BRISTOL CITY COUNCIL

TOWNS COMMITTEE7 September 2015

Report of: Service Director, Environment and Leisure

Title: Downs Management Report

Ward: N/A

Officer Presenting Report: Andrew Gordon,

Heritage Planning and Partnership Officer

Contact Telephone Number: 0117 9639194

RECOMMENDATION:

Members:

To note the points and recommendations made in the report.

Summary

This report reflects the objectives of the Downs Management Plan and to inform members of progress since the last meeting.

The significant issues in the report are:

- Enjoyment
- Access
- Working Groups
- Landscape
- Wildlife
- Management and Resources.

1. Policy

Not Applicable

2. Consultation

a) Internal

John Williams, Area Manager North.

Andrew Gordon, Heritage Planning and Partnership Officer

Mike Allen, Business Manager Becky Belfin, Nature Conservation Officer Richard Ennion, Environmental Improvement Manager

b) External

Mandy Leivers, Avon Gorge and Downs Biodiversity Education Officer Jack Penrose, FOD + AG Chris Westcott, Natural England

3. Context

Enjoyment:

Works to carry further access improvements (phase 2) at the top and lower slopes of the Gully have been successfully completed. A press release will be made to highlight the Lord Mayor formally opening the steps and the partnership working with members, BCC and FODAG which has enabled this project to be carried out.

Officers have had a complaint from a local resident about people parking and having BBQs on Christchurch Green opposite Sion Hill. They have asked whether a byelaw sign could be erected on this part of the Downs. Bristol Design has been asked to provide a quote for providing and installing the sign.

Recommendation: Members to consider whether or not they would approve a bylaw sign being erected on Christchurch Green to deter antisocial behavior.

Access:

Information provided by BCC Security Services recorded 11 incidents of antisocial behaviour (7 were people lighting BBQs) from 9 June until 11 August (see attachment 1 for table of incidents).

Working Groups

Interpretation Group

Members approved, at their meeting in April, the recommendations by the group to implement the Downs management plan objectives for interpretation including the reprinting of the two Downs History Trails.

The two guides, No 1 Durdham Down, No 2 Clifton Down, were published in November 2011 to coincide with the 150th anniversary of the Downs Act. 10,000 of each leaflet were printed. Clifton Down is now out of print and Durdham Down will follow shortly. The project, which included the exhibition on the railings of the Water Tower was funded by the Heritage Lottery Fund, with additional help from the Downs Committee. The guides were written by Francis Greenacre and designed and produced by Naomi Winter of BCC Corporate Design. They are free and the main distribution points have been the Downs cafe, Clifton Suspension Bridge Visitor Centre, Henleaze Library

(and other libraries) and events organised by Mandy Leivers and the Avon Gorge and Downs Wildlife Project.

The total costs of reprinting 10,000 of each would be £2042 and of 5,000 each would be £1430.

Recommendation: That the Downs Committee commission the printing of 5,000 of each trails at a total cost of £1430.

Traffic group:

Bristol Design Team has commenced preliminary work on the Place and Movement Framework in June including:

- Survey work and analysis
- · Review of key information and reports
- Reviewing similar places/ issues/ initiatives used elsewhere
- Some initial discussions with internal and external stakeholders.

We have met the Cycle Sunday group to better understand their event and their longer term aspirations.

The first planned Sub Group session has now been scheduled for the 3rd September. In the meantime we have started to develop the proposed structure for the Framework. We expect to define the potential strategic visions and their associated opportunities/ constraints for discussion with the Sub Group in September.

Rock Fall Group:

Bridge Road:

This project has been delayed as result of receiving a revised written estimate i.e. £19,235 + VAT from WSP Parson's Brinkerhoff for designing, tendering and supervising the rock stabilisation works which is substantially above the original quote. The explanation provided for the increase in cost is *that this is based upon current knowledge and the results of the tactile rock inspection.* The two quotes are not readily comparable as they are not for the same scheme.

As an alternative officers have tried to see if BCC Engineering Services could provide the expertise for this project, but unfortunately they do not have the capacity to do this work. Given the urgency with regard to health and safety concerns over the rock face, Officers are seeking a waiver to commission WSP PB to avoid the need to go out to tender.

Recommendation: members to decide whether or to not approve the commissioning of WSP PB to undertake the design, tendering and supervision of Bridge Road stabilisation works.

Black Rock Quarry

Members will recall reports in previous meetings about concerns raised by the adjacent landowner with respect to rock falls onto his land from the cliffs in this quarry, including the fall in January 2013 and the risk of future rock falls to the Portway, Network Rail track and the public. Officers have met with consulting engineers WSP Parson's Brinkerhoff to discuss how best to address these issues and they have advised that a qualitative risk assessment should be carried out to assess the probability of rock falls reaching the Portway and Network Rail. This will also make recommendations for dealing with rock that has fallen on to the land. The estimated cost of providing the risk assessment is £ £9,950 plus VAT

Recommendation: members to decide whether or to not approve the commissioning of WSP PB to undertake the Black Rock Quarry risk assessment.

Landscape:

Officers have approached Network Rail to remove the green galvanised palisade fence around the railway ventilation chimney within the Gully on Durdham Downs and to carry out repairs to prevent further masonry from falling off the structure. Network rail have so far apologised for not consulting members/BCC and have removed the fence. They have also verbally indicated to Officers that they intend to look at the option of covering the chimney with a structure to prevent further falls of masonry and they will be consulting Officers on the specification for these works.

e) Wildlife:

Scrub Management Plan

A Scrub Management Plan has been produced for the Downs in accordance with action 7.3.1 in the Downs Management Plan. The Scrub Management Plan has been written by Avon Wildlife Trust's Consultancy, and the AGDWP steering group and members of FoDAG were consulted. The overall objective of the plan is to manage the scrub habitat on the Downs, so that the botanical interest of the species-rich grassland is maximised, whilst restoring areas of historical open downland. The plan also seeks to retain sufficient scrub in the most appropriate places, to provide wildlife habitat, educational, visual and recreational amenity, thus balancing the various needs of the Downs to meet multiple requirements. A copy of the Scrub Management Plan can be found in the attachment 2.

Recommendation: Members approve the formal adoption of the Clifton & Durdham Down Scrub Management Plan

Summary of activities of the Avon Gorge and Downs Wildlife Project education programme for July 2015 (see the attachment 3 for the full report)

July has been a busy month with 113 people attending six public events on the Downs including: walks, a musical event for toddlers and children's holiday events. We also taught 255 school children with four of the schools visiting the Downs for the first time. 66 children, from four playschemes, came for summer holiday events (a further 9 sessions will take place in August). The Shaun the sheep trail was launched this month. We provided interpretation for the 'Shaun in the City Nature Explorer' booklet which features a Shaun, called 'Bloomin' Gorge-ous', situated on Christchurch Green. It was designed by Professor Alice Roberts and is decorated with some of the rare plants of the Avon Gorge. The Nature Explorer booklet can be picked up from the Tourist Information Centre but it was also given away free in The Post (circulation 40,000).

A peregrine falcon education session with children from Parson's Street school was filmed as part of a Bristol Green Capital 2015 'Virtual field trip' project. The film will be launched at the end of the Green Capital year and it is intended that schools will use it to get ideas for trips and activities that they can do with their pupils. As part of Bristol 2015, we also hosted a European Volunteer from Spain (arranged through Change Agents UK), who spent 7 weeks supporting our educational events and activities; she was an invaluable addition to the team.

Finally, the education officer gave a short presentation to the 'Britain in Bloom' judges who were considering Clifton Village for a prize. The co-ordinator late wrote, "It was lovely to meet you yesterday. Thank you so much for your most interesting and informative presentation about the Avon Gorge and the work carried out. The judges were really impressed with all that they saw and heard throughout the judging."

f) Management and Resources:

Downs Team

Since the last report the Downs team have continued with the busy summer programme of works that included the daily removal of litter off the ground and emptying the bins, grass cutting and daily goat monitoring.

The new picnic area benches and flagstones seem to be getting regular use, however the team are experiencing some vandalism, including the need remove Graffiti from the benches on a couple of occasions, as well as causing burn marks. This will continue to be monitored.

Maintenance of the summer flower beds at St Thomas Memorial continues, including watering, dead heading and weeding.

The team have carried out extensive works to cut back vegetation and keep open the 4 main footpaths that run off the Downs, down to the Portway (The

Gully, Bridge Valley Rd footpath, Mousehole and the Zig Zag)

August is when the Team begin the process of initial marking the 30 football pitches back onto the Downs prior to the coming season. This will continue until the first fixtures of the new season on 29th August.

Downs team have assisted in the setting up and clearing up afterwards of the Kite festival, that took place on 22nd and 23rd August.

The hay cut was completed in August and the City Farms were provided with the bales at no cost. Ragwort has been removed from these fields prior to the cut.

Finance

Officers regret to report that the only tender received for the concession at Parry's Lane has been withdrawn due to concerns about financial viability of having a mobile unit, rather than a fixed unit and parking issues for customers. Officers will retender the concession after the new Downs parking restrictions have come into force, which should reduce the amount of commuter parking and free up spaces for concession customers.

The infrastructure for Sea Walls refreshment unit concession has been installed and the concession tendered. Officers are in the process of evaluating the tenders.

Risk Assessment:

Summary of risk assessments of the Downs cliff edges and works required to reduce the risks (see attachment 4 for the latest draft risk assessments)

The Observatory

Corporate Safety have assessed the existing barriers around the Observatory and advised where there is currently no hedge in front of existing barriers this should be raised to1100mm and steel mesh attached to reduce the chance of accidental fall from climbing/leaning on the barrier and additional warning signs should be provided. It is considered that where there is an existing hedge in front of the barrier this reduces the risk of falling. CS has also advised that the rock at the bottom of rock slide should be removed or modified to reduce the risk of injury as result of people hitting it. BCC landscapes have been asked to provide quotes for doing all this work. The Downs team have repaired holes in the green mesh fencing to discourage climbing on the barrier.

Cliff top barriers between Peregrine Watch and Ladies Mile/Bridge Valley Road

The risk assessment recommendations at this location are to raise the barriers along approximately 27m section at Peregrine Watch to 1100mm, as the current barrier does to meet minimum H & S standards, in a location which attracts large numbers of people. Where there are gaps in the thorn hedge on the Gorge side of the barrier warning signs and mesh will be installed. BCC landscapes have been asked to provide quotes for doing this work. The Downs team have repaired holes in the green mesh fencing

The estimated length of barriers to be raised and steel mesh installed at both the above locations is 218m.

Cliff edges at Sea Walls between the goat enclosure and toilet block The risk assessment recommendations at this location are:

- To extend the goat fencing (including an access gate for the Downs Team to carry out maintenance) between the end of Sea Walls stone wall and the goat pen at the southern end to restrict access to cliffs at this point. There works have now been completed.
- 2. To repair the stone wall and railings adjacent to toilet block at the northern end of Sea Walls. Repointing to the stone wall has been carried out, but it has been discovered that part of the wall is falling down/leaning over and needed to be rebuilt along 14m section at cost of c. £9,000. The total cost of the wall works, including the original quote is £13,766. The Neighbourhoods Service Director has explained to the Lord Mayor that the works have had to be carried out on health and safety grounds i.e. the wall could collapse in a location used regularly by the public.

The British Mountaineering Association has been consulted about all the safety work and in general considers the proposals should not adversely affect the ability of climbers to access the cliff tops of the Gorge.

Officers met with a small group of interested individuals concerned about ways to reduce suicides on the Downs on 4th August 2015. Present were Andrew Gordon (BCC Heritage Planning and Partnership Officer), David Anderson (Bridge master) Clive Gray (Bristol Suicide Prevention Group (SPAG) lead) Maggie Cameron (Director of Bristol Samaritans) David Gunnell (Professor of Epidemiology, Bristol University) and John Miles (potential benefactor for a planting initiative).

Main points raised were:

1. The cliff edges in question are part and parcel of Avon Gorge Site of Special Scientific interest (a designated nationally important nature conservation site) and Special Area of Conservation (Internationally Important nature conservation site). The primary reason for designation is an assemblage of

nationally rare and scarce plants which require open and bare ground habitat to be maintained by grazing or cutting.

- 2. The BCC Planning and Partnership Officer spoke to Natural England conservation adviser Chris Westcott about the possibility of being allowed to plant thorny hedges in gaps between the existing/established hedging described above. He considers this would result in loss of habitat for the national rare and scarce plants and scrub would invade other parts of the cliffs resulting in further loss of habitat. Also the Council is subject to an agreement with Natural England whereby they provide grant funding to remove invading scrub and ruderal vegetation. It is BCC's long-term intention to remove all the scrub along the fence length. Officers would be happy to meet/talk to stakeholders in the Bristol Suicide Prevention Group (BSPG) to explain this objective.
- 3. Natural England has indicated they would not give consent for planting of bushes in the SSSI/SAC. As suggested above BSPG can contact Chris Westcott to present their case for planting bushes.
- 4. H & S Risk Assessment measures by BCC are aimed at preventing people falling from the cliff edge, not preventing suicides. They include raising the fencing, where there is no hedge, to 1100mm height and installing mesh to make it more difficult to climb as well putting up greater number of warning signs.
- 5. A 2m deer fence has been erected in the gap at the southern end of Sea Walls to limit access to the cliff which will to some extent deter suicides at that point.
- 6. The Sea Walls metal fence and wall does provide a reasonably robust and high barrier, which would deter less physically able people from climbing over it.
- 7. BCC is repairing the wall and railings by the toilet block at Sea Walls.
- 8. The Bridge Master suggested that where the existing hedge is at its highest (minimum 1m) and has significant depth (min 0.5m) and is supported by intact metal fencing, that provides an adequate barrier that most people would find difficult to climb. He therefore suggested that Andrew Gordon could arrange for the hedge to be maintained at this height rather than the current variable (lower) height.
- 9. It was agreed that the sections where fencing is broken providing relatively easy access, could be repaired with sections of fencing and the hedge be encouraged to infill the gap. Ideally the gaps should be planted with hedging with Natural England's agreement.
- 10. Clive Gray also suggested it may be worth BCC investing in making the fencing higher and using a design that makes the fence difficult to scale. He recently visited Gap Park in Sydney (a notorious suicide "hotspot"). The site has a long length (probably more extensive than the Downs cliff edges) of easily accessible cliff where the fence of 1300mm in height, is inward curving, reasonably and helps photographers with unsteady hands to take photos.

- 5a) Before making a decision, section 149 Equality Act 2010 requires that each decision-maker considers the need to promote equality for persons with the following "protected characteristics": age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex, sexual orientation. Each decision-maker must, therefore, have due regard to the need to:
 - i) Eliminate discrimination, harassment, victimisation and any other conduct prohibited under the Equality Act 2010.
 - ii) Advance equality of opportunity between persons who share a relevant protected characteristic and those who do not share it. This involves having due regard, in particular, to the need to --
 - remove or minimise disadvantage suffered by persons who share a relevant protected characteristic;
 - take steps to meet the needs of persons who share a relevant protected characteristic that are different from the needs of people who do not share it (in relation to disabled people, this includes, in particular, steps to take account of disabled persons' disabilities);
 - encourage persons who share a protected characteristic to participate in public life or in any other activity in which participation by such persons is disproportionately low.
 - iii) Foster good relations between persons who share a relevant protected characteristic and those who do not share it. This involves having due regard, in particular, to the need to
 - tackle prejudice; and
 - promote understanding.

6. Legal and Resource Implications

Legal

The Clifton and Durdham Downs (Bristol) Act 1861 provides that the Downs should remain as a place for the resort and recreation of the citizens of Bristol, and that a committee should be appointed to manage them. The recommendations of this report are within the powers conferred by this statute.

Financial (a) Revenue:

(b) Capital None Financial advice provided by Mike Allen. Business Partner.

