



Parks and Estates

A Management Plan for

Troopers Hill Local Nature

Reserve

2012—2017

A Management Plan for Troopers Hill Local Nature Reserve

Contents

Acknowledgements	3	4 Community Use	24	6 The Five Year Work Plan	33
Location Plan	4	4.1 Visitor Facilities	24	6.1 Compartments	33
1 Introduction	5	4.2 Consultation	24	6.2 Table of Aims and Objectives	37
1.1 Reasons for Producing the Management Plan	5	4.3 Community Groups and Other Interested Organisations	26	7 Monitoring and Review	46
1.2 Purpose of the Plan	5	4.4 Access	26	Appendices	47
1.3 Process Used to Produce the Plan	6	4.5 Informal Recreation	27	Appendix 1 - Local and National Policies	47
1.4 Life of the Plan	7	4.6 Events	27	Appendix 2 - Environmental Register	51
1.5 Vision and Themes	7	4.7 Children and Young People	28	Appendix 3 - Approved Pesticides	54
2 Policy Context	8	4.8 Educational Use	28	Appendix 4 - Environmental Policy and EMAS	55
2.1 The Corporate Plan	8	5 Current Management	29	Appendix 5 - Achievements Since 2007	58
2.2 Bristol Strategic Context	10	5.1 People with Responsibilities for Troopers Hill	29		
2.3 The Green Flag Award	10	5.2 Contractors	29		
3 Site Description	11	5.3 Specifications	29		
3.1 The Name of the Site	11	5.4 Resources	29		
3.2 Location and Area	11	5.5 Standards	31		
3.3 Ownership	11	5.6 Interpretation and Promotion	31		
3.4 Site Description	11	5.7 National Organisations	31		
3.5 A Short History of the Site	11	5.8 Bristol Parks Forum	31		
3.6 Heritage Values	15	5.9 Sustainability	32		
3.7 Natural Heritage	15	5.10 Risk Assessment	32		
3.8 Cultural Heritage	21				
3.9 Built Heritage	22				
3.10 Legal Agreement	23				

A Management Plan for Troopers Hill Local Nature Reserve

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A Management Plan for Troopers Hill Local Nature Reserve



Bristol City Council
Neighbourhoods

Troopers Hill Nature Reserve
Location Plan

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A Management Plan for Troopers Hill Local Nature Reserve

1 Introduction

1.1 The Reason for Producing a Management Plan

Troopers Hill has had a management plan since 1992 and it has been revised periodically to remain current. In 2006 Bristol City Council adopted a template for future management plans for parks and green spaces based on guidance from the Commission for Architecture, Buildings and Environment (CABE Space). It was also agreed to apply for three Green Flag Awards in 2007 and Troopers Hill was chosen as one of those sites. The existing plan was updated to accommodate both the council's new template for management plans and to more fully address the Green Flag criteria. In line with Green Flag guidance this plan was reviewed and updated in January 2012 and will be reviewed again in 2017.

1.2 The Purpose of The Plan

Troopers Hill forms part of Bristol's Local Nature Reserves (LNR) network. There are now 8 existing LNRs in Bristol and three additional sites are due to be designated in the near future. Therefore it is important to ensure that the site is managed so that it complies with the criteria that Natural England set out as being necessary and definitive for such designation. See section 2.2.1.

Therefore the plan will:

- Assist Bristol City Council to look at the long-term management of the site by setting policies and management priorities.
- Provide continuity by providing a stable business plan when personnel change (staff, management and committee members retire or move on).
- Enable the council to identify significant projects that are presently beyond their financial resources so that additional capital and revenue funding can be sought, possibly from outside organisations.
- Provide sound aims with which to approach other organisations and council departments with a view to working together to achieve mutual objectives.
- Allow parks officers to prepare a rolling 5-year work plan that will be reviewed annually to manage the site in the medium term.
- Enable the Parks and Estates Service and The Friends of Troopers Hill to agree ongoing maintenance work to be carried out by Parks and Estates and volunteers.



A family event on Troopers Hill

Greg Mort

- Inform all interested user groups and individuals about the long-term future of Troopers Hill and explain to them both the daily maintenance regime and the reasons behind any major changes.

Other useful advantages include:

- Everyone - i.e. Bristol City Council, contractors, community groups, outside institutions - can work together to the same ends.
- Consultation with service users gives 'validity' to decision making.
- Provides open and 'transparent' decision-making.

A Management Plan for Troopers Hill Local Nature Reserve

- It will help to address and hopefully resolve conflict created by different demands.
- Identify investment that needs to be made in the site.
- Enable Troopers Hill to retain achieve Green Flag Award status.

