bred. Woodcock are occasionally disturbed from dense bracken. There is a winter roost of up to 100 Meadow Pipit in the heather. The roost has declined from a peak of 300 birds. Silver birches are used as song posts by willow warbler and yellowhammer. Birch scrub supports breeding blackcap (*Sylvia atricapilla*) and garden warbler (*Sylvia borin*). Grey squirrel (*Sciurus carolinensis*) is present and has damaged many of the birch and uncommon aspen saplings.

Target Hill is the most important reptile habitat in the park. Adder, grass snake, slow-worm and lizard are regularly seen. Two winter hibernacula are known.

Flowering heather attracts large numbers of insects including honey bee (*Apis mellifera*). Green tiger beetle (*Cicindela campestris*) and long-winged cone head are both present.

Pipistrelle bats are regularly seen.

Compartment 9 Entrance and Wild Garden

This small compartment lies outside the HLS scheme. It comprises the entrance, car park and wild garden, formerly a residential garden. The entrance drive is lined with silver birch and *Rhododendron* hedge. The car park has a number of mature oak, alder, Scot's pine and sallow. Pendulous sedge (*Carex pendula*) is common.

There is a small orchard adjacent to the entrance drive. Snowdrops (*Galanthus nivalis*) are a significant feature in early spring. Crawley Beauty apple trees were

planted in 2003 although these have suffered from deer browsing. Locally sourced wild daffodils, once a feature of the area, have been planted along the entrance drive.

The wild garden has a diverse mix of species. There are natives such as hazel and oak and exotics like Cedar (*Cedrus*) and *Azalea*. Most of the *Rhododendron* has been cleared. The garden is fenced and dog free. There are four small ponds which are important for breeding common frog (*Rana temporaria*), palmate newt (*Triturus helveticus*) and broad bodied chaser dragonfly (*Libellula depressa*).

Future work will focus on improving paths and managing the vegetation to maintain diversity and make the area more interesting for visitors.

3.3: CULTURAL

3.3.1: Archaeology

There are a number of archaeological features identified as heritage assets and recorded on the WSCC Heritage Environment Record (HER). In the centre of compartment 3 a cluster of mine pits run in a SW-NE direction around Spruce Hill. These workings were part of a wider pattern of medieval iron ore extraction from the area of the Tunbridge Wells Sand and collectively they would have supplied not only the nearby Bewbush furnace but other furnaces in the wider area such as Tilgate, St Leonard's and Warnham.

In the south of compartment 3 a pillow mound (HER 4431) runs east-west over 75 metres long and is 3 metres high. Pillow mounds were warrens built for breeding rabbits as a source of meat.

Crescent shaped rifle butts are located in compartment 8. These may have been a response to the creation of a volunteer rifle corps around 1859 and were described as disused by the 1870's. A collection of bullets have been recovered from the site.

3.3.2: Historical including past land use

The occasional find of Neolithic barbed and tanged flint arrowheads demonstrate that in prehistory the area was used for hunting and pasturing animals.

The park was once part of the larger St Leonard's Forest consisting of woodland and heath in roughly equal proportions. In the 16th and 17th centuries the area was part of a larger iron ore extraction industry providing water to power and timber to the industry. The nearest furnace was situated in Bewbush on the Mole to the north of Buchan and was working from the second half of the 16th century.

Due to the number of warrens, rabbits had begun to multiply in the parish in the 17th century and the pillow mound indicates that the open heath was a productive source of meat. This hindered regeneration of woodland, as did the practice of burning heathland to increase food supply.

The timber exploitation for coppice products and sheep grazing continued until Victorian times.

In 1882 the Saillard family turned part of the area now occupied by the park into landscaped gardens for Buchan Hill House. At the end of the 19th century a larger house was built (now Cottesmore School). The valley was dammed to form two ponds, and the boathouse and castellated waterfall were built. The Saillard family moved from the house in 1915. A section of the original drive to Cottesmore House now forms part of the park trail.