7. Land

The land is under the control of the Downs Committee.

8. Personnel

Not applicable

Appendices: 1& 2

LOCAL GOVERNMENT (ACCESS TO INFORMATION) ACT 1985

Background Papers: None

Anti-social behaviour records on The Downs Incident type	Period 9 th June to 11 August 2015
Unauthorised	2
parking	_
Public	0
complaints	
Cycling	0
BBQ's	7
Litter	0
Erection of	2
structures e.g.	
tents	
Kite surfing	0



Clifton and Durdham Downs, Bristol

Scrub Management Plan

2015 - 2025

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1 Introduction and Methodology

1.1 Introduction and Aim

Avon Wildlife Trust Ecological Consultancy was commissioned by Bristol City Council (BCC) to develop a scrub management plan for Clifton and Durdham Downs. Large areas of the Downs consist of species-rich calcareous grassland. Unimproved calcareous grassland is a habitat of national importance, and with 95% having been lost since the late 1940s, it is now nationally designated as a Priority Biodiversity Action Plan Habitat with initiatives in place for its protection and restoration. The Downs provides the greatest extent of this grassland type second only to the Mendips in the Bristol region. However, the species-richness is increasingly being lost largely due to scrub invasion. Further loss has occurred where grassland has been fertilised and re-seeded to provide playing fields in the north-east of the site. In addition, single trees have been planted in various sites, some as memorial trees.

Aware that scrub encroachment was a problem, BCC commissioned a scrub plan for the Zoo Banks area some years ago and a certain amount of management work has been carried out in this area already.

1.2 Method

Each scrub compartment was subject to a botanical survey, with the individual species recorded and the DAFOR score (dominant, abundant, frequent, occasional, rare) applied to each stand. The surveys were completed by Mary Wood MCIEEM, an experienced botanist, during October and early November 2014. A unique number was assigned to each compartment and the grid reference was noted using a hand held GPS. Due to scrub density, it was usually not possible to obtain a central Ordnance Survey grid reference, so the grid reference from the centre of one of the longest sides was taken instead. Individual trees have not normally been included, except where clearance around them should occur or to note those included on the lichen trail. The scope of the survey area is shown in Figure 1.

1.3 Review of Existing Information

Several ecological surveys have been commissioned for the Downs, including botanical, birds and invertebrates. These reports provided important background information for the current study and are referred to within the text as appropriate. They are listed under References at the end of this document. A data search was also carried out for protected and notable species associated with the site. This information was obtained from Bristol Regional Environmental Records Centre (BRERC).

1.4 Constraints

Although the majority of scrub compartments were assessed, two wooded locations, one known as Fairyland and the other as the Barbecue area, were not surveyed and may in future be included as part of the Avon Gorge scrub and woodland, which this plan does not cover. Due to time constraints, it is possible that some species per scrub compartment were missed, but it is not considered that this would have a significant impact on the proposed management.

2 Site Information

2.1 Location

Clifton and Durdham Downs are located in west Bristol, immediately adjacent to the Avon Gorge. The central grid reference is ST5680 7480 and the site covers approximately 200 hectares.

2.2 Land Tenure

The site is owned by the Society of Merchant Venturers and Bristol City Council, and is managed by BCC, in association with the Downs Committee (formed under the Downs Act 1861) and the Friends of Downs and Avon Gorge. Both organisations are partners in the Avon Gorge and Downs Wildlife Project which was set up to secure the outstanding wildlife interest of the Bristol side of the Avon Gorge and Clifton and Durdham Downs and to raise awareness and understanding of this unique location and its importance for people and wildlife. The Friends of Downs and Avon Gorge also contribute to various elements of management work and are keen to assist with aspects of the current proposals. In terms of ongoing management, it would be valuable in addition to seek other sources of voluntary contribution to deliver this extensive programme of proposed works.

2.3 Historical Perspective

The changes in the Downs' landscape over time has been well researched and explained in many articles, the most recent being that by Francis Greenacre (in press 2014). It is not intended to cover this subject extensively in this Plan other than in this brief summary. Once an open, sheep-grazed landscape, scrub has gradually colonised and spread, particularly in the south-eastern sector. Grazing declined on Clifton Down in the mid-19th Century and also declined on Durdham Down during the late 19th Century, ceasing completely in 1924. However, due to ongoing Commoners' rights, nowadays a few sheep are very occasionally still grazed on small sections of the Downs but only for a short period.

When the Downs Committee was formed, the decision was taken to plant more trees on the Downs. Previously the open landscape was punctuated by the scattered hawthorn trees *Crataegus monogyna* and a few older mature trees. The occurrence and subsequent encroachment of scrub on the Downs has occurred predominantly over the last 50 years. Scrub, often having grown up around the isolated hawthorn trees, is now rapidly expanding and joining up with neighbouring stands. The woodland in the south-east of the site has been noted to have extended by two to three metres a year during the last 10 years. A large number of hawthorns (some the variety 'Paul's Scarlet') were planted during the 1980s with the long-term view that they would replace the much older hawthorns as they deteriorated. In fact, the older hawthorns show longevity in that they can become multi-stemmed or regenerate from a fallen trunk, effectively becoming everlasting.

2.4 Current Land Use

The Downs are very popular and well-used. The dominant activities are recreational walking, jogging and dog exercising. Guided walk leaflets have been produced encouraging appreciation of the history of the Downs. Occasionally people have barbecues, although this activity is now being encouraged to take place in one dedicated zone. Football is a frequent activity, particularly at weekends, in the north of the site where there are over 30 football pitches. Large events such as funfairs take place in dedicated areas and an area in the west of the site is used for overflow Zoo parking.

The Avon Gorge & Downs Wildlife Project has been running a wildlife education programme on the Downs since the appointment of the Avon Gorge & Downs Biodiversity Education Officer in 2001. Throughout the year there is a programme of walks, talks, courses, children's and family events, looking at all aspects of the wildlife of the Avon Gorge and the Downs. Thousands of children also visit the Downs for school, playscheme and uniformed group education sessions. The Education Officer also runs guided walks for community groups. The majority of these educational activities take place on Clifton and Durdham Downs and look at all areas of the Downs. In Zoo Banks West there are log piles and an area which is regarded as the 'outdoor classroom' which is used for some of the education sessions. Other education work takes place in the main meadow, Zoo Banks East, the Dumps and the area by the Rangers' Pound. A range of nature trail leaflets have also been produced so that visitors can explore the site for themselves. Leaflets include: The Downs Bird Trail, Downs Lichen Trail, Downs Tree Trail, Downs Meadow Trail (currently out of print), four seasonal family trails and Discover the Wildlife of the Avon Gorge and Downs.

2.5 Environmental Information

2.5.1 Physical

Clifton and Durdham Downs consist of carboniferous limestone bedrock, the substrate being an extension of the Avon Gorge geology. They lie approximately 70 metres above sea level. In many areas, particularly in the east, the rock is close to the surface and frequently exposed. However, the terrain has been altered by human activities. The remnants of Iron Age and medieval lead mining are visible in shallow undulating ground, known as 'gruffy' ground, in several locations in the east of the site. During the Second World War, American tanks and troops were stationed by Seawalls and an area between Zoo Banks and Ladies Mile was used to store army vehicles, causing soil compaction and surface damage. Clay from the development of the city docks was used to fill in deep quarry pits in the 19th Century and efforts were made to fill and level the ground following tank damage after the Second World War, both thereby reducing the effects of the underlying geology and the botanical interest in many areas.

2.5.2 Biological

2.5.2.1 Grassland

Botanical surveys have shown that the species-rich calcareous grassland, growing on the thin soils over limestone rock, is diminishing as scrub encroachment proceeds (WEC 1996). BCC have maintained the open grassland through regular cutting but as the scrub compartments have joined up the pathways between them have narrowed such that passage of the gang mowers and baling machines is prevented. Five particularly botanically rich areas have previously been identified (WEC 2000) as follows:-

- a large strip between the Circular Road and Ladies Mile, known as the Main Meadow;
- the south-east, known as Zoo Banks;
- the old mine-workings in the east of the site, known as 'The Dumps';
- an area just south of the Circular Road bend; and
- an area west of The Promenade.

Although the current survey did not assess the grassland in detail, it was evident from a quick ground check that the last two areas did not appear to have maintained their species-richness.

Adjacent to these locations and elsewhere on the Downs, are sites where the botanical interest has partially diminished but where restoration may still be possible. Three such lie adjacent to the main strip, one to the north-east of Zoo Banks, two in the centre-east of the site, one to the north of the lead workings, an area in the far west, and two areas in the north of the site. These will also be targeted for restoration. Indeed it has been commented that "the distinction between unimproved and semi-improved grassland on the Downs is somewhat arbitrary" (WEC 2005). The area north-west of Zoo Banks supports keeled garlic *Allium carinatum pulchellum*. This introduced and naturalised species is a problem in the Avon Gorge where it outcompetes native flora, but in this area it currently disappears in the spring thereby not competing with the native flora; with progressive scrub removal as proposed here to benefit the grassland, the frequency of this species should be monitored and control instigated should it become necessary.

2.5.2.2 Scrub Compartments

A species list for each compartment, with the frequency scale DAFOR (dominant, abundant, frequent, occasional, rare) is given in Appendix 1. The scrub compartments are largely consistent with the W21 Hawthorn-Ivy community of the National Vegetation Community, which includes species such as wayfaring tree *Viburnum lantana*, dogwood *Cornus sanguineum*, wild privet *Ligustrum vulgare* and gorse *Ulex europaeus*, although the latter species is quite rare on the Downs. What gorse bushes remain are remnants from the removal of areas of bracken *Pteridium aquilinum* and gorse during the late 19th Century and early 20th Century to facilitate mowing. The hawthorns have some historical interest as well as biodiversity and visual interest. To re-discover and protect the oldest hawthorns, some of which may date back to the 17th century (Richard Bland 2014), a project has been set up under the name 'Adopt a Hawthorn' whereby people are registered to clear vegetation around particular trees and subsequently maintain them.

Although the species content of the compartments is broadly similar across the site, there are some geographical variations. While spindle *Euonymus europaeus* is ubiquitous in the southeastern section, it is absent across the rest of the site. Wych elm *Ulmus glabra* and English elm

Ulmus procera, although present in the south-west, are more prevalent elsewhere. Field maple *Acer campestre*, wayfaring tree and blackthorn *Prunus spinosa* are rare on the Downs, occurring in only a handful of compartments. Hazel *Corylus avellana* is also infrequent. Whitebeam *Sorbus aria* is occasional and will be retained wherever it occurs (at some stage it may be worth having the Downs' species checked by a whitebeam expert in case any should prove to be the more unusual species found in the Avon Gorge.

Some compartments have developed a ground flora. Although ivy *Hedera helix* is the dominant ground flora species, some compartments also support wild madder *Rubia peregrina*, which supports leaf mines of the Nationally Scarce moth *Mecyna asinalis* (WEC 1999). Other ground flora present include occasional broad buckler fern *Dryopteris dilitata*, hedge woundwort *Stachys silvatica* and stinking iris *Iris foetidissima*. The introduced and naturalised plant Alexanders *Smyrnium olusatrum* is a potential problem in some compartments but as an annual is fairly easy to control.

In terms of structure, the majority of scrub compartments are one to two metres in height, with frequent ash-dominated saplings overtopping the low scrub to approximately ten metres. Although the compartments vary, with some areas very extensive, the majority are relatively small, approximately ten metres by eight metres. The hawthorns are approximately four metres in height. In some compartments mature trees and several veteran trees are present.

2.5.2.3 Woodland

Some areas have developed into non-native holm oak *Quercus ilex* dominated woodland i.e. two sections of Zoo Banks. These provide additional interest with their associated woodland species but the woodland boundaries need to be controlled. However there is a conservation issue with holm oak as its acorns are prolifically produced in many years and can be carried to the Avon Gorge where the sapling growth shades out the important Gorge flora. A broad description of woodland compartments within the survey area is provided in Appendix A.

2.5.2.4 Protected and Notable Species

The data search returned records for notable plant species, many of which still occur in the species-rich grassland. Bat records include common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus* and serotine *Eptosicus serotinus*. The scrub and more wooded habitats provide suitable foraging habitat for these species and the mature and veteran trees may have bat roost potential. There were no records for slow-worm *Anguis fragilis*, but there was a 1996 record for viviparous lizard *Zootoca vivipara*. No reptiles were encountered during the survey, although it is considered that there is potential for slow-worm to occur. There are also records for badger *Meles meles*, but few signs were seen for this species during the site visits, other than occasional small latrines. Notable bird species include kestrel *Falco tinnunculus* and bullfinch *Pyrrhula pyrrhula*, both of which were noted during the surveys. There are several insect species records, and insects (especially bee species) were noted around the late ivy flowers. It is hoped that the retention and spread of scrub in selected areas will benefit invertebrates, as will the extension of the species-rich grassland.

3 Management Rationale and Prescriptions

3.1 Objective

The overall objective is to manage the scrub habitat on the Downs so that the botanical interest of the species-rich grassland is maximised, restoring areas of historical open downland, while retaining sufficient scrub to provide wildlife habitat with educational, visual and recreational amenity. The presence of scrub on the Downs is a relatively recent feature, with associated benefits and disadvantages, summarised below. The objective involves balancing various needs of the Downs as outlined above to meet multiple requirements.

<u>Advantages</u>

- The provision of habitat for species such as breeding and foraging birds, which particularly favour larger blocks of scrub (WEC 1999);
- Important habitat for invertebrates e.g. hawthorn supports the longhorn beetle
 Grammoptera ruficornis and 14 spot ladybird Propylea 14-punctata and cream spot
 ladybird Calvia 14-guttata (Barnett 2014). The scrub species also support a number of
 spiders e.g. the cucumber green spider Araniella cucurbitina/opistographa (Pajak 2014);
- The scrub (and woodland) provide outdoor classrooms for education activities; and
- The provision of an additional dimension to an otherwise potentially bleak open landscape, enabling visual diversity, the framing of views, screening and noise reduction from adjacent roads, and opportunities for windbreaks and quiet seclusion.

Disadvantages

- The primary disadvantage is the reduction in area and quality of the species-rich calcareous grassland;
- Historically, the Downs was an extensive open space with views over the Gorge and beyond, and many would welcome a return to this perspective;
- Shelter for anti-social behaviour and a reduced sense of personal safety, particularly at night; and
- The obscuring of archaeological ground evidence and potential damage by roots to belowground artefacts.

3.2 Rationale

3.2.1 Calcareous Grassland Restoration

Calcareous grassland restoration is an overriding driver in the Plan proposals. The work programme attempts to spread the work out relatively evenly over the ten year period. It is important to avoid excessive removal in any one area both to minimise the impacts on scrub-dwelling biodiversity and also to enable a gradual visual acceptance of the changes. It is considered that where the botanical interest of the grassland remains high, given its greater rarity in local and national terms compared with scrub habitat, these areas will be prioritised for the most

extensive scrub control/removal. Where the grassland is botanically poor, some scrub compartments will be enabled to extend and occasionally join up, to provide compensatory habitat for scrub loss elsewhere. Restoration of species-rich grassland is complex; it is hoped that the currently rich areas will be enabled to spread in time with the removal of scrub, but should this prove slow after a few years, it may be worth considering an appropriate 'green hay' or other seed sowing project.