1.3 The Process Used to Produce The Plan

March 1992	The first Troopers Hill Management Plan was produced by Land Mark consultants for Bristol Development Corporation.
August 1994	A photographic monitoring programme was established in 1994 with the aim of assessing ecological changes at Troopers Hill over a period of time. Photographs are taken from 35 fixed points on the site every five years in August, and a report on the findings is produced. See 7.2.9.3
June 1995	Bristol City Council declared Troopers Hill as a Local Nature Reserve.
March 1999	A new Management Plan was produced for Bristol City Council by Wessex Ecological Consultancy.
April 2004	A Management and Action Plan for Troopers Hill was produced by the newly formed Friends of Troopers Hill, in partnership with Bristol City Council.
April 2005 - 2006	Updates and reports produced by the Friends of Troopers Hill.
Summer 2006	The council adopted a format for future management plans for parks and green spaces based on guidance from the Commission for Architecture, Buildings and Environment (CABE Space). It was also agreed to apply for three green flags in 2007 and Troopers Hill was chosen as one of those sites.
November 2006 to January 2007	The existing management plan for Troopers Hill was revised in line with other parks site management plans. The Friends Of Troopers Hill worked closely with the city council during the whole of this process and provided much of the research and information that has been included.
November 2011 - January 2012	Review and update 2007 Management Plan.

A Management Plan for Troopers Hill Local Nature Reserve

1.4 The Life of The Plan

The plan is to inform policy making with a view of over 50 years. It contains a 5-year work plan that will be reviewed annually as part of the process of creating an annual action plan. This is because it identifies a number of longer-term proposals that cannot be implemented until financial resources have been identified. It will also make it more responsive to for example changes in wildlife populations.

The whole document will be reviewed in 5 years time (from 1st April 20172). See section 8.0.

1.5 Vision and Aims

Troopers Hill is a popular and well used open space, highly valued by the residents of east Bristol. It is also recognised as the most important habitats in Bristol for invertebrates, fungi and lichens, by experts in all three fields. It is used as a survey site by Bristol University and is visited by naturalist, industrial history and school groups.

1.5.1 The Vision for Troopers Hill

The vision for Troopers Hill is to enhance the use of the site for recreation by the local community while protecting its natural beauty, rich bio-diversity, history and geology.



Troopers Hill in winter

1.5.2 The Aims for Troopers Hill

Overall Aim

1.5.2.1 To ensure that Troopers Hill is maintained as a Local Nature Reserve, of benefit to both wildlife and people.

Site Aims

1.5.2.2 To conserve and where possible enhance the extent and quality of acidic grassland and heath habitats, including its associated bare earth for the benefit of species diversity.

1.5.2.3 To ensure that Troopers Hill landscape retains its strong landscape character and remains in good condition.

1.5.2.4 To conserve and where possible enhance the geological features of the site where this does not conflict with important biological interest.

1.5.2.5 To conserve the industrial heritage features.

Community Aims

1.5.2.6 To provide suitable facilities and opportunities for public enjoyment of the site, for present and future generations of Bristolians and visitors to the city, providing that these do not conflict with nature conservation requirements.

1.5.2.7 To provide maximum opportunities for interpretation and encourage educational use.

1.5.2.8 To encourage community involvement in the site, and encourage active involvement in the care and management of the site.

1.5.2.9 To assist organisations or individuals with any scientific research.

1.5.2.10 To ensure that Troopers Hill is safe and accessible to all within the natural constraints of the site.

1.5.2.11 To ensure that antisocial behaviour is controlled and its impacts reduced.

1.5.2.12 To ensure that Troopers Hill is well managed, and well resourced, balancing all the various public uses with the wildlife and heritage value of the site.

A Management Plan for Troopers Hill Local Nature Reserve

2 Policy Context

This section provides some strategic context within which the management plan has been produced and provides an example of how actions and aims within the management plan are both guided by, and relate back, to wider strategies. Bristol City Council is guided by a Corporate Plan, The Bristol Partnership Community Strategy and other key strategic documents. National and local strategies provide guidance and help to steer and formulate objectives. These can be seen in Appendix 1.

2.1 The Corporate Plan

The Corporate Plan sets out what, within available resources, Bristol City Council plan to achieve over the next three years towards the delivery of the longer-term vision for the city. The Corporate Plan can be viewed at www.bristol.gov.uk/page/corporate-plan.

2.1.1 Parks and Green Spaces Strategy (2009)

The Parks and Green Space Strategy (P&GSS) outlines a 20-year investment programme for the future provision of green space and the facilities and services that should be provided. Its core vision is to create a city with good quality, attractive, enjoyable and accessible green spaces which meet the diverse needs of all Bristol citizens and visitors. The P&GSS can be viewed at: www.bristol.gov.uk/parkstrategy

The P&GSS has eight objectives:

1. Raise the quality of parks and green spaces.
2. Encourage greater use and enjoyment of Bristol's parks and green spaces by all sectors of the community.
3. Contribute to the wider planning of the urban fabric of the city by providing a range of good quality parks and green spaces, which play a significant role in meeting the needs of balanced and sustainable communities and enhancing the urban landscape, to help make Bristol a green and sustainable city.
4. Protect needed green space from development.
5. Rectify shortage in particular types of green space across the city to ensure all residents have access to formal, informal, natural, sports and children & young people's spaces.
6. Provide a clear basis for beneficial investment in green spaces - identifying those areas of Bristol where investment and improvements in green space are most needed - helping the council 'spend better'.
7. Encourage active and healthy life-styles and promote social inclusion.
8. Encourage community participation in the improvement and management of green spaces.