3.3.3: Past management

Prior to 1969 the park was managed as private amenity woodland. WSCC purchased the land in 1969 to protect the route of the Crawley south-west bypass which was completed in September 1992. In 1980 Buchan was designated a Country Park and since then a variety of habitat, access and recreational management has been completed.

Priorities for habitat management have been the removal of *Rhododendron*, the creation of heathland, the re-introduction of coppicing and the management of the ponds for the nationally important dragonfly assemblages.

Until the early 1990's dense *Rhododendron* covered more than 15% of the park and was spreading rapidly. Only isolated *Rhododendron* plants now remain. On the heathland areas *Rhododendron* clearance has been followed by annual bracken spraying and the thinning of Scot's pine. Heather has established, more rapidly in some areas than others and areas of bare ground have been created for the benefit of heathland invertebrates. The colonisation by gorse (*Ulex europeus*) has been monitored to ensure it does not become invasive. An annual programme of selective cutting of silver birch maintains a mosaic of scrubby heathland.

In 1987 the Great Storm led to the loss of many trees in compartments 3 and 5. Bracken quickly invaded and the areas were subsequently affected by damaging fires. With financial assistance from the Forestry Commission large scale bracken spraying reduced the fire risk and encouraged the establishment of native trees. Malicious and damaging fires continued to be a problem throughout the 1990's. One fire in 1996, centred on Middle Covert and The Common, damaged 7 hectares. Since an annual spraying of bracken has been undertaken there have been no significant fires since 2004. Clearing bracken allows plants such as bluebell and grasses to establish. This has significant benefits for insects, reptiles and small mammals.

Since 2002 a block of sweet chestnut and silver birch has been coppiced in compartment 3. The cut areas have been fenced with temporary netting to prevent deer browsing. In the absence of a dense tree canopy re-growth has been rapid. However what is thought to be *Phytophthora* fungus now threatens this work.

A section of the meadow has been mown annually in winter to prevent encroachment of scrub.

In 2006 12 timber fishing platforms were installed around the margins of Douster pond.

More than 500 metres of surfaced Fittleworth stone path have been laid since 2008 to meet the increased visitor pressure. This has seen many of the informal paths disappear which reduces erosion and disturbance to wildlife. Maintenance work on the paths has been carried out annually.

In 2008 a 'Dog Dip' was created at Island Pond. An area of hard standing and a small 'beach' made from Fittleworth stone was created in the north east corner from which dogs are permitted to swim.

In 2008 an information panel with an improved site map replaced the existing boards at the centre. Interpretation on the High Weald AONB has been available since 2009. Visitors can now obtain a trail guide and information about the AONB when the centre is closed.

It was a management objective of the last plan to promote sustainability. Progress has been made on several fronts. Improved signage from the local bus stops at Bewbush and Broadfield shopping parades was put up in 2009. A fortnightly programme of health walks has also been running since 2009. The range of local produce on sale at the centre has increased. In 2012/13 more than £2000 was raised from the sale of logs arising from management work in the park and other WSCC countryside sites.

In 2011 the Friends of Buchan Country Park was launched.

The Friends are a group of people who enjoy Buchan Country Park and who feel that they would like to promote its use as a beautiful public space. As an independent self-funding body, they aim to promote and support the management of the park. More information is available from <http://fobcp.org.uk/>. Early successes have included dog shows and community art events.

In 2011 significant repairs were carried out to the wave wall on Douster. The work was carried out by a team of divers as it was not possible to lower the water level.

In February 2012, through a Heritage Lottery Fund grant a Mesolithic round house was built by the East Sussex Museums Partnership team in the wild garden. Sadly the building which proved popular with visitors was destroyed in an arson attack in July 2013.

Working with local artists a number of sculptures have been installed around the park including a new sculpted entrance gate.