3.2.2 Scrub Management

Scrub compartments (shown on aerial photograph GIS layer and in Figures 2-8) will be subject to a range of management operations as follows:-

- A Complete removal with stump treatment to prevent recurrence where species-rich grassland is present.
- B Selective removal and treatment of certain species e.g. the felling of young trees such as ash *Fraxinus excelsior* and wild cherry *Prunus avium*, to prevent overshading of the scrub. Selective removal will also include removal of non-native invasive species such as holm oak, Turkey oak *Quercus cerris*, sycamore *Acer pseudoplatanus*, *Cotoneaster* spp., cherry laurel *Prunus laurocerasus*, snowberry *Symphoricarpos alba* and Norway maple *Acer platanoides*. Although buddleja *Buddleja davidii* is non-native, it is rare on the Downs and will be retained for its important invertebrate foraging qualities. It is proposed that non-native species that do not appear to have invasive growth habits such as walnut *Juglans regia* should be retained for the additional interest they provide.
- C Larger areas of scrub will be subject to 'scalloping' of the edges, by cutting bays back into the vegetation, treating the stumps and keeping the bays mowed. This will increase the sheltered edge habitat of particular importance to invertebrates and ensure that scrub encroachment onto the grassland is prevented. Such bays will need to have shallow curves to facilitate their cutting by machinery.
- D Ongoing management such as rotational coppicing of shrub species, to enhance structural diversity within scrub compartments.
- E Ongoing rotational flailing of bramble and other shrubs each year, to prevent encroachment onto adjacent grassland.

Stump treatment is strongly recommended to prevent or at least reduce re-growth. While bramble *Rubus fruticosus* agg. re-growth can be weakened to an extent by regular cutting, it has been found (AWT pers comm) that after cutting, spraying the following year's re-growth before or after flowering, is more effective than just cutting alone in preventing recurrence. Privet and dogwood are not amenable to stump treatment and so these two species also require spraying of re-growth in the year following cutting. Usually holm oak would be removed due to the vigour of its seedlings, but mature holm oaks are very frequent on the Downs and some are fine specimens with a strong landscape presence, particularly being evergreen. One specimen also is

very popular with children for climbing. The removal of holm oak saplings is prioritised, and the felling of mature holm oaks in the denser areas of woodland in the south-east of the site is proposed, but elsewhere mature holm oaks will be retained (particularly in the Outdoor Classroom areas). It is advised (Natural England pers.comm.) that holm oak is most effectively treated by stem injection before removal rather than stump treatment.

Certain areas of scrub will be retained in the south-west of the site adjacent to the Circular Road, despite the area's botanical richness. These sections now have short lengths of chestnut paling fencing attached to them to encourage joggers to keep to the path beside the road, rather than run across the grass with consequent damage to the sward.

Scrub is of maximum value for most invertebrates and for nesting birds when it is low and dense, with older berry-bearing growth of particular value to breeding birds (WEC 1999). Taller overshading saplings will reduce this ideal structure. Cut ends of scrub branches provide nesting and overwintering opportunities for some invertebrates. Where scrub is retained, it will be managed to maximise these features. Coppicing will be necessary to maintain the vigour and structure of the retained scrub. It is recommended that a rotational programme is established every seven years initially. But since species grow at different rates and are likely to also be affected by temperature and exposure to wind, this may require review over time. It may be that the Adopt a Hawthorn project could take over some of the hawthorn 'release and retain' management. Retained bramble will be flailed on a three year rotation.

3.3 Management Prescriptions

The following table describes the vision and actions for each scrub compartment over the next ten years. Please see Section 4 'Ten Year Work Programme' for the proposed ten year schedule. NB It is strongly advised that whichever organisation is selected to carry out the works, appropriate guidance is given to ensure relevant species recognition and a thorough understanding of the works involved per compartment.

Table 1: Management Actions for Each Scrub Compartment.

No.	Grid Ref. (ST)	Action	
Zoo B	Zoo Banks - Compartments 1-30 and 43-47		
1	56717 74069	Remove and treat all.	
2	56706 74063	Remove and treat bramble, ash and sycamore saplings. Coppice 50%	
		retained area on rotation every seven years.	
3	56696 74061	Remove and treat all.	
4	56707 74055	Remove and treat all.	
5	56702 74051	Remove and treat all.	
6	56694 74047	Remove and treat all.	
7	56687 74052	Remove and treat all.	
8	56706 74042	Retain mature ash and wych elm, remove and treat all else.	
9	56716 74052	Retain hawthorn, remove and treat all else.	
10	56682 74031	Remove and treat all.	
11	56671 74010	Retain hawthorn, remove and treat all else.	
12	56672 74006	Remove and treat all.	
13		Retain old hawthorn and keep clear, treat as necessary.	
14	56646 74021	Retain hawthorn, yew and one third spindle, remove and treat all else.	

		Connice E00/ retained area on retation averages veges
15	56626 72002	Coppice 50% retained area on rotation every seven years.
15 16	56626 73992 56622 73990	Remove and treat all. Remove and treat all.
17		
	56614 73966	Remove and treat all.
18	56589 53989	Remove and treat all.
		Ompartments 19-58
19	56657 74121	Coppice 50% on rotation every seven years.
20	56635 74123	Remove and treat all ash. Scallop edges back by two metres and treat.
21	56602 74122	Coppice 50% retained area on rotation every seven years. Crownlift lower branches of holm oak by third of height. Retain standing
21	30002 74122	dead tree. Remove and treat ash saplings, sycamore and sapling holm
		oak, retain all else. Scallop edges back by two metres and treat.
		Reduce south-west bramble by five metres. Flail 50% bramble on
		rotation every three years. Coppice 50% retained area on rotation
		every seven years.
22	56583 74154	Remove and treat all.
23	56560 74151	Retain small-leaved lime, remove and treat all else.
24	56553 74132	Retain elm, remove and treat sycamore.
25	56561 74125	Retain hawthorn, remove and treat all else.
26	56551 74108	Remove and treat all.
27	56548 74096	Remove and treat all.
28	56562 74094	Remove and treat all.
29	56538 74047	Remove and treat all.
30	56545 74011	Remove and treat all.
31	56530 74030	Remove and treat all.
32	56552 74057	Remove and treat all.
33	56585 74079	Remove and treat all.
34	56592 74075	Remove and treat all.
35	56618 74092	Retain whitebeam, remove and treat all else.
36	56694 74144	Remove and treat all.
37	56697 74163	Remove and treat all.
38	56715 74179	Retain gorse, remove and treat all else. Coppice gorse every ten years.
39	56730 74162	Remove and treat ash. Reduce size of area by two thirds and treat.
		Coppice 50% retained area on rotation every seven years.
40	56723 74152	If retain Turkey oak lift the lower branches, remove and treat all else.
41	56709 74142	Remove and treat all.
42	56702 74121	Remove and treat all.
43	56728 74086	Release and retain mature ash by removing and treating scrub
		underneath. Open up ride through middle to two metres and treat. Thin
		ash trees and treat. Remove and treat ash saplings. Coppice 50%
		retained area on rotation every seven years. Flail 50% bramble on
44	56737 74095	rotation every three years. Remove and treat bramble.
45	56754 74107	Remove and treat bramble.
46	56763 74113	Remove and treat bramble. Remove and treat all.
47	56809 74115	Release and retain holly, remove all else and treat. Open up ride
47	30009 74113	through woodland by five metres on either side by removing and
		treating sycamore and young ash. Keep woodland glades open.
48	5669 7417	Remove and treat all.
49	5669 7418	Remove and treat all.
50	5670 7419	Remove and treat all.
51	5671 7420	Remove and treat all.
52	5672 7420	Retain and keep clear hawthorn on lichen trail, treat as necessary.
53	56743 74213	Remove and treat all.
54	56744 74220	Remove and treat all.
55	56774 74200	Retain mature ash, remove and treat all else.
56	56769 74192	Retain gorse, remove and treat all else. Coppice gorse every ten years.
57	56787 74202	Remove and treat all.
<u> </u>	3010117202	Nomovo and trout all.

58	56775 74199	Retain gorse, remove and treat all else. Coppice gorse every ten years.
Zoo Ba	anks Woodlands	
ZBW west	5662 7404	Reduce the edges by five to ten metres on north and south boundaries, felling mature holm oak as necessary (but not removing the trees in the Outdoor Classroom).
ZBW east	5682 7419	Reduce the edges by five to ten metres on north and south boundaries, felling mature holm oak as necessary (but not the trees used as the Outdoor Classroom towards the Rangers' Pound). Retain blackthorn at the current extent on the north side of the wood for the Downs Lichen Trail.
59	56752 74243	Allow area to spread east by two metres. Remove and treat all ash, except large mature ash tree. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years.
60	56699 74259	Allow area to spread by two metres. Remove and treat ash. Coppice 50% retained area on rotation every seven years.
61	56698 74245	Clear base around hawthorn and treat.
62	56674 74265	Remove and treat all.
63	56639 74264	Remove and treat all.
64	56619 74263	Retain yew and mature ash, remove and treat all else.
65	56640 74290	Thin elder and wych elm by 50% and treat. Coppice 50% retained area
		on rotation every seven years.
66	56669 74336	Remove and treat all ash. Flail 50% bramble on rotation every three years.
67	56682 74361	Retain walnut and elm, remove and treat ash, spruce and Norway maple.
68	56708 74315	Retain hawthorn and clear around base and treat.
69	56711 74319	Retain hawthorn and clear around base and treat.
70	56722 74342	Remove and treat ash, allow rest to spread by two metres. Coppice 50% retained area on rotation every seven years.
71		Remove and treat all ash except one about to fall which should be left as dead wood. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years.
72	56709 74416	Release and retain walnut, and older hawthorn, remove and treat all else.
73	56712 74418	Allow area to spread up to two metres. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years.
74	56730 74384	Clear vegetation around hawthorn at end and treat. Allow rest to spread up to two metres. Coppice 50% retained area on rotation every seven years.
75	56731 74397	Clear vegetation around hawthorn and treat.
76	56731 74401	Remove and treat ash. Allow rest to spread up to two metres. Coppice 50% retained area on rotation every seven years.
77	56737 74425	Remove and treat all.
78	56755 74423	Release and retain mature ash. Remove all rest and treat.
79	56760 74412	Remove and treat all.
80	56756 74403	Remove and treat all except oak.
81	56768 74419	Retain holly and elder. Remove and treat all else.
82	56786 74415	Allow area to join up. Remove and treat ash. Coppice 50% retained area on rotation every seven years.
83	56801 74400	Remove and treat ash. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years.
84	56815 74373	Remove and treat ash and young holm oak. Allow these two areas to join up. Coppice 50% retained area on rotation every seven years.
85	56772 74266	Retain one hawthorn, remove and treat ash.
86	56834 74281	Release and retain mature holly tree, remove and treat all else.
87	56841 74282	Remove and treat all.
88	56844 74290	Retain hawthorn on lichen trail and keep clear, treat if necessary.
89	56851 74300	Remove and treat ash. Allow rest to spread. Flail 50% bramble on

	<u> </u>	rotation overvithree years. Copping 50% retained area on rotation every
		rotation every three years. Coppice 50% retained area on rotation every seven years.
90	56854 74325	Release and retain hawthorn. Remove and treat ash. Leave all else to spread up to two metres apart from around the released hawthorn. Coppice 50% retained area on rotation every seven years.
91	56859 74343	Remove and treat ash. Allow rest to spread up to two metres. Coppice 50% retained area on rotation every seven years.
92	56868 74355	Release and retain hawthorn, remove and treat all else.
93	56866 74366	Allow to spread up to two metres. Re-coppice one hazel on rotation every ten years. Coppice 50% retained area on rotation every seven years.
94	56852 74403	Remove and treat ash. Allow to join up and spread by up to two metres. Coppice 50% retained area on rotation every seven years.
95	56873 74396	Retain all. Coppice 50% retained area on rotation every seven years.
96	56889 74386	Remove holm oak and treat. Release and retain hawthorn. Coppice 50% retained area on rotation every seven years.
97	56902 74378	Retain veteran ash and elder. Flail 50% bramble and nettle on rotation every three years. Coppice 50% retained area on rotation every seven years.
98	56905 74389	Release and retain hawthorn, remove and treat rest.
99	56896 74361	Coppice 50% on rotation every seven years.
100	56908 74367	Remove and treat all.
101	56902 74342	Release and retain hawthorn, remove and treat bramble.
102	56888 74321	Coppice 50% area on rotation every seven years.
103	56881 74311	Coppice 50% retained area on rotation every seven years.
104	56893 74308	Keep hawthorn clear, remove and treat elder, taking care to avoid damage to the Trail disc or removal of the branch supporting the disc.
105	56908 74315	Retain and allow to spread up to two metres. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years.
106	56867 74312	Release and retain hawthorn, remove and treat bramble.
107	56893 74308	Keep hawthorn clear, treat if necessary.
108	56944 74308	Coppice 50% retained area on rotation every seven years.
109	56947 74336	Remove all and treat.
110	57017 74362 (E end) 56956	Let join up but scallop edges back by two metres and treat. Remove and treat ash. Flail 50% on rotation every three years. Coppice 50%
111	74357 (W end) 56950 74385	retained area on rotation every seven years. Scallop edges back to two metres and treat. Remove and treat ash and holm oak. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years.
112	56936 74417	Scallop edges back by two metres and treat. Remove and treat coppiced ash. Coppice 50% retained area on rotation every seven years.
113	56924 74426	Remove and treat holm oak. Scallop edges back by two metres and treat. Coppice 50% retained area on rotation every seven years.
114	56912 74460	Remove and treat snowberry, ash, spruce and Norway maple. Flail 50% bramble on rotation every three years.
115	56993 74443	Release and retain hawthorn, treat if necessary and keep clear.
116	57005 74423	Remove and treat all.
117	56992 74400	Remove and treat northern scrub section beyond mature maple tree. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years.
118		
119	56969 74409	Remove all and treat.
400	56969 74409 56910 74478	Continue to manage the cleared hawthorn. Remove and treat all else.
120		
121	56910 74478	Continue to manage the cleared hawthorn. Remove and treat all else. Retain managed hawthorn. Flail 50% bramble on rotation every three years. Remove and treat ash. Coppice 50% of area every seven years.
	56910 74478 56927 74497	Continue to manage the cleared hawthorn. Remove and treat all else. Retain managed hawthorn. Flail 50% bramble on rotation every three years.