The following table shows how the policies in the PGSS relate to the Troopers Hill Management Plan.

In addition the Troopers Hill is protected by Bristol Core Strategy Green Infrastructure Policy BCS9.

Troopers Hill receives protection under this policy due to its designation as a Local Nature Reserve (LNR), Site of Nature Conservation Interest (SNCI) and as one of Bristol's Regionally Important Geological and Geomorphological Sites (RIGS). The Policy states that:

The integrity and connectivity of the strategic green infrastructure network will be maintained, protected and enhanced. Opportunities to extend the coverage and connectivity of the existing strategic green infrastructure network should be taken...Open spaces which are important for recreation, leisure and community use, townscape and landscape quality and visual amenity will be protected....National and local sites of biological and geological conservation importance will be protected having regard to the hierarchy of designations and the potential for appropriate mitigation....

A Management Plan for Troopers Hill Local Nature Reserve

Ref	Policy Detail	The Troopers Hill Management Plan Response
NG	Natural Green Space	
NG2	Improve maintenance and management regimes ensuring optimum conditions for wildlife alongside attractive, welcoming and easily accessible places for people to enjoy. Key members of parks staff have been made aware of the value of the site for both ecological and geological conservation. Developing a skilled workforce means that they are more able to manage this sensitive site through the lead of the management plan and the Nature Conservation Officers (NCOs).	Key members of parks staff have been made aware of the value of the site for both ecological and geological conservation. Developing a skilled workforce means that they are more able to manage this sensitive site through the lead of the management plan and the Nature Conservation Officers (NCOs).
NG5	Create new habitats for wildlife to remedy shortfalls in natural green space. Explore potential to create new wildlife habitats at woodland edges that have been cleared in compartments 9, 10 and 11.	Explore potential to create new wildlife habitats at woodland edges that have been cleared in compartments 9, 10 and 11.
LM	Land Management Policies	
LM6	Develop the role of on-site parks staff and dog wardens to tackle problems of dogs' mess and uncontrolled dogs through education, encouragement and enforcement.	Key members of parks staff will receive training to enable them to educate, encourage and as necessary issue fixed penalty notices for uncontrolled dogs and fouling.
LM9	Adopt sustainability targets in the management of Bristol's parks and green spaces.	The management plan seeks to undertake a range of sustainability measures, which form part of the Parks and Estates Environmental Management Audit Scheme (EMAS) commitment.
D	Delivery Policy	
D1	Support participation and involvement in parks and green spaces through consultation, participation in active management of spaces, volunteering, education and outreach activities.	Bristol City Council support and work in partnership with the Friends of Troopers Hill to increase consultation and community participation in a variety of events and activities.
D2	Increase use and enjoyment of spaces through a range of activities including providing health and exercise related opportunities, events, festivals and improved information provision.	The need to provide and increase the use and enjoyment of Troopers Hill has to be carefully balanced with the protection of its natural assets and wildlife. Regular small scale events are held throughout the year on Troopers Hill.

A Management Plan for Troopers Hill Local Nature Reserve

2.1.2 Area Green Space Plans

Troopers Hill is included in the Area Green Space Plan for St George East and West. An area green space plan is both a spatial and investment plan for each Neighbourhood Partnership Area in the city.

Each plan sets the foundations for green space provision for the next 20 years and will outline where different types of facilities and space - such as children's playgrounds, young people's facilities, sports facilities, toilets etc - are to be located. Each plan will apply the standards and policies set out in the Parks and Green Space Strategy and ensure that the significant investment anticipated for green spaces is prioritised with the help of stakeholders and communities.

The Area Green Space Plan for St George East and West can be viewed at www.bristol.gov.uk/agsp.

2.2 Bristol Strategic Context

This management plan complements the wider strategic context of Bristol City Council and its partners. It seeks to achieve the objectives of the strategic framework by translating those policies that are appropriate to the management of Troopers Hill.

The management of Troopers Hill has been governed and guided by local policies, strategies and Local Plan designations. These are listed in Appendix 1 along with regional and national policies that have guided the development of the Troopers Hill Management Plan.

2.2.1 Local Nature Reserves (LNRs)

Bristol City Council officially declared Troopers Hill as a Local Nature Reserve on 22nd June 1995, under the 1949 National Parks and Access to the Countryside Act. The site was one of three LNRs declared at that time, all of which were selected with the guidance and approval of English Nature (now Natural England). These sites became Bristol's first LNRs and were selected on the basis of their high nature conservation value, and the fact that each site supported a contrasting range of habitats and species. The importance of public enjoyment of nature and education were also crucial factors in the declaration of the LNRs. The cultural and historical importance of Troopers Hill was highlighted at the time of the site's declaration as an LNR.