3.3.4: Present land use

Buchan Country Park is managed as a Green Flag Award winning country park, a SSSI and a SNCI.

3.4: PEOPLE

3.4.1: Community

Volunteers provide invaluable assistance in the management of the park. Around 400 volunteer days a year are recorded undertaking a range of tasks. Using the formula recommended by Volunteer England and data, on average earnings, from the office of national statistics the economic value of the work that volunteers carry out is £30,500.

Since 2006 the volunteer 'Get Grubby' group has met on the first Saturday each month and carried out a variety of practical conservation work. In 2009 a weekly Thursday group was launched. Volunteers also assist with the opening of the countryside centre. Without the Friends of group some events such as the dog show would not happen. A range of groups help on the site as the opportunity arises. They include Sussex Weald NHS Trust, Sussex Wildlife Trust via Gatwick Greenspace Project and corporate groups.

Volunteers have long helped provide assistance to educational visits and the park also offers opportunities for up to 3 Plumpton College student placements a year. Volunteers also assist with staffing the visitor centre at weekends. The park also provides training opportunities for work experience placements from local secondary schools.

The recruitment and on-going support for volunteers is managed as part of the WSCC Volunteer Policy.

WSCC has good communication and working relationships with a range of local community and interest groups. This includes the neighbourhood police who undertake independent patrols of the car park and occasionally the park itself.

3.4.2: Stakeholders

WSCC is the main stakeholder. Other organisations with an interest in the park include

- Crawley Angling Society - www.crawleyanglingsociety.co.uk
- Crawley Borough Council – neighbouring land owner
- Cottesmore golf club – neighbouring landowner
- Environment Agency – Reservoirs Act and Flood and Water Management Act enforcing authority - www.environment-agency.gov.uk
- Friends of Buchan Country Park – fobcp.org.uk
- Holmbush estate – neighbouring SSSI landowner
- Keep Britain Tidy – Green Flag Award greenflag.keepbritaintidy.org
- Mole Valley Orienteering Club– www.mvoc.org
- Natural England - SSSI status and HLS Agreement www.naturalengland.org.uk

There is also a range of user groups, both local and regular and visiting from outside the area that includes dog walkers, walkers, orienteers, photographers and cyclists.

The Buchan Advisory Board meets three times a year and supports the management of the park and/or issues relating to it. The Board consists of WSCC Councillors, District and Borough Councillors, and representatives from statutory bodies and local interest groups. All meetings are open to the public.

3.4.3: Access

The park has 1 vehicular entrance and 6 pedestrian entrances, including the main entrance which has a welcome sign. The locations of the entrances are shown at appendix 8.8.

3.4.3.1: Visitor numbers

A data logger was installed in May 2007 to record visitor numbers and time and date of visit. The last data from May 2011 shows a weekly average of 2200 visitors. This is a typical figure that changed little throughout the recording period. Visits are spread evenly through the week with a slight peak at weekends. The busiest periods are school holidays with Sunday afternoons and Bank Holidays seeing most visitors.

3.4.3.2: Access to/within site (appendix 8.7)

Access by road - The main car park is adjacent to the A2220 and road access to the park is good. There is free car parking, including two disabled bays, for approximately 90 cars and 2 motor cycles. Drop bollards at the entrance gates can be opened to allow coach and minibus entry.

Access by bus – The Fastway 1, 10, 20 and 23 services currently stop at Broadfield and Bewbush shopping precincts. The park is sign posted from Broadfield Barton and Dorsten Square. For more information visit www.metrobus.co.uk

Access by rail – The nearest train station to the park is Ifield, a 1.5 mile walk along the sign-posted Crawley Greenway.

Access by foot and bicycle – All entrances are suitable for pedestrians. A footbridge crosses the A2220. There is an extensive network of surfaced paths, which are mostly suitable for wheelchair and pushchair use. In addition there is a public footpath and a permissive path linking nearby areas of Crawley and the open countryside.