124	56877 74524	Retain managed hawthorn. Remove young ash and all of northern 50%
		and treat. Coppice 50% retained area on rotation every seven years.
125	56878 74486	Retain fallen hawthorn with elder. Remove and treat snowberry.
126	56844 74476	Remove and treat all.
127	56850 74498	Remove and treat all.
128	56838 74469	Remove and treat all.
129	56833 74462	Remove and treat all.
130	56831 74452	Release and retain hawthorn, treat as necessary.
131	56835 74437	Remove and treat all.
132	56848 74449	Release and retain hawthorn, retain holly. Remove and treat all else.
133	56817 74463	Release and retain hawthorn. Remove and treat horse chestnut.
134	56813 74458	Remove and treat all.
135	56789 74465	Remove and treat all.
136	56793 74499	Remove and treat all.
137	56771 74507	Retain holly. Remove and treat all else.
138	56796 74526	Remove and treat all.
139	56797 74540	Remove and treat holm oak, young ash and sycamore. Coppice 50%
	(SW end)	retained area on rotation every seven years.
140	56815 74573	Release and retain holly, treat as necessary.
141	56805 74591	Remove and treat sycamore, hawthorn and bramble.
142	56823 74586	Release and retain hawthorn, treat as necessary
143	56784 74581	Retain mature ash tree and old hawthorn. Remove and treat all else.
144	56840 74580	Allow to spread up to two metres and join up with 145. Remove and
	300 10 7 4000	treat sycamore. Flail 50% bramble on rotation every three years.
		Coppice 50% retained area on rotation every seven years.
145	56864 74558	Allow to spread and join up with 144. Remove and treat ash and
	0000111000	sycamore. Flail 50% bramble on rotation every three years. Coppice
		50% retained area on rotation every seven years.
146	56868 74559	Remove and treat holm oak.
147	56847 74551	Allow 147 to 152 to join up. Scallop edges (other than those on the
		linking sections) back by two metres and treat. Flail 50% bramble on
		rotation every three years. Coppice 50% area on rotation every seven
		years.
148	56844 74531	Allow 147 to 152 to join up. Scallop edges (other than those on the
		linking sections) back by two metres and treat. Remove and treat holm
		oak. Flail 50% bramble on rotation every three years. Coppice 50%
		area on rotation every seven years.
149	56842 74515	Allow 147 to 152 to join up. Scallop edges (other than those on the
		linking sections) back by two metres and treat. Flail 50% bramble on
		rotation every three years. Coppice 50% area on rotation every seven
		years.
150	56837 74518	Allow 147 to 152 to join up. Scallop edges (other than those on the
		linking sections) back by two metres and treat. Remove and treat ash.
		Flail 50% bramble on rotation every three years. Coppice 50% area on
		rotation every seven years.
151	56820 74518	Allow 147 to 152 to join up. Scallop edges (other than those on the
		linking sections) back by two metres and treat. Flail 50% bramble on
		rotation every three years. Coppice 50% area on rotation every seven
		years.
152	56833 74532	Allow 147 to 152 to join up. Scallop edges (other than those on the
		linking sections) back by two metres and treat. Release and retain
		hawthorn. Remove and treat ash. Flail 50% bramble on rotation every
		three years. Coppice 50% area on rotation every seven years.
153	56856 74616	Remove and treat ash and sycamore. Scallop edges back by two to
		three metres and treat. Coppice 50% retained area on rotation every
		seven years.
154	56883 74648	Scallop edges back by two to three metres and treat. Flail 50% bramble
		on rotation every three years. Coppice 50% retained area on rotation
		every seven years.
	· · · · · · · · · · · · · · · · · · ·	

455	EC007 74C44	Demonstrated below only wild shown confiners and shown loved
155	56907 74644	Remove and treat holm oak, wild cherry saplings and cherry laurel.
		Scallop edges back by two to three metres and treat. Coppice 50%
456	F6007 74607	retained area on rotation every seven years.
156	56907 74607	Coppice 50% area on rotation every seven years.
157	56899 74686	Remove and treat bramble.
158	56966 74580	Scallop edges back two to three metres as close to quarry pit as
	(E side)	possible and treat. Remove and treat ash and holm oak. Coppice 50%
159	EC07C 74E2C	retained area on rotation every seven years.
160	56976 74536 56986 74557	Coppice 50% area on rotation every seven years. Remove and treat all.
161		Remove and treat ash. Release and retain hawthorn.
162	56830 74606 56817 74642	
102	30017 74042	Remove and treat all vegetation around mature trees to manage as parkland.
163	56836 74690	Remove and treat all vegetation around mature trees to manage as
103	30030 74090	parkland.
Comp	artments 164 to 1	73 have grown up around old mine workings. Parts of this area retain
		Icareous flora such as rock rose and selective clearance of scrub to
		erest should be prioritised. Scrub will be retained in the gullies for
	ebrates.	crest should be phontised. Octub will be retained in the gailles for
164	56986 74628	Remove and treat ash, small sycamores, bramble and holm oaks.
	0000071020	Leave vegetation in gullies. Coppice 50% retained area on rotation
		every seven years.
165	57022 74645	Retain oak. Remove and treat bramble, <i>Cotoneaster</i> , ash saplings and
	0.022	young ash trees. Coppice one third retained area on rotation every
		seven years. Maintain 'ivy mound' to south-west at current extent
		(ST57001 74629).
166	57097 74712	Release and retain hawthorn, treat as necessary.
167	57084 74751	Release and retain hawthorn. Remove and treat all else.
168	57095 74777	Remove and treat all except Turkey oak.
169	57072 74699	Remove and treat all except purple underside sycamore.
169 170	57072 74699 57061 74702	Remove and treat all except purple underside sycamore. Remove and treat all.
170	57061 74702	Remove and treat all.
170 171	57061 74702 57070 74714	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all.
170 171 172	57061 74702 57070 74714 57059 74718	Remove and treat all. Coppice 50% area on rotation every seven years.
170 171 172 173	57061 74702 57070 74714 57059 74718 57029 74757	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years.
170 171 172 173	57061 74702 57070 74714 57059 74718 57029 74757	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at
170 171 172 173 174	57061 74702 57070 74714 57059 74718 57029 74757 57017 74662	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at eastern end. Coppice 50% retained area on rotation every seven years.
170 171 172 173 174	57061 74702 57070 74714 57059 74718 57029 74757 57017 74662	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at eastern end. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Coppice 50% retained area on rotation every
170 171 172 173 174	57061 74702 57070 74714 57059 74718 57029 74757 57017 74662 57002 74664	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at eastern end. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Coppice 50% retained area on rotation every seven years. Release and retain yew. Remove and treat ash. Remove and treat ash. Remove and treat three metres length of scrub
170 171 172 173 174 175	57061 74702 57070 74714 57059 74718 57029 74757 57017 74662 57002 74664 56987 74658	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at eastern end. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Coppice 50% retained area on rotation every seven years. Release and retain yew. Remove and treat ash. Remove and treat ash. Remove and treat three metres length of scrub at eastern and western ends. Coppice 50% retained area on rotation
170 171 172 173 174 175 176 177	57061 74702 57070 74714 57059 74718 57029 74757 57017 74662 57002 74664 56987 74658 57014 74681	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at eastern end. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Coppice 50% retained area on rotation every seven years. Release and retain yew. Remove and treat ash. Remove and treat ash. Remove and treat three metres length of scrub at eastern and western ends. Coppice 50% retained area on rotation every seven years.
170 171 172 173 174 175	57061 74702 57070 74714 57059 74718 57029 74757 57017 74662 57002 74664 56987 74658	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at eastern end. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Coppice 50% retained area on rotation every seven years. Release and retain yew. Remove and treat ash. Remove and treat ash. Remove and treat three metres length of scrub at eastern and western ends. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Flail 50% bramble on rotation every three years.
170 171 172 173 174 175 176 177	57061 74702 57070 74714 57059 74718 57029 74757 57017 74662 57002 74664 56987 74658 57014 74681 57002 74703	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at eastern end. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Coppice 50% retained area on rotation every seven years. Release and retain yew. Remove and treat ash. Remove and treat ash. Remove and treat three metres length of scrub at eastern and western ends. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years.
170 171 172 173 174 175 176 177	57061 74702 57070 74714 57059 74718 57029 74757 57017 74662 57002 74664 56987 74658 57014 74681	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at eastern end. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Coppice 50% retained area on rotation every seven years. Release and retain yew. Remove and treat ash. Remove and treat ash. Remove and treat three metres length of scrub at eastern and western ends. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years. Remove and treat ash and holm oak. Coppice 50% retained area on
170 171 172 173 174 175 176 177	57061 74702 57070 74714 57059 74718 57029 74757 57017 74662 57002 74664 56987 74658 57014 74681 57002 74703 57019 74605	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at eastern end. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Coppice 50% retained area on rotation every seven years. Release and retain yew. Remove and treat ash. Remove and treat ash. Remove and treat three metres length of scrub at eastern and western ends. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years. Remove and treat ash and holm oak. Coppice 50% retained area on rotation every seven years.
170 171 172 173 174 175 176 177 178 179	57061 74702 57070 74714 57059 74718 57029 74757 57017 74662 57002 74664 56987 74658 57014 74681 57002 74703 57019 74605 57030 74609	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at eastern end. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Coppice 50% retained area on rotation every seven years. Release and retain yew. Remove and treat ash. Remove and treat ash. Remove and treat three metres length of scrub at eastern and western ends. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years. Remove and treat ash and holm oak. Coppice 50% retained area on rotation every seven years. Remove and treat all.
170 171 172 173 174 175 176 177 178 179 180 181	57061 74702 57070 74714 57059 74718 57029 74757 57017 74662 57002 74664 56987 74658 57014 74681 57002 74703 57019 74605 57030 74609 56738 74595	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at eastern end. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Coppice 50% retained area on rotation every seven years. Release and retain yew. Remove and treat ash. Remove and treat ash. Remove and treat three metres length of scrub at eastern and western ends. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years. Remove and treat ash and holm oak. Coppice 50% retained area on rotation every seven years. Remove and treat ash and holm oak. Coppice 50% retained area on rotation every seven years. Remove and treat ash and holm oak. Coppice 50% retained area on rotation every seven years. Remove and treat all. Retain ash and oak trees. Remove and treat all else.
170 171 172 173 174 175 176 177 178 179 180 181 182	57061 74702 57070 74714 57059 74718 57029 74757 57017 74662 57002 74664 56987 74658 57014 74681 57002 74703 57019 74605 57030 74609 56738 74595 56737 74612	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at eastern end. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Coppice 50% retained area on rotation every seven years. Release and retain yew. Remove and treat ash. Remove and treat ash. Remove and treat three metres length of scrub at eastern and western ends. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years. Remove and treat ash and holm oak. Coppice 50% retained area on rotation every seven years. Remove and treat ash and holm oak. Coppice 50% retained area on rotation every seven years. Remove and treat all. Retain ash and oak trees. Remove and treat all else. Remove and treat all.
170 171 172 173 174 175 176 177 178 179 180 181 182 183	57061 74702 57070 74714 57059 74718 57029 74757 57017 74662 57002 74664 56987 74658 57014 74681 57002 74703 57019 74605 57030 74609 56738 74595 56737 74612 56751 74609	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at eastern end. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Coppice 50% retained area on rotation every seven years. Release and retain yew. Remove and treat ash. Remove and treat ash. Remove and treat three metres length of scrub at eastern and western ends. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years. Remove and treat ash and holm oak. Coppice 50% retained area on rotation every seven years. Remove and treat ash and holm oak. Coppice 50% retained area on rotation every seven years. Remove and treat all. Retain ash and oak trees. Remove and treat all else. Remove and treat all.
170 171 172 173 174 175 176 177 178 179 180 181 182 183 184	57061 74702 57070 74714 57059 74718 57029 74757 57017 74662 57002 74664 56987 74658 57014 74681 57002 74703 57019 74605 57030 74609 56738 74595 56737 74612 56751 74609 56725 74655	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at eastern end. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Coppice 50% retained area on rotation every seven years. Release and retain yew. Remove and treat ash. Remove and treat ash. Remove and treat three metres length of scrub at eastern and western ends. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years. Remove and treat ash and holm oak. Coppice 50% retained area on rotation every seven years. Remove and treat ash and holm oak coppice 50% retained area on rotation every seven years. Remove and treat all. Retain ash and oak trees. Remove and treat all else. Remove and treat all. Remove and treat all. Maintain cleared hawthorns, remove and treat all else.
170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185	57061 74702 57070 74714 57059 74718 57029 74757 57017 74662 57002 74664 56987 74658 57014 74681 57002 74703 57019 74605 57030 74609 56738 74595 56737 74612 56751 74609 56725 74655 56703 74627	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at eastern end. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Coppice 50% retained area on rotation every seven years. Release and retain yew. Remove and treat ash. Remove and treat ash. Remove and treat three metres length of scrub at eastern and western ends. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years. Remove and treat ash and holm oak. Coppice 50% retained area on rotation every seven years. Remove and treat all. Retain ash and oak trees. Remove and treat all else. Remove and treat all. Maintain cleared hawthorns, remove and treat all else. Release and retain hawthorns, remove and treat all else.
170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186	57061 74702 57070 74714 57059 74718 57029 74757 57017 74662 57002 74664 56987 74658 57014 74681 57002 74703 57019 74605 57030 74609 56738 74595 56737 74612 56751 74609 56725 74655 56703 74627 56682 74619	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at eastern end. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Coppice 50% retained area on rotation every seven years. Release and retain yew. Remove and treat ash. Remove and treat ash. Remove and treat three metres length of scrub at eastern and western ends. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years. Remove and treat ash and holm oak. Coppice 50% retained area on rotation every seven years. Remove and treat all. Retain ash and oak trees. Remove and treat all else. Remove and treat all. Maintain cleared hawthorns, remove and treat all else. Release and retain hawthorns, remove and treat all else.
170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187	57061 74702 57070 74714 57059 74718 57029 74757 57017 74662 57002 74664 56987 74658 57014 74681 57002 74703 57019 74605 57030 74609 56738 74595 56737 74612 56751 74609 56725 74655 56703 74627 56682 74619 56662 74625	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at eastern end. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Coppice 50% retained area on rotation every seven years. Release and retain yew. Remove and treat ash. Remove and treat ash. Remove and treat three metres length of scrub at eastern and western ends. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years. Remove and treat ash and holm oak. Coppice 50% retained area on rotation every seven years. Remove and treat all. Retain ash and oak trees. Remove and treat all else. Remove and treat all. Maintain cleared hawthorns, remove and treat all else. Release and retain hawthorns, remove and treat all else. Release and retain mature ash, remove and treat all else. Retain hawthorn under ivy, remove and treat bramble.
170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188	57061 74702 57070 74714 57059 74718 57029 74757 57017 74662 57002 74664 56987 74658 57014 74681 57002 74703 57019 74605 57030 74609 56738 74595 56737 74612 56751 74609 56725 74655 56703 74627 56682 74619 56662 74625 56630 74611	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at eastern end. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Coppice 50% retained area on rotation every seven years. Release and retain yew. Remove and treat ash. Remove and treat ash. Remove and treat three metres length of scrub at eastern and western ends. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years. Remove and treat ash and holm oak. Coppice 50% retained area on rotation every seven years. Remove and treat all. Retain ash and oak trees. Remove and treat all else. Remove and treat all. Maintain cleared hawthorns, remove and treat all else. Release and retain hawthorns, remove and treat all else. Release and retain mature ash, remove and treat all else. Retain hawthorn under ivy, remove and treat all else. Release and retain mature ash. Remove and treat all else.
170 171 172 173 174 175 176 177 178 180 181 182 183 184 185 186 187 188 189	57061 74702 57070 74714 57059 74718 57029 74757 57017 74662 57002 74664 56987 74658 57014 74681 57002 74703 57019 74605 57030 74609 56738 74595 56737 74612 56751 74609 56725 74655 56703 74627 56682 74619 56662 74625 56630 74611 56702 74575	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at eastern end. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Coppice 50% retained area on rotation every seven years. Release and retain yew. Remove and treat ash. Remove and treat ash. Remove and treat three metres length of scrub at eastern and western ends. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years. Remove and treat ash and holm oak. Coppice 50% retained area on rotation every seven years. Remove and treat all. Retain ash and oak trees. Remove and treat all else. Remove and treat all. Maintain cleared hawthorns, remove and treat all else. Release and retain hawthorns, remove and treat all else. Release and retain mature ash, remove and treat all else. Release and retain mature ash. Remove and treat all else. Release and retain mature ash. Remove and treat all else.
170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188	57061 74702 57070 74714 57059 74718 57029 74757 57017 74662 57002 74664 56987 74658 57014 74681 57002 74703 57019 74605 57030 74609 56738 74595 56737 74612 56751 74609 56725 74655 56703 74627 56682 74619 56662 74625 56630 74611	Remove and treat all. Coppice 50% area on rotation every seven years. Remove and treat all. Retain. Flail 50% bramble on rotation every three years. Remove and treat ash. Remove and treat three metres length scrub at eastern end. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Coppice 50% retained area on rotation every seven years. Release and retain yew. Remove and treat ash. Remove and treat ash. Remove and treat three metres length of scrub at eastern and western ends. Coppice 50% retained area on rotation every seven years. Remove and treat ash. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years. Remove and treat ash and holm oak. Coppice 50% retained area on rotation every seven years. Remove and treat all. Retain ash and oak trees. Remove and treat all else. Remove and treat all. Maintain cleared hawthorns, remove and treat all else. Release and retain hawthorns, remove and treat all else. Release and retain mature ash, remove and treat all else. Retain hawthorn under ivy, remove and treat all else. Release and retain mature ash. Remove and treat all else.