Bristol's Parks and Green Space Strategy outlines Bristol City Council's aim to declare a network of up to sixteen LNRs in order to meet Natural England's recommended national standard. The Strategy also details the policy to maintain LNRs to a high standard and to ensure that these key wildlife sites achieve their potential in terms of community involvement and environmental education.

2.2.2 Designations

- Local Nature Reserve (LNR)
- Site of Nature Conservation Interest (SNCI)
- Public Rights of Way (PROW)
- Conservation Area
- Listed buildings / structures (2)
- Regionally Important Geological and Geomorphological Site (RIGS)

2.3 The Green Flag Award

The Green Flag Award scheme is a measure of the quality of the provision and management of parks and green spaces. It is an annual award that is administered by The Civic Trust. Applications are made in January when the management plan for the site is submitted for evaluation. If the management plan gains sufficient marks then an assessment of the site is made by (usually) two independent judges who evaluate the site using the following criteria:

- A welcoming place;
- Healthy, safe and secure;
- Well-maintained and clean;
- Sustainability;
- Conservation and heritage;
- Community involvement;
- Marketing;
- Management.

The prestigious Green Flag Award was awarded to Troopers Hill in 2007 and has been retained in subsequent years.



The Friends Of Troopers Hill celebrating five years of Green Flag Awards

A Management Plan for Troopers Hill Local Nature Reserve

3 Site Description

3.1 The Name of the Site

Troopers Hill Local Nature Reserve.

3.2 Location and Area

Grid reference ST628731

Area 8.4 Ha (21 acres)

See Location Plan on Page 6.

3.3 Ownership

The whole of the site is owned by Bristol City Council.

3.4 Site Description

Troopers Hill is a hillside facing south and west, providing spectacular views across the city and towards The Mendips. The top is an uneven plateau bounded to the north by an allotment site. The site is roughly triangular in shape and is bounded to the south-east, by Troopers Hill Road. This boundary is a 4 rail wooden fence at the bottom of the slope. To the south-west it is bounded by Crews Hole Road and to the west it is contiguous with Crews Hole woodland, which is also owned by Bristol City Council. To the north east, part of the boundary runs along the small cul-de-sac of Greendown and part is with 'The Farm' allotment site which is managed by Bristol East Allotments Association. The site has been extensively mined for coal, fire clay and quarried for

pennant sandstone in the past. It is uneven and very steep in places, with mainly very poor soils. There is bare rock and a little erosion of spoil in places. Access to the northern most entrance is via Troopers Hill Field which is an adjacent flat recreation area also owned and managed by Bristol City Council. See Location Plan on page 4.

The flora of the site is very interesting. The top of the ridge and tops of the spoil heaps are generally clothed with fine grasses and mosses. There is occasional ling and heather in places. It is difficult to decide if this is remnants of wider areas of heath or new heath colonising the grass. The tops of the slopes have heath, sometimes with broom or gorse. Lower down is often bramble with bracken which diffuses into hawthorn and woodland trees at the bottom of the slopes and especially around the boundaries of the site. There are five pedestrian gates into the area and two gates for working vehicles, one on Greendown, the other on Malvern Road providing access via a track over Troopers Hill Field. There is an extensive network of paths some of which are maintained and some are "desire lines". There are two listed monuments (both are redundant chimney stacks from previous industrial work on site). There are no facilities other than benches and dog waste bins that have also been provided in recognition of the extensive use made of the hill by dog walkers.

Neither of the adjacent Bristol City Council owned sites (Troopers Hill Field and Crews Hole Woodland) are within the scope of this management plan. However, both are managed so as to provide complementary facilities and experiences to visitors. In particular children's play equipment and five a-side goal posts are provided in The Field. These would not be appropriate on the Nature Reserve. Likewise the Field has two litter bins. The woodland provides footpaths that have a very different feel to the open heathland of the hill. The track across the Field also provides a level access to the top of the hill.

3.5 A Short History of The Site

Note that this abbreviated version was taken from a much more detailed account that was written by Rob Acton-Campbell of the Friends of Troopers Hill. The full version is available on The Friends web site www.troopers-hill.org.uk.

3.5.1 Troopers Hill in the Seventeenth Century

Harris Hill

The area that is now known as Troopers Hill is on the edge of Kingswood Forest or Chase overlooking the river Avon. A map dated 1610 shows the hill as 'Harris Hill' and a later map of 1672 shows 'Harris Hill Lands'.

A Management Plan for Troopers Hill Local Nature Reserve

The 1610 map shows a single tree on Harris Hill. It is not clear whether the area was tree covered at that time, though it may have been.

Civil War

Local tradition has it that the Parliamentary army, under the command of Sir Thomas Fairfax, camped on Troopers Hill prior to the siege of Bristol in 1645. It has also been suggested that the ditch between the hill and the allotments was dug at this time as a defensive earthworks.