Cyclists can use the park provided they remain on surfaced routes and that cycles are pushed when using the permissive path.

The park is split in two by Douster Brook and the ponds. Vehicular access to the western side is available via a concrete bridge over the brook. This bridge does not have a specified loading capacity. Heavy vehicles can only gain access to much of the park by crossing Cottesmore golf course or through Holmbush estate.

It is planned to carry out an access audit in 2014-15.

3.4.4: Recreational use

As a Country Park one of the sites main roles is to encourage quiet enjoyment of the countryside by local people. The site receives at least 120,000 visitors a year and this has to be managed in light of the SSSI designation amongst other constraints.

In 2010, the park achieved the Green Flag Award (GFA – see glossary) in recognition of the work that has been undertaken to try and achieve this. The park has retained the annual award ever since.

The park is a valuable resource for informal recreation for local people and has

- a ranger led events programme –www.westsussex.gov.uk
- FoBCP events -
- a novice orienteering trail
- two picnic areas
- numerous benches
- several geocaches - www.geocache.com
- fortnightly health walk –www.crawley.gov.uk

Current wildlife sightings and habitat news are regularly updated at the visitor centre giving visitors the opportunity to learn about the natural history of the park.

The ranger led events are run at a variety of times including early morning and at weekends. Approximately 2000 people a year take advantage of the varied events on offer with many over-subscribed. Evening events focusing on nocturnal wildlife and bushcraft are particularly popular. Most events require pre-booking and there is a small charge. The FoBCP events include an annual Art in the Park day and a popular dog show.

CAS has a license with WSCC until June 2021 to allow its members to fish Douster Pond. Fishing is permitted daily from dawn to dusk. Night fishing is permitted Tuesday and Saturday and members must hold a CAS night fishing permit. At September 2013 there were 244 members and 67 night permit holders. A close season operates from 15th March to 15th June inclusive.

The site suffers from sporadic vandalism, graffiti and incidental damage. It is a priority that incidents are dealt with quickly, by staff if possible or by contractors if required. Relationships with the Broadfield neighbourhood police team are good.

At certain times the car park reaches capacity. This may increase due to the significant amount of new housing being built in close proximity to the park. Through monitoring, possible mitigation may be required if the problem increases.

3.4.5: Interpretation and promotional material

A range of interpretation is used and is constantly being developed, on the site. A comprehensive range of signs are present including ladder boards, static information boards and sculptures. Other interpretation includes a site leaflet which is updated when reprinted.

The internet is increasingly used to promote events, volunteering opportunities and wildlife highlights. The park has a website www.westsussex.gov.uk/buchan, Facebook page www.facebook.com/buchancountrypark, a twitter account <https://twitter.com/BuchanCP> and blog <http://thebuchanbabble.blogspot.co.uk/>

Regular press releases are made in the local newspapers to advertise events, volunteer opportunities and wildlife highlights.

An interpretation and access audit is planned for 2014 -15

3.4.6: Education

A part time education officer currently runs the service. The service provides a variety of activities for schools, community groups and the general public. The aim is to raise awareness of the countryside amongst all user groups. A number of volunteers regularly help with this work the work is mainly, but not exclusively at the park.

In 2013 Buchan hosted over 30 class visits, plus twelve visits by clubs (beavers, rainbows, brownies, cubs and scouts). Most visits are in the summer term. School groups are mostly primary age, as well as some pre-school and secondary. Most groups are led by Buchan staff, but a growing number are self-led. Visits increasingly involve bushcraft and forest school activities from shelter building to tool use, fire lighting and environmental art. Groups also come to study habitats (ponds, woods and meadows) and identify animals and plants. The orienteering trail is used on a self-led basis. Buchan staff also lead outreach activities in school grounds, to help children understand habitats and how to create them.

3.4.7: Income

A review of income generation has been completed as part of a wider WSCC Countryside Services review. All income generation opportunities must ensure the SSSI is not compromised, and that the ethos of a country park is maintained.