400	F0707 74004	Delegas and retain have them and walnut
192	56707 74604	Release and retain hawthorn and walnut.
193a	5668 7452	Re-create parkland, remove and treat all understorey vegetation.
/b 194	E6660 74402	Pamaya and tract all
195	56668 74493 56682 74458	Remove and treat all. Remove and treat all.
196	56644 74444	
197		Release and retain lime, remove and treat all else.
198	56643 74412	Retain beech, remove and treat Norway maple.
199	56615 74397	Retain oak, remove and treat all else.
200	56619 74345	Retain oak, remove and treat all else.
201	56604 74333	Release and retain hawthorn, remove and treat all else.
201	56579 74322	Retain ash, remove and treat elder.
202	56513 74307	Remove and treat all.
203	56507 74316	Remove and treat all.
	56517 74348	Remove and treat all.
205	56523 74350	Retain Turkey oak and keep clear. Remove and treat bramble.
206	56431 74286	Remove and treat all.
207	56421 74307	Remove and treat all.
208	56413 74302	Retain whitebeam, remove and treat all else.
209	56414 74325	Remove and treat ash and elm.
210	56410 74344	Retain oak, remove and treat all else.
211	56426 74361	Retain whitebeam, remove and treat all else.
212	56435 74379	Remove and treat all.
213	54684 74383	Remove and treat all.
214	56472 74400	Remove and treat all.
215 216	56483 74409	Retain whitebeam. Remove and treat all else.
217	56514 74415	Remove and treat all.
218	56471 74428	Remove and treat all. Remove and treat ash and wych elms. Coppice 50% retained area on
210	56459 74439	
219	56483 74465	rotation every seven years. Release and retain old hawthorn, remove and treat all else.
220	56503 74443	Retain hawthorn, remove and treat all else.
221	56497 74432	Remove and treat all.
222	56520 74455	Remove and treat all.
223	56543 74458	Release and retain hawthorn, remove and treat all else.
224	56548 74463	Retain oak, remove and treat all else.
225	56548 74483	Remove and treat all.
226	56557 74476	Remove and treat all.
227	56531 74506	Retain rowan and hawthorn, remove and treat all else.
228	56521 74484	Retain mature ash, remove and treat all else.
229	56504 74492	Retain one oak and one yew. Remove and treat all else.
	(large area)	Trotain one sait and one you. Tromove and troat an olde.
230	56529 74539	Remove and treat all.
231	56516 74559	Retain mature ash and lime, remove and treat all else.
232	56529 74686	Retain whitebeam, remove and treat all else.
233	56527 74721	Remove and treat all.
234	56538 74707	Retain old hawthorn and holly, remove and treat all else.
235	56565 74715	Remove and treat all.
236	56542 74756	Remove and treat all.
237	56526 74803	Retain hawthorns, remove and treat elder.
238	56464 74821	Retain hawthorn and one elder, remove and treat all else.
239	56609 74919	Retain hawthorn and holly, remove and treat all else.
240	56637 74915	Retain hawthorn, remove and treat all else.
241	56642 74929	Retain beech, remove and treat all else.
242	56646 74949	Retain beech, remove and treat wych elm.
243	56662 74897	Retain old hawthorn, remove and treat elder.
244	56663 74962	Retain beech and hawthorn, remove and treat holly, elder and wych
		elm.
245	56706 74867	Retain whitebeam, remove and treat all else.

0.40	T 50740 74040	
246	56742 74846	Remove and treat all.
247	56758 74879	Retain holly, remove and treat ash.
248	56730 74883	Remove and treat all.
249	56727 74898	Retain one hawthorn, remove and treat ash.
250	56762 74903	Retain veteran ash and old hawthorn, remove and treat all else.
251	56708 74936	Remove and treat all.
252	56720 74981	Release and retain hawthorn but allow all else to spread to merge with 253.
253	56725 74986	Release and retain hawthorn but allow all else to spread to merge with 252.
254	56721 75004	Retain purple-underside leaved sycamore, remove and treat all else.
255	56770 75014	Allow to spread so that 255 and 256 join up. Coppice 50% area on
250	EC74E 7E047	rotation every seven years.
256	56745 75047	Allow to spread so that 256 and 255 join up. Coppice 50% area on
257	56809 74800	rotation every seven years. Allow to spread so that 257 and 258 link up. Coppice 50% area on
257	50009 74000	rotation every seven years.
258	56841 74789	Allow to spread so that 258 to 257 join up. Coppice 50% area on
		rotation every seven years.
259	56827 74749	Retain hawthorn, remove and treat all else.
260	56787 74777	Retain cleared hawthorn, remove and treat elder.
261	56796 74743	Allow 261-265 to join up. Remove and treat ash. Coppice 50% area on
		rotation every seven years.
262	56789 74746	Allow 261-265 to join up. Remove and treat ash. Coppice 50% area on rotation every seven years.
263	56794 74730	Allow 261-265 to join up. Remove and treat yew, wych elm and horse chestnut. Coppice 50% area on rotation every seven years.
264	56781 74723	Allow 261-265 to join up. Fell tallest two elders and treat. Release and retain hawthorn, allow large elder to collapse. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years.
265	56787 74739	Allow 261-265 to join up. Release and retain hawthorn, fell and treat young ash. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years.
266	56736 74749	Release and retain hawthorn, remove and treat cherry laurel. Flail 50% bramble on rotation every three years.
267	56727 74753	Allow 267 and 268 to join up. Release and retain old hawthorn. Fell and treat all ash. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years.
268	56696 74752	Allow 268 and 267 to join up. Allow elder to collapse. Flail 50% bramble on rotation every three years. Coppice 50% retained area on rotation every seven years.
269	56663 74742	Fell and treat ash and wych elm. Encourage low scrub to spread. Coppice 50% retained area on rotation every seven years.
270	56789 74687	Remove and treat all.
271	56776 74671	Retain cleared hawthorn. Remove and treat wych elm. Flail 50%
		bramble on rotation every three years.
272	56788 74668	Remove and treat all.
273	56781 74657 (x4 patches)	Retain large wych elm by path, remove and treat all else.
Parry'	s Lane Triangle	
274	57240 75632	Retain oak, remove and treat all else.
275	57216 75611	Retain hawthorn, remove and treat all else.
276	57181 75675	Retain hawthorn. Remove and treat sycamore.
277	57162 75674	Retain beech. Remove and treat hawthorn.
278	57159 75659	Retain oak and holly, remove and treat all else.
279	57137 75701	Retain veteran ash, release two old hawthorns, remove and treat all else.
280	57135 75741	Retain yew, oak and one fallen hawthorn, remove and treat all else.
00	1 37 130 10171	reading for, our and one failor navelion, remove and treat an else.

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281	57094 75762	Remove and treat holm oak, ash and sycamore. Retain all else.
	Pit Road Section	
282	57396 75358	Remove and treat all.
283	57394 75384	Retain one hawthorn, remove and treat all else.
284	57390 75403	Retain ivy-covered monolith, remove and treat all else.
285	57328 75401	Retain cherry and lime, remove and treat all else.
286	57312 75425	Flail 50% bramble on rotation every three years.
287	57304 75436	Release and retain hawthorn, remove and treat bramble.
288	57330 75444	Remove and treat all.
289	57337 75435	Crown lift mature ash, remove and treat all else.
290	57329 75440	Release and retain hawthorn, remove and treat bramble.
291	57318 75447	Release and retain one old hawthorn, remove and treat all else.
292	57306 75467	Retain one hawthorn. Remove and treat all else.
293	57327 75471	Retain holly. Release and retain hawthorn. Retain ivy at end of stand.
		Remove and treat bramble.
294	57336 75480	Release and retain oak and old hawthorn. Retain two thirds bramble
		and flail 50% on rotation every three years. Remove and treat all else.
295	57357 75484	Retain one hawthorn, remove and treat all else.
296	57361 75462	Remove and treat all.
297	57357 75437	Release and retain one hawthorn. Remove and treat all else.
298	57372 75441	Release and retain one hawthorn. Remove and treat all else.
299	57364 75512	Retain one hawthorn, remove and treat all else.
300	57325 75524	Retain one hawthorn. Remove and treat all else.
301	57328 75512	Retain one wych elm, remove and treat all else.
302	57357 75526	Release and retain one old hawthorn and yew. Remove and treat all else.
303	57293 75532	Release and retain hawthorn. Remove and treat bramble.
304	57297 75564	Release and retain old hawthorn if safe. Retain oak. Remove and treat all else.
305	57306 75573	Release and retain hawthorn. Remove and treat bramble and wych elm.
306	57303 75577	Retain hawthorn, one ash and wych elm with bent trunk. Remove and treat all else.
307	57320 75587	Retain hawthorn. Remove and treat bramble.
308	57338 75600	Release and retain hawthorn. Remove and treat all else.
309	57299 75596	Release and retain two hawthorns. Remove and treat all else.
310	57314 75622	Release and retain hawthorn. Remove and treat ash and bramble.
311	57320 75635	Remove and treat all.
312	57307 75645	Release and retain oak. Remove and treat all else.
313	57320 75650	Remove and treat all.
Saville	e Road south tria	ingle
314	56763 75359	Retain veteran ash, holly and leaning hawthorn. Remove and treat all else.
lvywe	II Road	
315	55948 74791	Retain spindle, hazel and ivy. Cut off overhanging ash branches. Remove and treat ash saplings and dog rose. Coppice 50% retained
		area on rotation every seven years.
316	55961 74804	Maintain ash tree clear of vegetation. Remove and treat all else.
317	55963 74829	Remove and treat ash and sycamore. Flail 50% bramble on rotation every three years.
318	55983 74841	Release and retain holly and hawthorn. Remove and treat bramble.
319	56005 74836	Maintain veteran ash and holly. Remove and treat all else.
320	56021 74868	Remove and treat all.
321	56218 74939	Fell and treat ash to encourage oak. Release and retain holly and hawthorn. Remove and treat bramble and elder.
322	56223 74968	Retain oak sapling, two ash, one elm and holly. Remove and treat all else.
323	56181 75008	Retain beech. Remove and treat all else.
324	56199 75030	Retain at current extent. Coppice 50% retained area on rotation every
JLT	1 20133 1 2020	Netain at current extent. Coppice 50 % retained area on rotation every

		seven years.	
325	56274 74967	Retain veteran ash and hawthorn. Remove and treat all else.	
Woodl	and	Remove and treat bramble around trees. Remove and treat cherry	
		laurel, sycamore saplings and young sycamore trees.	
Prome	Promenade Triangle		
326	5661 7380	Retain one mature ash, release and retain holly. Remove and treat all	
		else.	
Circular Road Avon Gorge near goat enclosure			
Dense		Scallop edges back by two metres and treat. Remove and treat holm	
Scrub/	Woodland	oak sapling.	

3.4 Legislation

3.4.1 Nature Conservation Legislation

- Bats are protected under the Conservation of Habitats and Species (Amendment)
 Regulations 2012 and the Wildlife and Countryside Act 1981 (as amended). It is an
 offence to disturb, injure or kill a bat, or to damage or destroy a roost. Some of the trees
 scheduled for removal may have the potential to support bats and therefore a bat survey
 should be carried out by a qualified ecologist before works to trees with features which
 may support bat roosts commence. Should a bat roost be present, a licence will be
 required from Natural England.
- Nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended).
 Scrub and tree works should only be carried out between October and February inclusive to avoid harm to nesting birds.
- Reptiles are protected against killing and injury under the Wildlife and Countryside Act 1981 (as amended).

3.4.2 Health and Safety Legislation

- In accordance with Health and Safety Regulations, safety checks must be carried out across the site, recorded and recommendations acted upon where necessary.
- Risk assessments must be made and kept for each work or public event activity.

3.4.3 Health and Safety at Work Act 1974

 All operations carried out on the site must be undertaken by trained personnel, using methods and equipment approved by the Health and Safety Executive.

3.4.4 Occupier's Liability Act 1984

- This Act imposes an obligation on the landowner to ensure that every reasonable care is taken to remove any risks to all visitors to the site. In compliance it will be necessary to:
 - a) Make sure that all footpaths and other constructions are safe;
 - b) Remove any hazardous objects;
 - c) Survey all trees on the site, both within and along the boundaries, on a regular basis to ensure the safety of visitors to the site and of those people who use the adjacent rights of way, such as the footpath at the eastern end of the site;
 - c) Conduct a safety audit to identify further hazards.

4 Ten Year Work Programme

4.1 Work Programme

Actions relating to the next ten years of management are listed in tabular format below. Table 2 gives the capital works (i.e. one off works) schedule and Table 3 the annual works (i.e. ongoing works) schedule. In the schedules the type of work per compartment is shown. The timetable provided should be incorporated into Bristol City Council's annual work schedule. It is suggested that an ongoing record is kept annually of work completed (including dates and operators) and work carried forward, with the Plan amended accordingly, so that it is a useful working document.

 Table 2 Capital Works for Scrub on Clifton and Durdham Downs, Bristol 2015-2025

	Work to be carried out in October to February inclusive										
Action	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	
Compartment numbers											
Remove and treat all	1, 15, 27, 46, 48, 49, 50, 51, 53, 54, 118, 170, 212, 217, 235, 251.	3, 16, 29, 57, 172, 213, 216, 233, 236.	4, 17, 33, 62, 122, 202, 206, 207, 272.	5, 18, 32, 63, 126, 156, 203, 214, 282.	6, 34, 77, 127, 190, 204, 221, 270, 311.	7, 22, 36, 79, 128, 189, 195, 194, 222, 288, 313.	10, 26, 37, 87, 129, 180, 182, 183, 320.	28, 100, 131, 138, 160, 225, 246.	12, 31, 41, 109, 134, 226, 296.	30, 42, 116 , 135, 136, 230, 248.	
Selective removal and treat and/or scallop and treat edges	2, 8, 14, 20, 35, 38, 44, 56, 142, 155, 162, 169, 174, 177, 208, 211, 220, 229, 245, 279, 289, 305, 318, 321, 326.	9, 11, 13, 21, 23, 39, 43, 140, 143, 176,193a,197 200, 215, 218, 232, 247, 274, 291, 295, 306, 314, 322.	24, 45, 55, 58, 88, 139, 144, 157, 175, 184, 188, 209, 219, 223, 228, 249, 281, 298, 304, 307, 315, 325.	25, 40, 52, 66, 71, 78, 96, 107, 133, 137, 145, 158, 163, 181, 185, 198, 224, 234, 250, 275, 276, 297, 308, 317.	59, 67, 80, 86, 98, 112, 121, 146, 161, 178, 186, 199, 210, 227, 231, 254, 277, 278, 303, 309, 319 + Ivywell Rd Road Woodland.	47, 68, 81, 89, 101, 113, 123, 147, 148, 164, 179, 187, 201, 205, 237, 238, 239, 272, 280, 294, 310.	60, 69, 82, 90, 104, 114, 124, 149, 150, 165, 191, 238, 241, 259, 267, 271, 287, 299, 312, 323. Circular Road woodland	61, 70, 83, 91, 106, 115, 125, 151, 152, 166, 192, 240, 244, 252, 260, 269, 283, 290, 300.	64, 72, 84, 92, 110, 117, 130, 153, 167, 193b, 242, 253, 261, 263, 265, 284,292 301.	65, 76, 85, 94, 111, 119, 132, 141, 154, 168, 196, 243, 262, 264, 266, 285, 293, 302.	
Crown lifting	21, 289.	75)4/	7514	75)4/	0: 1						
Reduce boundaries and treat	ZBW west, southern boundary.	ZBW east, northern boundary.	ZBW west, northern boundary.	ZBW east, southern boundary.	Circular Rd Woodland						