Baptists

A reference to the area in the seventeenth century is made in *“The Records of a Church of Christ in Bristol 1640 to 1687”*. This is the story of the struggles of the Baptists in Bristol against persecution. In the record for August and September 1682 it refers to preaching on the woodland slope in the area of Troopers’ Hill’. While it is not known exactly where this gallery was, this account does indicate that the slopes on the side of the Avon Valley were woodland at that time.

3.5.2 Eighteenth Century

Copper Smelting

In the eighteenth century copper smelting was established in the area. Copper ore was brought by boat, mainly from Cornwall and north Devon and coal was sourced locally. The copper produced was mostly used with calamine (zinc ore) from the Mendips in the manufacture of brass at Baptist Mills and other sites in Bristol.

Troopers Hill Chimney

It is not known exactly when the chimney was built. However there is evidence to suggest that it originates from the 1790s and that it was built for a copper works. It is certain that the chimney was built before 1826, since it is shown in a drawing from this date of the view from Arnos Court commissioned by G.W. Braikenridge.

The smelting of both copper and lead in the Avon Valley throughout the eighteenth century may have had an effect on the natural environment of the hill. Both produce smoke laden with sulphur, which may have increased the acidity of the soil in the surrounding area. The chimney is now a Grade II listed structure.

3.5.3 Early Nineteenth Century (1800 – 1840)

Coal Mining

Copper and lead smelting continued in Crews Hole on a much smaller scale during the early years of the nineteenth century than it did in the eighteenth century. On Troopers Hill itself there was some quarrying of pennant sandstone during this period, but the most significant development was the opening of Troopers Hill Pit.

The chimney or stack that still stands at the junction of Troopers Hill Road and Crews Hole Road is all that remains of this colliery. Originally the chimney was at the corner of the engine house and parts of the walls of that building can still be seen. The corners of the stack are formed with black copper slag blocks.

This structure is also Grade II listed. The colliery, which was also known as Crews Hole Pit, was mining coal from the early 1800s and closed before 1845.

Scenes in our Parish, by a Country Parson’s Daughter

A unique record of the Crews Hole area in the early nineteenth century has been provided by Elizabeth Emra, the Country Parsons Daughter. ‘Little Elizabeth’, was the author of *“Scenes in our Parish”* the first part of which was published in 1830.

“the barren and quarried hill, with its yellow spots of gorse and broom, and its purple shade of heath, raising itself above the dark heaps of dross on our own side; and then the river, the beautiful, soft flowing river that we have all loved so well, laving as kindly our rough and barren banks, and holding its pure mirror to us, as truly as to the embellished and fertile scenery on the other side; and how clearly we saw every reversed image of the trees in the little copse-wood beyond...” [dross: ‘The scum thrown off from metals in smelting’]

This actually refers to the hill at the top of what is now Strawberry Lane, however the same landscape will undoubtedly have extended all the way along the valley to Troopers Hill at that time.

A Management Plan for Troopers Hill Local Nature Reserve

Troopers Hill – Origin of the Name

1830 marks the first recorded use of the name 'Troopers Hill' - first edition of the Ordnance Survey map of the Bristol area. Prior to this date the hill had been referred to as 'Harris Hill' or 'Truebody's Hill'. 'Truebody's Hill' continued to be used on legal documents until the end of the century. One document has 'The Bodies Hill'; this must have been a transcription error, and demonstrates how easily names can be changed.

Troopers Hill and Truebody's Hill were therefore both used through much of the nineteenth century, with Troopers Hill becoming the accepted name by the end of the century, possibly because of its use on the Ordnance Survey map. It remains in doubt as to whether the name came from the use of the hill by troopers in the civil war or at some other time; or whether it was simply a corruption of Truebody's Hill.

3.5.4 Late Nineteenth Century (1840 – 1900)

Tar Works

1843 saw the start of a new industry adjacent to Troopers Hill that dominated the area until 1981. The Great Western Railway from Bristol to Paddington railway was under construction in 1838 John Bethell patented creosote for the wooden sleepers as a timber preservative and Brunel realised that its use would be a benefit to his new railway. William Butler & Co (Bristol) Ltd gradually took over all the land between Troopers Hill and the River.

Chemical Works

It is not known who purchased the copper works sites and Troopers Hill in 1828 when the Brass Company sold it, but by 1886 all the land, except that owned by Butlers, was owned by the Somers family of Clevedon.

In the area where the new copper works were shown on the 1803 map, the 1886 lease shows Stone & Tinson's Chemical Works. Given the requirement to maintain the chimney and flue mentioned in the lease it seems likely that this works was using the Troopers Hill chimney at that time.

Fireclay Mine and Works

Fireclay is often found alongside coal seams and fireclay mines were often operated in areas where the coal had previously been extracted. The first recorded fireclay mine in Crews Hole was owned and worked in the 1850s. The exact location is unknown but the 1886 lease points to it being at Troopers Hill. The Fireclay Company abandoned the mine in 1908.