In recent years income has been successfully generated from a variety of sources. This has included a successful HLS bid in 2012, increasing the diversity of goods being sold in the centre and reviewing the charging for events. Other income has included external funding for projects such as the roundhouse and rental income from CAS.

The review of income generation is now an integral part of site management and options are being considered for how to further this. For example the option for a café is currently being explored.

3.5: LANDSCAPE

Most of the park is located in the High Weald AONB.

The whole site lies within the WSCC High Weald Forests (HW2) Landscape Character Area (appendix 8.9).

Although the park is not included in the English Heritage Register of historic parks and gardens the WSCC Historic Environment Record identifies part of compartments 6 and 8 as a historic parkscape/landscape formerly associated with Buchan Hill House. Visual reminders of this can be seen in a number of mature tall pines and other exotics which are believed to have been a result of large scale tree planting by the Buchan Estate during the early 19th century.

4: FEATURES OF INTEREST

See appendix 8.4 for map of compartments

Archaeological (compartment 4/6/8) – There are a number of designed features from the 19th century around Douster pond. Bell or mine pits (see glossary), a pillow mound and the rifle butts on Target Hill are from an earlier era.

Lowland Heathland (compartment 8)

Purple with heather at the height of summer heathland is an internationally important habitat. It provides a key habitat for nationally scarce/locally significant species such as nightjar and reptiles. In addition the maintenance of heathland strengthens the vegetation mosaic characteristics of the High Weald AONB. Without active management the ecological value of these areas will decline.

The developing heathland area on the adjacent CBC land is a valuable extension to Target Hill.

Scrub (compartment 3/7)

Scrub provides a valuable habitat supporting a range of associated species and it is included within the HLS Agreement. The areas at the park enhance the woodland edge environment and also contribute to the mosaic of habitats.

Elsewhere successional birch scrub is maintained for the benefit of bats, uncommon birds such as nightjar and reptiles. The scrub quickly established following large scale bracken spraying in the 1990's.

Semi-improved rough grassland (compartment 3)

The small area of grassland within compartment 3 is dominated by purple moor grass with some heather. It is valuable as part of a mosaic of habitats and is favoured by harvest mouse, nightjar and meadow pipit.

Species rich semi-natural grassland (compartments 1/3/4)

The areas of semi-improved grassland are important, being recognised within the UK Biodiversity Action Plan. The small area of semi-improved grassland in compartment 1 (Roundabout Grassland) is the most botanically rich area in the park.

Hedgerows (compartment 1/4)

Hedgerows are a distinctive feature of the High Weald AONB. At the park there are only two hedges. Both support the scarce brown hairstreak butterfly.

Historic parkscape/ designed landscape (compartment 6/8/SSSI unit 3)

The mature pines that form a distinctive avenue close to Island Pond is a legacy of the designed landscape phase but there are reminders of other less welcome designed species such as isolated *Rhododendron*.

Ponds (compartment 6/SSSI unit 2/3)

Douster and Island ponds are the dominant feature of the park. In the SSSI citation the ponds are incorrectly described as hammer ponds (see glossary). The ponds are an ideal location for walking and relaxing and offer anglers the opportunity to catch large carp. Frequently cloaked in mist on spring and autumn mornings they give an illusion of wilderness that is less than 3 miles from Crawley town centre.

Woodland (compartments 1-3/5-8)

Trees are the dominant feature of the park. Native and exotic species grow side by side. Veteran Scot's pines in Plantation Wood are a significant feature in the landscape. Mature beeches are dotted around the park. There are impressive oaks to be found around the lakes. Others are stunted oak due to the poor soil. Invasive *Rhododendron*, once common is much reduced.

The wet alder woodland within the SSSI is a scarce habitat.

Bracken dominates the field layer in many areas. Where conditions allow, heather and bilberry, a locally scarce plant, are a feature.