 Table 3 Ongoing Works for Clifton and Durdham Downs, Bristol 2015-2025

	Work to be carried out in October to February inclusive									
Action	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
Compartment numbers										
Coppice 50% retained area every seven years. () indicates alternate section of same compartment.	2, 19, 43, 73, 89, 97, 110, 124, 148, 154, 164, 178, 255, 263, 315.	14, 56, 74, 90, 99, 111, 139, 150, 155, 165, 179, 256, 264, 324.	(2), 20, (43), 65, (73), (89), (97), (110), (124), 76, (148), 91, (154), 102, (164), 144, (178), 149, (255), 158, (263), 171 (315), 218, 257, 265, 112.	(14), 21, (56), 58, (74), (90), (99), 82, (111), 93, (139), (150), (155), (165), (179), (256), (264), (324), 103, 113, 147, 151, 159, 174, 258, 267.	(20), 38, (65), 59, (76), (91), (102), 83, (144), 94, (149), 156 (158), (171), (218), (257), (265), (267), 105, 117, 152, 175, 261, 268, (112).	(21), 39, (58), 71, (82), (93), (103), 84, (113), 95, (147), (151), (159), (174), (258), (267), 108, 121, 145, 153, 177, 262, 269.	2, 19, (38), 43, (59), 73, 89, 97, 110, 124, 148, 154, 164, 178, 255, 263, 315, (83), (94), (105), (117), (152), (175), (261), (268).	14, (39), 56, (71), 60, 74, 90, 99, 111, 139, 150, 155, 165, 179, 256, 264, 324, (82), (84), (95), (108), (121), (145), (153), (177), (262), (269).	(2), 20, (43), 65, (73), (89), (97), (110), (124), 76, (148), 91, (154), 102, (164), 144, (178), 149, (255), 158, (263), 171, (315), 218, 257, 265, 112.	(14), 21, (56), 58, (60), 70, (74), (90), (99), (111), (139), (150), (155), (165), (179), (256), (264), (324), 82, 93, 103, 113, 147, 151, 159, 174, 96, 258, 267.
Flail 50% bramble every three years on rotation. () indicates alternate section of same compartment.	21, 43, 59, 66, 71, 73, 83, 89, 97, 105, 110, 111, 114, 117, 120, 144, 145, 147, 148, 149, 150, 151, 152, 154, 173, 178, 264,	(21), (43), (59), (66), (71), (73), (83), (89), (97), (105), (110), (111), (114),	21, 43, 59, 66, 71, 73, 83, 89, 97, 105, 110, 111, 114, 117, 120, 144, 145, 147, 148, 149, 150, 151, 152, 154, 173,	(21), (43), (59), (66), (71), (73), (83), (89), (97), (105), (110), (111),	21, 43, 59, 66, 71, 73, 83, 89, 97, 105, 110, 111, 114, 117, 120, 144, 145, 147, 148, 149, 150, 151, 152, 154,	(21), (43), (59), (66), (71), (73), (83), (89), (97), (105), (110), (111), (114), (117), (120), (144), (145),	21, 43, 59, 66, 71, 73, 83, 89, 97, 105, 110, 111, 114, 117, 120, 144, 145, 147, 148, 149, 150, 151, 152, 154, 173,	(21), (43), (59), (66), (71), (73), (83), (89), (97), (105), (110), (111), (114), (117), (120), ((144), (145),	21, 43, , 59, 66, 71, 73, 83, 89, 97, 105, 110, 111, 114, 117, 120, 144, 145, 147, 148, 149, 150, 151, 152, 154, 173, 178, 264,	(21), (43) (59), (66), (71), (73), (83), (89),97),(105), (110),(111), (114), (117), (120), (144), (145), (147), (148), (149), (150), (151), (152), (154), (173), (178),

Coppice gorse every 10 years		(317).		(294), (317).		58				
		(148), (149), (150), (151), (152), (154), (173), (178), (264), (265), (266), (267), (268), (271), (286), (294),		(147), (148), (149), (150), (151), (152), (154), (173), (178), (264), (265), (266), (267), (268), (271), (286),	317.	(152), (154), (173), (178), (264), (265), (266), (267), (268), (271), (286), (294), (317).		(152), (154), (173), (178), (264), (265), (266), (267), (268), (271), (286), (294), (317).		
	265, 266, 267, 268, 271, 286, 294, 317.	(117), (120), (144), (145), (147),	178, 264, 265, 266, 267, 268, 271, 286, 294, 317.	(114), (117), (120), (144), (145),	173, 178, 264, 265, 266, 267, 268, 271, 286, 294,	(147), (148), (149), (150), (151),	178, 264, 265, 266, 267, 268, 271, 286, 294, 317.	(147), (148), (149), (150), (151),	265, 266, 267, 268, 271, 286, 294, 317.	(264), (265), (266), (267), (268), (271), (286), (294), (317).

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Figure 1 Scope of Management Area