Pennant Sandstone Quarrying

The industry that had the most effect on the shape of Troopers Hill as we see it today was the quarrying of pennant sandstone for use in building. Quarrying probably started on a small scale very early on in the history of the area and Elizabeth Emra referred to a large quarry in her book of 1830. i

The 1890 Ordnance Survey map shows a quarry in what is now known as 'the gully'. Comparison of this map with the second edition Ordnance Survey map of 1904 clearly shows that a lot of rock was removed between the dates of the surveys for these two editions. The shape of the hill in 1904 was much as it is now so quarrying must have ceased soon afterwards. The humps between the gully and Troopers Hill Road are tipped waste from this quarry. A quarry is also shown on the south-west of the hill on the 1890 map that has become an 'old quarry' by 1904. The 1890 map also shows an 'old quarry' adjacent to the colliery engine house at the Crews Hole end of Troopers Hill Road.

The exposed sandstone faces in the gully with their great range of colours from red to grey which were left when the quarry closed are now one of the hill's most striking features.

A Management Plan for Troopers Hill Local Nature Reserve

Expansion of Bristol

In 1897 the boundaries of the City and County of Bristol were extended to include St George and therefore Troopers Hill. Prior to this date Troopers Hill had been in the County of Gloucestershire.

Fortunately Troopers Hill and the fields of Troopers Hill Farm to the north both escaped development. The farm was to become allotments on the outbreak of war in 1914. Part of it remains as Bristol East Allotments Association's 'Farm' allotments site, while the area now known as Malvern Road open space was converted from allotments to public open space some time after its purchase by Bristol City Council in 1932.

3.5.5 Early Twentieth Century (1900 – 1956)

White's Bristol Flora

An indication of the range of flora present on Troopers Hill at the beginning of the twentieth century is given in *'The Bristol Flora' by James Walter White, published in 1912*. Troopers Hill is listed in this book as one of the 'minor eminences on the Gloucester side of Bristol'. In the chapter on soils Mr White refers to the change in the vegetation to the east of Bristol due to the pennant sandstone and says "the trees are low in stature, as if stunted by fumes and smoke from collieries and chemical works; and the few remaining untilled portions of old Kingswood Chase are sprinkled with heather, broom, needle-whin, and uncommon forms of bramble".

Troopers Hill For Sale!

With the closure of the fireclay mine, the quarries and finally the chemical works of Stone and Tinson the industrial history of Troopers Hill itself came to an end.

In 1920 and again in June 1924, Troopers Hill was offered for sale by auction. It was said to have 'over 2,000 feet of frontage to public roads and comprises some useful building sites'. The chimney stack and flue are mentioned as well as 'valuable Quarries of Stone and seams of Fireclay'. Potential buyers were obviously not attracted by this sales pitch and no sale was completed until September 1924 when it was purchased by John Ballard of Holly Lodge, St George for £515.

Coal Digging in the General Strike

Outcrops of coal were dug during the 1926 General Strike while the coal mines themselves were closed. It is believed that one of the coal diggers lost his life on the hill at this time. The photograph of coal digging on Troopers Hill in Dave Stephenson, Andy Jones and Dave Cheesley's book on Crews Hole, may date from this time.

Purchase by Bristol City Council as a Public Open Space 14th September 1956

In papers held in Bristol Records Office, is a report from a local paper under the headline of 'Troopers Hill' it states:

"After visiting the area, the visiting sub-committee of Bristol Planning and Public Works Committee decided yesterday that negotiations should take place with the owner of 21 acres of land at Troopers Hill, St George, with a view to acquiring it for public open space purposes."

The sale was completed on the fourteenth of September 1956 for the sum of £600. There is a series of photographs taken in 1953 from Butlers Tar Works that show what the hill looked like at the time of its purchase. They can be seen on the website at www.troopers-hill.org.uk. The hill appeared dramatically different then to the way it does now, with significantly less woodland and more grassland. The quarry is clearly visible and there are only isolated hawthorn bushes.

There was open ground all the way along the side of the Avon Valley from Troopers Hill to Blackswarth Road. The land between Troopers Hill and Lamb Lane was also purchased by Bristol City Council in 1956; the area is now known as Crews Hole Woodland.

A Management Plan for Troopers Hill Local Nature Reserve

3.5.6 Later Twentieth Century (1956 – present)

New Fences and Paths

An information leaflet for Troopers Hill was produced by the Bristol Development Corporation (BDC) and Bristol City Council's Parks Department entitled 'Troopers' Hill ...is wearing out!'. This invited the public to a meeting on Thursday 28th February 1991. The leaflet set out a plan of action for the hill, which included building new fences around the perimeter to prevent access by motorcycles and repairing the footpaths. The fences and paths were constructed during the spring of 1991. The BDC also had a Management Plan drawn up for the site and subsequent to this two interpretation boards were installed.

Troopers Hill Local Nature Reserve

A photographic monitoring of the site was also introduced in 1994 to track the changes in the vegetation; this was undertaken by Wessex Ecological Consultancy. Photographs of the site have been taken from 35 fixed locations every other year since 1994, with the 2006 photographs being taken by Friends of Troopers Hill.

In March 1999 Wessex Ecological Consultancy produced a Management Plan for the site. The plan did not propose any changes to the site's management but did recommend the formation of a Community Action Group.

1995 Fire

In its second summer as an LNR Troopers Hill suffered from a serious grass fire that swept across the hill. Although the short-term effects did not look attractive the long-term effects were probably beneficial in controlling scrub. Fires on Troopers Hill were regular occurrences in the past. There have been no large fires on the site since this date.

3.6 Heritage Values

Heritage inherently implies an inheritance. In relation to Troopers Hill it includes everything that physically exists or is known about the site. It is dealt with under three headings to make the subject easier to deal with. These are 'natural' which is taken as either living or geological. Built, which encompasses all buildings and structures and cultural which includes knowledge of the site and what it tells us about our ancestors and hence ourselves. It is difficult or impossible to exclude 'culture' from the other two headings because Troopers Hill was created and is maintained by human activity and 'culture' is a main driving force of human activity.

3.7 Natural Heritage

Troopers Hill LNR supports the only significant area of Lowland Heathland and Lowland Acidic Grassland in the Bristol area. Both of these habitats are identified under the UK Biodiversity Action Plan (<http://www.ukbap.org.uk>) as UK Priority Habitats.

3.7.1 Acid Heath and Grassland

Acid Heath

Ling *Calluna* and bell heather *Erica cinerea* are both found on site, growing in a matrix of acid grassland. This is considered to be the most important part of the site because it is the only heath within the city boundary.



Ling and bell heather at Troopers Hill



A Management Plan for Troopers Hill Local Nature Reserve

3.7.2 Trees and Scrub

Trees

Whilst there are some sizeable oaks and mature hawthorn, there are no really large mature trees on Troopers Hill. This is probably due to the previous industrial use of the site. It is impossible to know if any trees have ever been planted here. It is assumed that the trees have all arrived through natural regeneration, probably from the well-wooded slopes of the adjacent site, Crews Hole (also owned by Bristol City Council). The main group is Oak, *Quercus robur*, Pedunculate oak *Q. cerris* Turkey oak and *Q. ilex*. Holm oak. There is also a group of birch *Betula sp.* And scattering of willow, *Salix sp.* together with a scattering of willow, *Salix sp.*

Current Management

Native trees are allowed to colonise parts of the boundaries of the site. This forms a useful barrier giving 'protection' to adjoining properties, shelter for birds and screens the adjacent allotment site. 7.2.2.5

Non native species are removed when still young. 7.2.2.1

All seedling trees are removed from areas of heath and grassland. 7.2.2.9

Trees are checked every two years as part of the risk assessment regime.



Scrub

Scrub is the next most important component of Troopers Hill landscape and wildlife interest after heath and acid grassland. It includes all stages from scattered bushes in grassland to closed canopy (the ground is not open to the sky) vegetation, dominated by shrubs and tree saplings, usually less than 5m tall, occasionally with a few scattered trees.

There is an increasing amount of bramble *Rubus*, hawthorn *Crataegus* and bracken *Pteridium* scrub present on Troopers Hill. Some scrub patches have more wildlife value than others – low dense scrub is of maximum value for most invertebrates and nesting birds. In Britain, most of the landscape would be woodland if not for the activities of man. Scrub is a natural progression between grassland to woodland. If it is not managed scrub will eventually develop into woodland. 7.2.2.8

There are benefits of scrub:

- As a landscape feature to frame views or block intrusive views, e.g. the adjacent allotment site.
- To provide variation and relief from the very open grassland landscape.
- To provide habitat for insects, birds and plants that do not inhabit open grassland.
- To provide warmth, shelter, and variations in grassland habitats by acting as a windbreak and casting shade.
- Adds educational interest.

Scrub Management

Scrub is a transitional landscape and will disappear if not managed. The spaces between the woody plants are just as important as the woody plants themselves. This is true from both a landscape and wildlife perspective. If it is not managed, the spaces in between the shrubs disappears first (loss of some herbaceous species) and then the larger woody types (trees) dominate with a consequential loss of some small woody species and herbs. The existing landscape character will be lost and the diversity of 'wild' species will be diminished if scrub is not managed.

Current Management

Heathland type scrub with broom *Cytisus* is managed to maintain the presence of typical species on site. 7.2.2.11

Hawthorn scrub is managed to prevent it from developing into woodland. 7.2.2.8

A Management Plan for Troopers Hill Local Nature Reserve

Bramble is managed to prevent encroachment onto open areas of heath or grassland and paths. 7.2.2.2

Japanese Knotweed is present in places. This is sprayed with herbicide 2-3 times a year. 7.2.2.6

3.7.3 Species

Flora

The most extensive vegetation type on the hill is acidic grassland. Frequent grasses here include common bent (*Agrostis capillaris*), sheep's fescue (*Festuca ovina*) red fescue (*Festuca rubra*) and wavy hair-grass (*Deschampsia flexuosa*). Frequent herbs in these areas include sheep's sorrel (*Rumex acetosella*), mouse-ear hawkweed (*Pilosella officinalis*) and buckshorn plantain (*Plantago coronopus*).