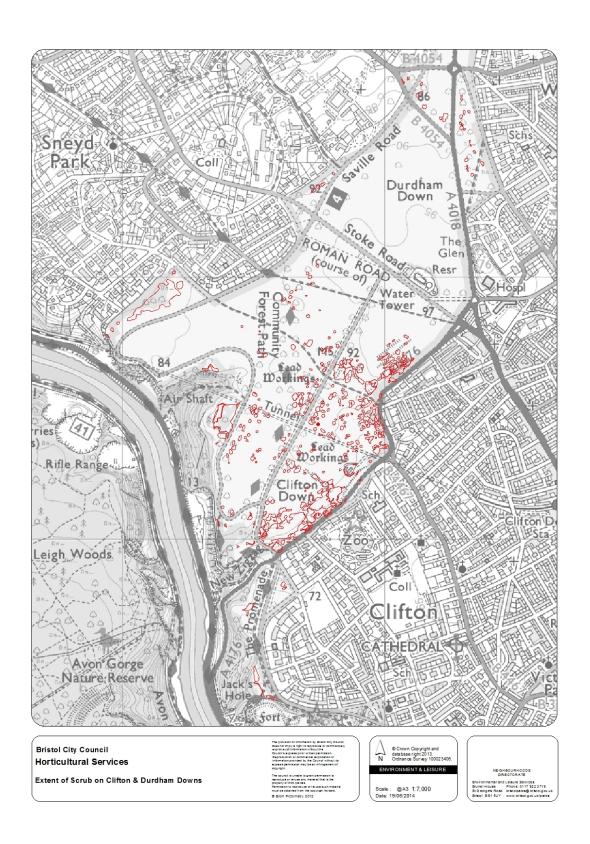


Figure 2 Zoo Banks

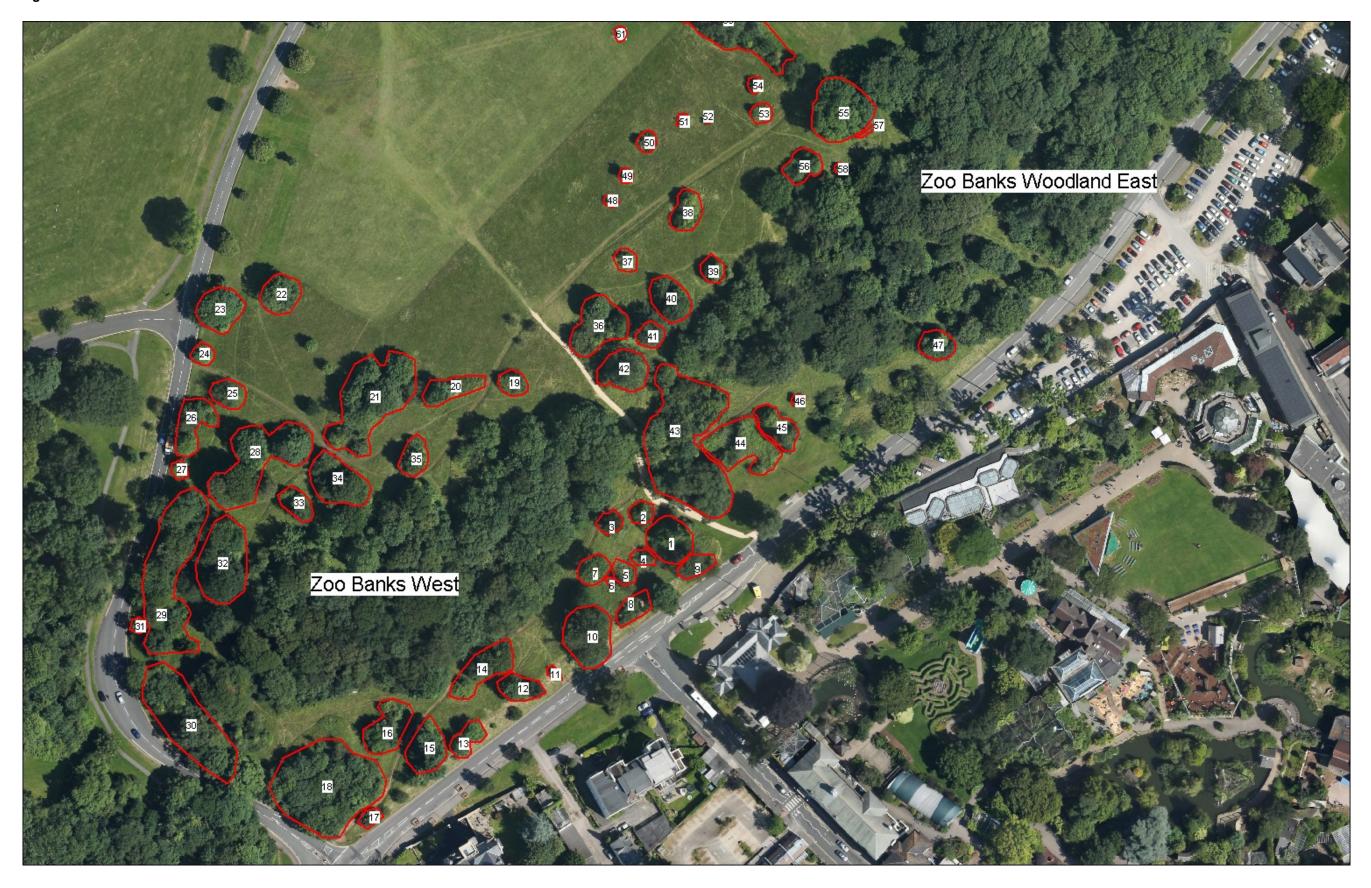


Figure 3 Northern Section



Figure 4 Circular Road South

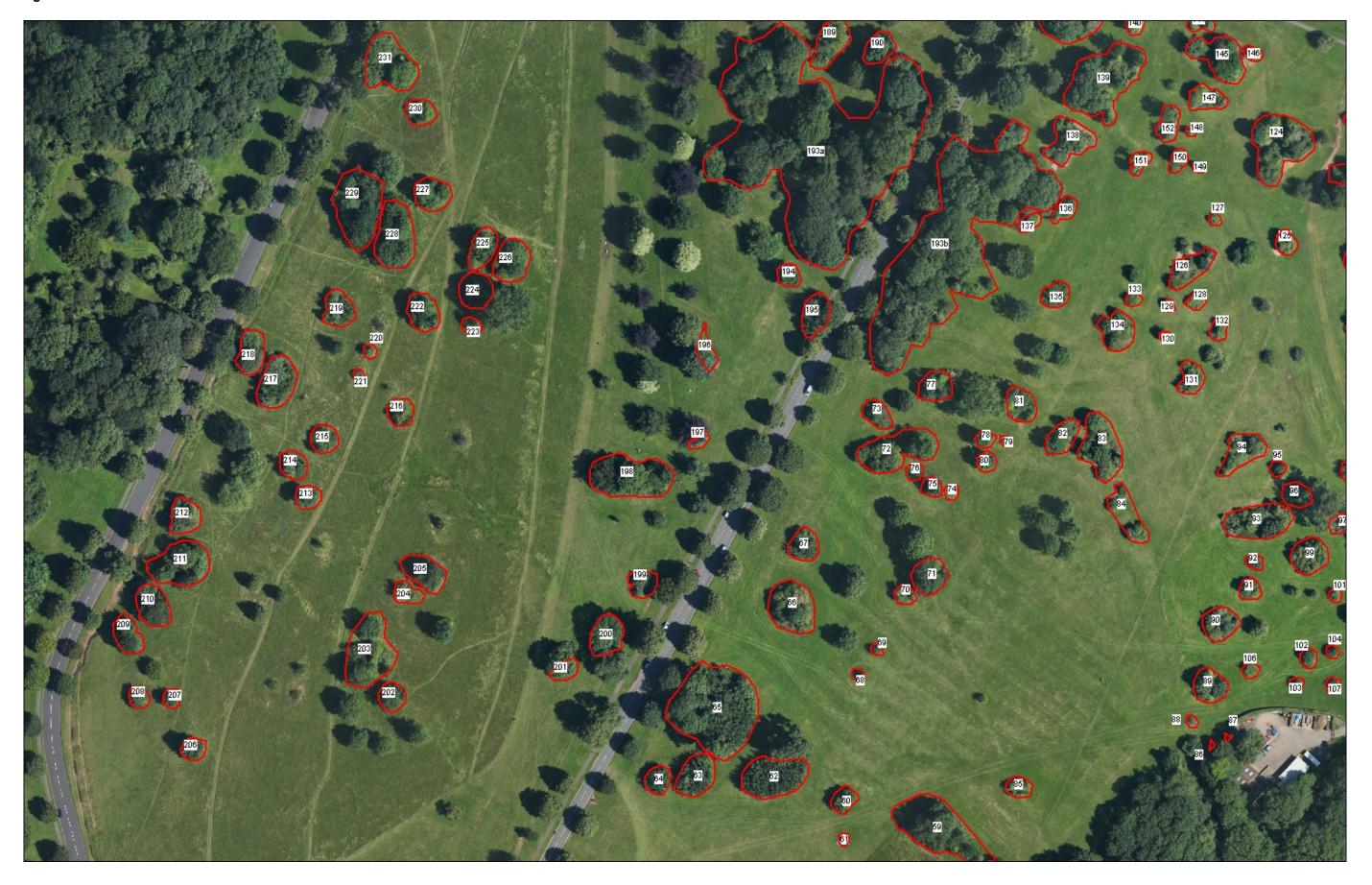


Figure 5 Ladies Mile



Figure 6 Central East

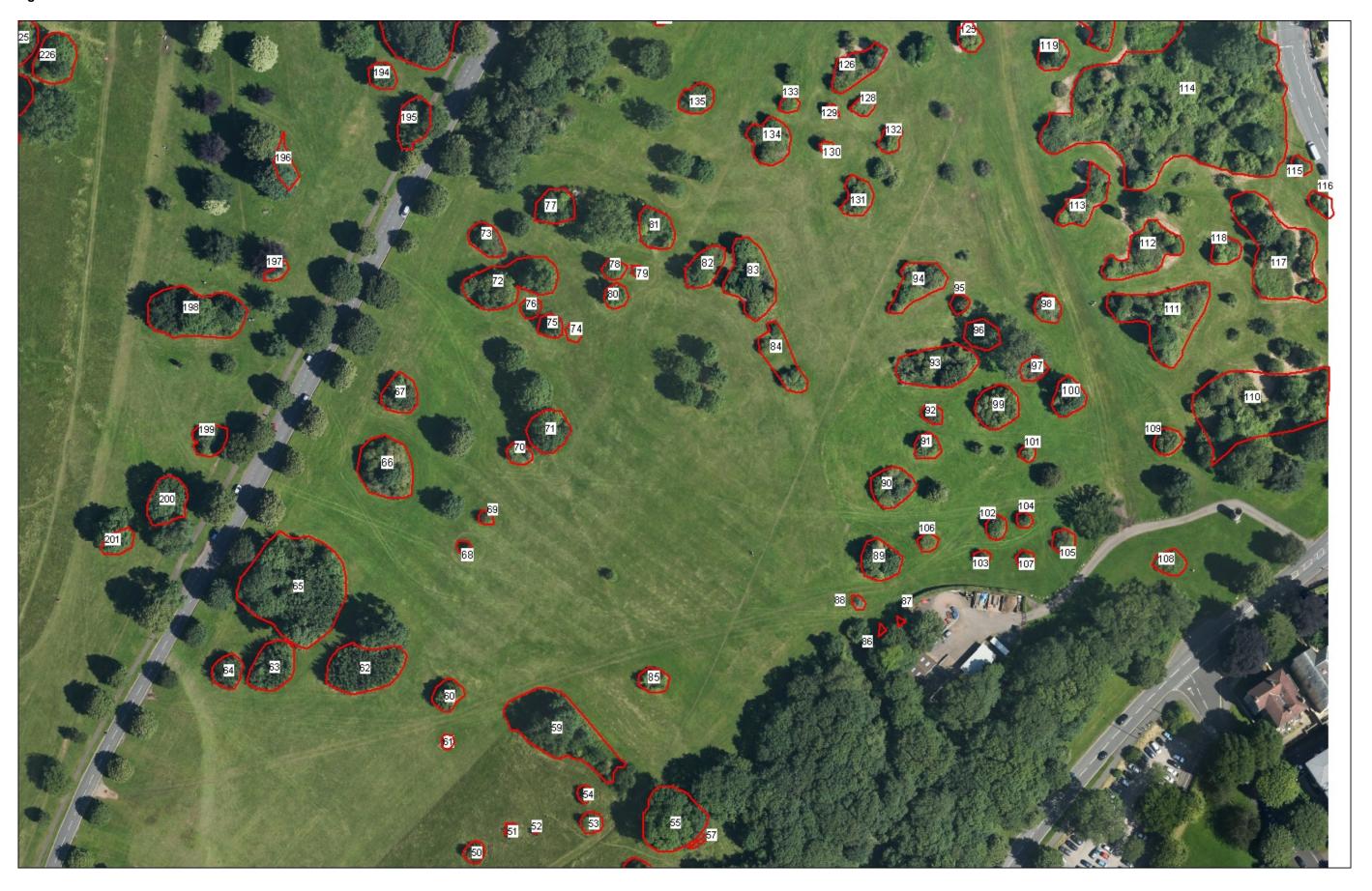


Figure 7 Baker's Path



Figure 7 Circular Road Bend

Figure 8 Circular Road Bend



Appendix 1 - Scrub Species Per Compartment

No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Species																												1	†	
Ash	R	LF	LF				D	D		F		LA		0	D	0	0	D	0	D	D	D	F		D	D	R	Α	D	D
Black bryony																		R	0	0								1	1	
Blackthorn																														
Bramble	F	F	Α	F	0		Α	F	F	0	F	Α		Α		LA		F	F	F	F	R	F		F	F		F	LA	Α
Buckthorn																														
Buddleia																												1	1	1
Cherry laurel																		R										1	1	1
Clematis	LA		LA											LA					F							LF	LA		F	1
Cotoneaster																		R											1	1
franchettii																														
Dog rose		0	F															0								F				R
Dogwood																		LA								LF		Α	R	R
Elder	R		0						LF		R						R	0												
English elm																						R	0	D		R				
Field maple																													R	
Gorse																														
Hawthorn	0	D	0	D		D		0	0	0	D		D	D		0		0	D				0		R	R		0	0	0
Holly	D	0	R				R			D					F	D	R	0		R								F	0	D
Holm oak	0				D																D							D	R	R
Honeysuckle					R							0																		
Hornbeam																										R				
Hybrid oak																											R			R
lvy	F	LA						LA						F								LA	LA		F					
Norway																														
maple																														
Rowan																														
Sm-I lime																							D							
Snowberry																														
Spindle	R	F	R			R	F	0	F					Α	F	0		0	0	0	F					R	R		R	R
Sycamore	0	R	LF				LF					D		0	D		D	F			0	D	D	D			R	R	D	Α
Turkey oak								R		D		D														D		D	0	
Walnut																														
Wayfaring																		R								1				
tree									1																	1		<u> </u>		
Wild cherry	R	F		R	R			F	D	R																				
Wild madder												0								F						F				0
Wild privet								LF		LA	LA	LA		F		Α	R		Α	Α		Α	LA		LA		R	R	LA	
Wych elm				F												R	LF												R	R
Yew	R													D						R	R		R						R	

Comp	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Species	 	<u> </u>					 •			1.0			1.0	1		1.0	† · · ·	1.0	1.0	"	<u> </u>						<u> </u>	+	+	+
Ash	D	D	F	F	LF	F	[↑] F		F	F	D	D	D				D		0				R	R	D	0		R	F	F
Beech	1				D				1				<u> </u>						<u> </u>							1			1	1
Black bryony	1				R			0						0														1	1	1
Blackthorn	1							1																				1	LA	1
Bramble	F			F		F	0	F	F	LA		LA	LA	0	Α	LA	Α				F		LA	F	Α	Α		F	F	0
Buckthorn	1						1	1		1			1															1	1	1
Buddleia	1																											1	1	1
Cherry laurel	1																												1	
Clematis	1				0	F		F							Α	LA													1	1
Cotoneaster	1	R				D		†							1													+	1	1
franchettii		' '																												
Dog rose	1												R											0				R	1	R
Dogwood	1			LA	0																			1		R		+	1	+
Elder	1						R	R						R									R			1		+	1	R
English elm	1						1.	1.						1														+	1	+
Field maple	1	R																										+	1	1
Gorse	1	1						R																		LF		R	1	1
Hawthorn	1	F	R	0	R	0	D	D	R	0		0	F	F		0		D	D		D	D	R	R	0	 - -	D	+	0	1
Hazel	1	-	1		1		+	 -		<u> </u>			LF	<u> </u>				1				 		1	<u> </u>			+	<u> </u>	1
Holly	1	R		F	R	D			D	F	F		LA		R		D											R	1	1
Holm oak	1	1	LA	D	1		0		 	1	<u> </u>						Ť									R		+	1	1
Honeysuckle	1			R			† <u> </u>																			1		+	1	1
Horse	1			1																							R	+	1	1
chestnut																														
Hybrid oak		R											R															1	1	R
lvy	1	1		F			LA	LA			LA		1.	LA		F			F	F			LA	LA	LA			1	F	LA
Norway	1			1			1 -	1								-			İ					_ `				1	1	+=
maple																														
Rowan																												1	1	
Silver birch			R																									1		
Sm-I lime																												1	1	
Snowberry																												1	1	1
Spindle				R		0	R		0	F	F		0													R		1		
Sycamore						D							F															1	R	1
Turkey oak		D	D	R	R	D				D	D	R	R															1	1	
Walnut																												1	1	
Wayfaring	1			R																						LA		1	1	
tree																														
Whitebeam	1				R								1															†		1
Wild cherry	1					1			1	1			1				t				1	1						1	1	1
Wild madder	1	1	0	0			1		+	1			1				0				1			F				†	†	†
Wild privet	†		0	LA	LA	LA		0	1	F	0		F				Ť			0	0	<u> </u>		<u> </u>	<u> </u>	0		\vdash	F	R
Wych elm	†	R						†	1	†	Ť		0	R			†			+ -	 	<u> </u>		F	<u> </u>	1		\vdash	†	+:-
Yew	+	R					R	R	1	0		1	0	† · ` `			†			D		1		† ·			 	 	R	R
I CAA		11	<u> </u>	1	<u> </u>	1	11	11		10	1	<u> </u>	10	<u> </u>	1	J	1]	I	טן	1	1	<u> </u>	<u> </u>]	<u> </u>	Ш	T 17	

Comp	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
Species																														
Ash				D	D	F	F	0	0	F	D	F				F	F	D	0	R	0	D	F	0	D	F	D		F	D
Black bryony																			0											
Blackthorn																														
Bramble		F			0	Α				LA	LA	LA	Α	F			F		LA	F	LA	LA	F	0			Α		LA	
Buckthorn																						R								
Buddleia																														
Cherry laurel																	R													
Clematis													0	LA			0								F	F			LA	
Cotoneaster																														
franchettii																														
Dog rose				0								0		R			0					0							0	
Dogwood																														
Elder				0	0	0						R	R										0	R					0	R
English elm																														
Field maple																														R
Gorse																														
Hawthorn	D		R	F	F	R		D	D		F	0	0	R	D	R	0	F			0	R	F	0	0	0		D	0	R
Holly												R		R	R	0					D	R	R	R		R				
Holm oak																								R						
Honeysuckle																														
Hybrid oak											R									R										
lvy						Α						LA	LA	0	LA	LA		LA				LA		Α						
Norway							R											R												
maple																														
Rowan																														
Sm-I lime																							R							
Snowberry																														
Spindle																														
Spruce							R																							
Sycamore																		R										<u> </u>	<u> </u>	
Turkey oak																														
Walnut							R					R																		
Wayfaring																														
tree																												<u> </u>		1
Wild cherry																R		R										<u> </u>		
Wild madder																														
Wild privet																														
Wych elm		D	D	D	Α	F						F						R												
Yew				R	R						R											R	R							

Comp	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
Species																														
Ash	R	R		0			D			D				F			F			0	0	0		0					D	
Black bryony																														
Blackthorn																														
Bramble				F			0	F	0	0	LA	F	F	Α	F	F			Α	Α	Α	Α	Α	LA	Α	0	Α	F		Α
Buckthorn																														
Buddleia																														
Cherry laurel																														
Clematis																				LA	Α			LA			Α	Α		
Cotoneaster																														
franchettii																														
Dog rose																											0			
Dogwood																														
Elder	R		D	0		R	F	0	R	0		F	F	F	F				D	R		F	D	F		0				
English elm																														
Field maple				R																										
Gorse																														
Hawthorn	R	D		F	R	R		R			D	D	D	D		D	D	R	R	F	F	F	F	Α	D	D	0		R	F
Hazel			R					R	D																					
Holly																				F	D	0	D	0			D	D		
Holm oak						F															R		R							
Honeysuckle																														
lvy	F	F				LA		LA		Α				Α				D	Α	F	Α	Α	LD				Α	Α	LA	Α
Maple sp.																											D	R		
Norway																								R						
maple																														
Rowan																														
Sm-I lime																								0						
Snowberry																								LA						
Spindle																														
Spruce																								R						
Sycamore																														
Turkey oak																														
Walnut																														
Wayfaring																														
tree																														
Wild cherry																														
Wild madder																														
Wild privet																										Α				
Wych elm																														
Yew					D															0						D				

Comp	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
Species																								1						
Ash	D			0		D					0			R	F	D	0	F	F				R		R					R
Black bryony																					0		0						i	
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Woodland Areas

Zoo Banks Woodlands	Dominated by holm oak, with holly abundant in the understorey.
Circular Road gorge edge scrub/woodland	Wych elm F, hawthorn F, wild privet F, hazel O, sycamore saps O, ivy LA, ash O. dogwood LA, holm oak sapling R. Scallop back into area, remove holm oak saplings.
Promenade woodland	Oak/ash woodland with holly, mature sycamores
Triangle	Tall young ash F, holly R, wych elm F, ivy LA
Observatory	Ash dominated secondary woodland with mature sycamore around ramparts. Understorey consists of elder, holly and blackthorn. Blackthorn on edge encroaching on grassland. Sycamore and ash saplings F.
Ivywell Road	Ash-dominated. Remove cherry laurel, sycamore saplings and young trees. Remove bramble around mature trees.

Avon Gorge and Downs Biodiversity Education Officer's Monthly Report July 2015

Events

- 27 people enjoyed a wonderful 'Moth Magic' event. Ray Barnett and half a dozen members of the
 Bristol and district moth group helped participants identify 89 species of Lepidoptera including: Silky
 Wave (Red Data Book 3), Chalk Carpet (Nationally Notable) and Small Marbled (rare migrant). A
 Nationally Notable beetle *Pseudocistela ceramboides* was also recorded.
- 21 participants enjoyed an evening meander on the Downs during the 'Meadow medicine' walk. Herbalist, Max Drake, talked about the traditional and medicinal uses of the plants.
- Unfortunately we had torrential rain on the day of the 'Butterfly walk on the Downs' so we cancelled
 it. Two people decided to come along anyway! Wonderfully the rain cleared for about three quarters
 of an hour and Timothy Dowling from Friends of the Downs and Avon Gorge guided us on a short
 walk on Zoo Banks. We only expected to see ringlets but in the end we also saw marbled whites,
 gatekeepers, skippers, a speckled wood and large whites not bad for such poor weather. Sadly,
 rain stopped play with another torrential downpour.
- Despite a forecast for a clear day, drizzle set in for this month's 'Music with Mummy' event. Luckily
 we could relocate to the Zoo and surprisingly the majority of people who booked still came along. 16
 children, 3 babies and 13 adults enjoyed Fiona Reilly's wildlife songs and made butterfly art.
- For 'Busy buzzy bees' (our first children's holiday event), we were lucky enough to have bee expert Rhian Rowson come along from Bristol Museum. She bought trays of specimens, a microscope and pictures to introduce the variety of UK bees and their lifecycles. We then went outside to look for and learn to identify solitary and bumblebees. We played lots of games and in the afternoon we created minibeast hotels for children to take home for their gardens. 16 children came along to the event.
- On our second children's holiday event, 'Minibeast magic', we spent a morning on the Downs bug hunting and making clay insects. In the afternoon the children created their own minibeast pop-up books. 15 children had been booked onto the event but unfortunately three cancelled last minute.

Education sessions and playschemes

- 61 Year 3 Westbury Park pupils joined us for the day to take part in 'Tree-mendous Fun' and 'Hairy Conservationists' sessions.
- 30 Year 3 children from Southville Primary visited us for a day of 'Wildflower Treasure Hunting' and 'Hairy Conservationists' this was **the school's first visit**, and went very well despite spells of exceedingly heavy rain!
- 12 Year 3 6 children from Elmfields came for a 'Fabulous peregrine falcons and food chains' session. The school is for hearing-impaired children and is their second visit to the Downs.
- 29 Year 3 children from Parson's Street joined us for a 'Fabulous peregrine falcons and food chains' session. The class was split into two groups (one visited in the morning, the other in the afternoon).
 The morning group was filmed taking part in the session as part of a Green Capital 2015 'Virtual field trip' project (see publicity section overleaf).
- 60 Year 1 children from Ashley Down infant school took part in both our 'Hairy Conservationists' and 'Wildflower Treasure Hunt' sessions. This was the **first time the school has visited us.**
- A planned trip for 30 Year 1 students from Filton Avenue was unfortunately cancelled, by the school, due to a miscommunication between staff at the school.
- A class of 18 Year 1 children made the journey from Cam Everlands (Gloucestershire), to take part in our 'Butterfly Lifecycle' session. This was the first time the school has visited us. Their visit was thanks to the teacher who had previously worked at a local Bristol school who had been very impressed by visits with her old school.
- Emily e-mailed the autumn school session programme to all of our teacher and school contacts.
- Emily contacted all schools who have visited to ensure that we receive feedback on their session.
- Emily e-mailed all the playschemes again, resulting in another playscheme booking a session. She also called playschemes that had previously visited but not booked this summer; feedback was positive but playschemes had just chosen alternative trips this year.
- Unfortunately, our first playschemes session of the summer with Southville Centre Holiday Playscheme had to be cancelled due to very heavy rain.
- The following week, 14 children from Southville Centre Holiday Playscheme joined us for a 'Nature Detectives' session.
- The same afternoon, 13 children from Oldbury Court After School and Holiday Club also took part in a 'Nature Detectives' session. One little girl exclaimed that it was 'the best trip ever!' One of the

leaders later told a zoo colleague that they had very much enjoyed the session and that Emily was brilliant.

• 12 children from Greenway Out of School Club took part in a 'Hairy Conservationists' session.

Your Downs

- Robin Haward and Martin Collins from FODAG led a soggy guided walk for the five ways to well-being group (Mandy was busy teaching a school group!).
- The extremely hot and humid weather at the beginning of July meant that sadly we had to cancel our second walk for the Heartful dodgers. The nurse who runs the group was concerned that the humid conditions would not be safe for patients recovering from heart attacks and strokes. We do have an autumnal walk planned for October though.
- Robin Haward, Martin Collins, Jack Penrose and Timothy Dowling (from FODAG), Ben Skuse and Mandy met to plan activities for the remainder of the year.
- Mandy has been talking to Helen Warren, the Young Carers Family Support Worker for Bristol. She
 has invited the young carers to come along to the 13th September Portway Sunday event. We are
 planning a picnic followed by a bug hunt in the Gully and the Great Quarry, supported by friendly
 experts from the Bristol Natural History Consortium and the Bristol Naturalists' Society.

Interpretation

- The Shaun the sheep trail was launched this month. Mandy had been asked by the trail's education officer to provide interpretation for one of the Shaun's, called 'Bloomin' Gorge-ous', for the 'Shaun in the City Nature Explorer' booklet (see the attached pdfs of the relevant pages). Bloomin' Gorge-ous was designed by Professor Alice Roberts and is decorated with some of the rare plants of the Avon Gorge. The Nature Explorer booklet can be picked up from the Tourist Information Centre but on the Friday of the week the trail was launched, it was given away free in the Post (circulation 40,000).
- The Peregrines of the Avon Gorge leaflet was edited and 1,000 copies printed in time for the July peregrine watch weekend.
- We took two boxes of the Discover the wildlife of the Avon Gorge and Downs leaflets, events programmes and a selection of our nature trail leaflets to the Tourist Information Centre.

Publicity

- The Parson's Street school peregrine session was filmed as part of a Green Capital 'Virtual field trip'
 project. Mandy was also interviewed after the session. The Bristol Green Capital 2015 education
 officer had commissioned the film which will comprise of short films about all of the GC themes;
 nature; transport; energy use etc. The film will be launched at the end of the Green Capital year and
 it is intended that schools will use it to get ideas of trips and activities that they can do with their
 pupils.
- Bristol Magazine were kind enough to list many of our July events (see attached pdfs).
- Mandy wrote an article about the Avon Gorge and Downs for the St Mary's Messenger, a magazine which is deliverd to every home in Stoke Bishop.
- Emily sent regular posts to Facebook and Twitter, with updates and photos of what we've been
 doing. Popular posts this month included news of the Bloomin' Gorge-ous Shaun in the City and
 photos from our Moth Magic event. Due to the upcoming Green Treasure Hunt as part of the Green
 Capital Arts programme, the Avon Gorge and Downs Wildlife Project has been regularly tagged and
 re-tweeted on Twitter, and we have passed the 200 followers mark.
- Julia produced posters for our 'Family animal sing-along' which were distributed as usual, as well as being given to attendees at both Music with mummy and our children's events.
- By the end of the month we reached a milestone of 500 likes on Facebook.

Volunteers and work experience students

• During July, five volunteers and one work experience student gave 172.5 hours of their time. This includes, Julia (our EVS volunteer arranged through Change Agents UK) who contributed 90 hours of her time. She was a fantastic help supporting school visits; preparing resources for our first two children's holiday events; helping with admin tasks; and preparing posters for events.

Other

- Mandy attended Downs Committee.
- Mandy gave a short presentation to the 'Britain in Bloom' judges who were considering Clifton Village for a prize. The co-ordinator late wrote, "It was lovely to meet you yesterday. Thank you so much for your most interesting and informative presentation about the Avon Gorge and the work carried out. The judges

were really impressed with all that they saw and heard throughout the judging and clearly enjoyed the afternoon." Best wishes. Rosie Joseland BID Co-ordinator

- Mandy attended a presentation by Jenny Brookes (Bristol City Council's education team) about the new curriculum.
- The giant bug sculptures that the Clifton College children created for the Festival of Nature have now gone on display, in Bug World, in the Zoo.

3rd August 2015

Dept: Neighbourhoods Date of Assessment: 22 April 2015 Assessed by: Emma Parker

Section: Estates, The Downs. Review dates (max 24 months) date one- date two-

Background Information (See Photograph Page 2)

The Observatory and its surrounding area, in Clifton Down, offer an iconic view of the Suspension Bridge and Avon Gorge. The site has been linked with a small number of deliberate fall incidents. It is essential that the standard of fencing and edge protection meets the requirements of Health & Safety legislation.

In this assessment of risk consideration has been given to protecting the quality of the views afforded from this area whilst ensuring an effective method of preventing all accidental falls. It is not possible to prevent all deliberate falls however it is recognised that maintaining good standards of edge protection and modifying current fencing to make climbing more difficult is a factor involved with prevention.

What is the Task/Activity or Workplace Environment You Are Assessing?	What Hazards Are Present or May Be Generated?	Who is affected or exposed to hazards?	What is the Potential Severity of Harm (Risk Rating Matrix Table 1)?	What Precautions are Already in Place to Either Eliminate or Reduce The Risk of an Accident Happening (Existing Controls)?	What is the Likelihood of harm occurring? (Risk Rating Matrix Table 1)?	What is The Risk Rating (See Note Below & Risk Rating Matrix Table 2)
Clifton Down Observatory area perimeter	Fall from height	Public Staff	Fatal/Major	Fencing is of an Estate/Horizontal rail type and is, in most locations approximately 900mm height. On some of the railings a facing of chain link or wire mesh has been fixed to discourage members of the public from standing on the lower rails to obtain a better view. In addition to the horizontal railing a dense barrier of vegetation (depth of 800-1000mm) exists along most of the gorge boundary side.	Possible	High
	Sharp edges of fencing material	Public Staff	Minor	Chain link fencing has been fixed on inner face of the horizontal railings – sharp edges exist in a number of locations.	Possible	Low
	Falling Rock	Public Staff	Fatal/Major	Rock faces are inspected by a specialist engineering company. This is annually in the case of the rock face behind the childrens play park. The rock faces under the gorge viewing boundary are inspected to a programme as recommended by the specialist engineering company.	Improbable	Medium
					1	

Dept: Neighbourhoods Date of Assessment: 22 April 2015 Assessed by: Emma Parker

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	Section 2 - ACTION PLAN			
What is the Hazard You Need to Control ?	What Additional Precautions do You Need to Either Eliminate the Risks or to Reduce the Risk to: at Least the MEDIUM RISK RATING or Ideally the LOW RISK RATING.	Who is Responsible For Implementing These Controls?	When Are These Controls to be Implemented (Date)?	When Were These Controls Implemented (Date)?
Fall from Height	All fencing, along the gorge boundary side, must be a minimum of 950mm in height, currently a few points measure between 600 - 800mm. Where the additional barrier of vegetation is not in place the height of the barrier should be 1100mm. Use of Perspex type materials or sensitivity to preserving views must be considered.	Estates Management	April 2016	
	Where the horizontal railings are not faced with chain link or 50mm gauge mesh, this must be put in place. 50mm rigid mesh gauge provides the safest cover to avoid sharp edges & prevent children from climbing. Warning signs around the perimeter of the site must be reinstated approx. 2 per side/edge - pictorial representation (red triangle & black image) caution, fall from height.			
	Additional signage at the point at which, over a number of decades, visitors have been sliding on a rock face - Risk Of collision injury pictogram, Rocks at base. Fencing & Signage should be inspected regularly and inspections recorded.			
Sharp Edges	Rigid wire grid facing for the horizontal railings to be used in preference to chain link fence. Where chain link is used it should be checked and sharp edges removed.	Estates Management	April 2016	
Falling Rock	Add the frequency of rock face inspections into this document.	Estates management	September 2015	

RISK RATING MATRIX

(Notes To Aid Completion Of The Risk Assessment Format)

Table 1

Potential Severity of Harm	Meaning	Likelihood of Harm	Meaning
Fatal/Major Injury	Death, major injuries or ill health causing long-term disability/absence from work.	High Likelihood Possible	Occurs repeatedly / event only to be expected
Serious Injury	Injuries or ill health causing short-term disability/absence from work (over three days)	Improbable	Moderate chance/could occur sometimes So unlikely that probability is close to zero
Minor Injury	Injuries or ill health causing no significant long-term effects and no significant absence from work		30 unlikely that probability is close to zero

Table 2

Risk Rating - Degree of Injury by Likelihood/Probability				
High Likelihood Possible Improbable				
Fatal/Major Injury	Very High Risk	High Risk	Medium Risk	
Serious Injury	High Risk	Medium Risk	Low Risk	
Minor Injury	Medium Risk	Low Risk	No Significant Risk	

Table 3

	Action Required : Key To Ranking			
High or Very High Risk STOP ACTIVITY! Action MUST be taken as soon as possible to reduce the risks and before activity is allowed to continue.				
Medium Risk	Implement all additional precautions that are not unreasonably costly or troublesome.			
Low Risk	Implement any additional precautions that are not unreasonably costly or troublesome.			
No Significant Risk	The risk is no more than is to be encountered in normal every day life.			

Dept: Estates Date of Assessment: 18/3/15 Assessed by: Emma Parker & Andrew Gordon DRAFT

Section: Review dates (max 24 months) date one- date two-

Background Information

Data shows approximately 5000 people per year commit suicide throughout the UK, of these, approximately 15 per year take place in Bristol (by deliberate fall). Studies demonstrate, of the suicides in Bristol as a whole, just less than 50% took place in the area closely related to The Clifton Suspension Bridge. There is no evidence to suggest there is any elevated instance of suicide around the wider Avon Gorge area.

SECTION 1

What is the Task/Activity or Workplace Environment You Are Assessing?	What Hazards Are Present or May Be Generated?	Who is affected or exposed to hazards?	What is the Potential Severity of Harm (Risk Rating Matrix Table 1)?	What Precautions are Already in Place to Either Eliminate or Reduce The Risk of an Accident Happening (Existing Controls)?	What is the Likelihood of harm occurring? (Risk Rating Matrix Table 1)?	What is The Risk Rating (See Note Below & Risk Rating Matrix Table 2)
Falls From Avon Gorge – Sea Wall & Adjacent Areas	Accidental Falls	Members of the Public BCC Staff Contractors or Volunteers working on behalf of BCC	Fatal	Sea Wall Fencing comprising Stone wall of approx. 680mm height with metal railing securely fixed into the top of the stone wall. The height of the railing is approximately 900mm. There is a gap of approximately 120mm between the wall & the railing. The overall height of the railing is approx. 1.7m. In the area of the Goats on the gorge, the protective wall & railing combination ends and there is some wire and post fencing in place to contain the goats.	Possible	High
				Public are encouraged to approach the gorge and the goat compound, good quality information signs inform public of the presence of goats and diverse flora & fauna in this area. There is a small section of the information board warning of cliff edges and steep slopes (Less than 10cm x 10cm). A warning sign on the end of the Sea Wall is no longer clearly legible. There is a Flower Tribute attached to the wire fence compound sometimes associated with sites of a death. This would need to be verified however I didn't want to ignore it as a potential relevant factor.		

Dept: Estates Date of Assessment :18/3/15 Assessed by : Emma Parker & Andrew Gordon DRAFT

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SECTION 1

	Deliberate Falls - Suicide	Individuals attempting suicide. Public if witness to attempt.	Fatal	Control Measures As Above.	Improbable (Sea Wall and surrounding area, based on available data)	Medium
alls in the area of eregrine Watch and ong the gorge to airyland	Accidental Falls	Members of the Public BCC Staff Contractors or Volunteers working on behalf of BCC	Fatal	Some Signage fixed to protective railing warning "DANGER Keep Out Cliff Edge". Some signs are faded and defaced. Protective railing varies in height as ground level varies – between 800mm minimum and 1100mm. Chain link fence has been used to face the protective railing. This is, in some places, in a poor condition. A dense barrier of hawthorn/gorse/other woody shrubs exist along most of this stretch of the gorge offering additional protection from fall.	Improbable	Medium
	Deliberate Falls - Suicide		Fatal	Control Measures as Above	Improbable	Medium

Dept: Estates Date of Assessment :18/3/15 Assessed by : Emma Parker & Andrew Gordon DRAFT

Section: Review dates (max 24 months) date one- date two-

Background Information

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SECTION 1

NOTE: If the risk rating is either High, Very High, Medium or Low proceed to section 2. If the risk rating is No Significant Risk no further action is required.

	Section 2 - ACTION PLAN			
What is the Hazard You Need to Control ?	What Additional Precautions do You Need to Either Eliminate the Risks or to Reduce the Risk to: at Least the MEDIUM RISK RATING or Ideally the LOW RISK RATING.	Who is Responsible For Implementing These Controls?	When Are These Controls to be Implemented (Date)?	When Were These Controls Implemented (Date)?
Accidental Falls - Sea Walls and adjacent area	Railing behind toilet, section missing requires replacement. Additionally horizontal bar railing are not the most suitable as it linked with encouraging members of the public including children to use them as rungs to climb. These are sited on top of a 1.3M wall and in a much less appealing area for viewing the gorge. Consider the option of facing the railings with a small gauge heavy duty mesh.			
	Main Sea Wall Wall/Railing combination, approx. height 1.6-1.9m offers a substantial and effective barrier to prevent accidental falls. It may however be worth considering the 120mm gap between railing and wall. The thinking behind this is that it is commonly used by members of public to stand on the wall and obtain a better view of the Bridge & Gorge. The height of the railing alone gives a remaining protection of 1020mm which falls between the 950mm HSE standard for workplace H&S and 1100mm standard for public buildings. I am satisfied that this a low risk however it should be considered.			
	Current building regulations and European Standards state avoiding limiting gaps to 100mm to prevent entrapment of a childs head - this again is unlikely although possible. This would not lead to a direct fall although parent or carers may take risky action in trying to free a child.			
	I am concerned the area of the goat enclosure is not adequately protected and the nature/extent of the hazard is not made clear enough to members of the public. Public may be unaware of the dangers of cliff edges and may be encourage to enter an area, potentially with small children, unaware of the dangers.			
	An effective barrier is needed to prevent easy access to the danger side of the Sea Wall to span the space between the Sea Wall and the Wire & Post enclosure. This is a significant risk as the area is adjacent to a clear safe area - public will assume they are still safe. Signage should be sensitively but clearly improved to highlight the dangers in this area.			
	The steps approaching the goat area are also steep and potentially difficult to negotiate for members of the public in varying states of physical ability.			

	Section 2 - ACTION PLAN		
Suicide Risk - Sea Walls and the adjacent area.	There is no evidence of an increased incidence of suicide attempts in the Sea Wall and adjacent areas. The above considerations will have an implication on prevention of Suicide as well as prevention of Accidental Falls. It is harder to put in place measures to prevent deliberate falls and must be balanced with how effective they can hope to be when the site is not one with an elevated number of suicide attempts taking place. It is however essential to introduce the measures related to the Goat compound area as outlined above.		
Accidental falls from Avon Gorge – Peregrine Watch to Fairyland.	Where gaps in the dense thorn hedge exist use signage to obscure the gap partially and clearly warn "KEEP OUT" "DANGER CLIFF EDGE - RISK OF FALL" any warning text should be accompanied by a pictogram. Consider "KEEP OUT" or "DO NOT CLIMB FENCE" At the area of Peregrine Watch, where the barrier height is approx. 900mm, an increase in height is recommended to 1100mm - in a style which is in keeping with the surroundings. This will not obsure or prevent the watching of wildlife in this area. Where chain link fencing is damage or missing, it is recommended to be replaced with a rigid stainless or coated or galvanised mesh (50mm).	WARNING Cliff edge Risk of falling Keep away	
Suicide Risk – Peregrine Watch to Fairyland	There is no evidence of an increased incidence of suicide attempts in this area. The above considerations will have an implication on prevention of Suicide as well as prevention of Accidental Falls.		

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RISK RATING MATRIX

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