Polytrichum piliferum



Around rock outcrops and, where erosion has occurred the sward is thinner and more broken mosses (including *Polytrichum* spp.) and various *Cladonia* lichens are frequent and higher plant species present include early hair-grass (*Aira praecox*), thyme-leaved sandwort (*Arenaria serpyllifolia*) and small mouse-ear chickweed (*Cerastium semidecandrum*). In several areas scattered plants of ling (*Calluna vulgaris*) and bell heather (*Erica cinerea*) are found in this grassland sward and in places. with higher incidences of heather on the south and west sides of the hill.

In a few areas where the soil is deeper or has been enriched taller grassland is present. This taller grassland is dominated by cocksfoot (*Dactylis glomerata*) and supports a variety of herbs including black knapweed (*Centaurea nigra*) and meadow vetchling (*Lathyrus pratensis*).

Light scrub is scattered across the site and is especially frequent along the west facing slope of the hill. This light scrub is dominated by broom (*Cytisus scoparius*) and bramble (*Rubus fruticosus* agg). Herbaceous plants associated with this scrub include wood sage (*Teucrium scorodonium*), golden rod (*Solidago virgaurea*), imperforate St John's wort (*Hypericum maculatum*) and wild carrot (*Daucus carota*).

Dense scrub grows along the south-east facing slope of the hill along Troopers Hill Road and also along the western edge of the site where it forms the boundary of Crew's Hole woodland. This scrub is dominated by hawthorn (*Crataegus*



Above: wild carrot
Below: golden rod



monogvna) but along the western edge of the site in particular it also includes silver birch (*Betula pendula*), goat willow (*Salix caprea*) and oak species (*Quercus robur*, *Quercus petraea* and the introduced Turkey oak *Quercus cerris* and Holm oak *Quercus ilex*).

A Management Plan for Troopers Hill Local Nature Reserve

Two patches of the non-native Japanese Knotweed (*Fallopia japonica*) are present on the edge of the scrub have been treated in successive years. Only spot treatment is now needed.

The site supports the only substantial area of acidic grassland and heath in Bristol and the best developed surviving example in the former County of Avon. Since acidic soils are uncommon in the area, 25 of the plant species recorded here are included in the list of Notable Plant Species in the former County of Avon. However, they may be much more common in other parts of the country where acidic soils are frequent.

(Notable species are those that are recorded in 150, or fewer, one kilometre squares in the former County of Avon).

Rare/scarce species recorded on site:

- Silvery hair-grass—*Aira caryophylla*
- Early hair-grass—*Aira praecox*
- Thyme-leaved sandwort—*Arenaria serpyllifolia* ssp *leptoclados*
- Ling—*Calluna vulgaris*
- Small mouse-ear chickweed—*Cerastium semidecandrum*
- Heath grass—*Danthonia decumbens*
- Wavy hair-grass—*Deschampsia flexuosa*
- Bell heather—*Erica cinerea*
- Blidlue fleabane—*Erigeron acer*
- Fennel—*Foeniculum vulgare* (probably introduced)
- Heath bedstraw—*Galium saxatile*

- Soft grass—*Holcus mollis*
- Imperforate St John's wort—*Hypericum maculatum*
- Bitter vetch—*Lathyrus linifolius*
- Narrow-leaved everlasting pea—*Lathyrus sylvestris*
- Heath woodrush—*Luzula multiflora*
- Buckshorn plantain—*Plantago coronopus*
- Sessile oak—*Quercus petraea*
- Sheep's sorrel—*Rumex acetosella*
- Golden rod—*Solidago virgaurea*
- Least trefoil—*Trifolium micranthum*
- Common corn salad—*Valerianella locusta*
- Squirrel's tail fescue—*Vulpia bromoides*
- Rats tail fescue—*Vulpia myuros*

Fungi and Lichens

Fungal forays have been carried out in 2005, 2007, 2008, 2010 and 2011, with over 30 species found. A couple of samples have been sent to Kew for further identification as potentially notable species. See www.troopers-hill.org.uk/fungi.htm for a report by Justin Smith on Fungi and Lichens on Troopers Hill and a list of fungi found by the Gloucester Lichen Group as part of a survey undertaken in November 2011.

Fauna

Casual records of birds present have been made during other surveys. Other species of vertebrate recorded on the site include common lizard, slow-worm and badger. The level of badger activity on the site appears to have increased since 1998.



Invertebrates

In 2000 and 2006 and 2007 Bristol City Council commissioned David Gibbs to carry out invertebrate surveys of Troopers Hill. His results were spectacular and it is worth quoting the first paragraph of his 2000 site assessment in full.

“Given the small size and isolation of this site its conservation significance for invertebrates is really quite extraordinary. The only sites so far investigated, which have proved to be better than Troopers Hill are very large more diverse sites, often abutting other good areas in the wider countryside. If we had sufficient information to score all the species according to their rarity Troopers Hill would probably come out as the most important site of its type in the Bristol region. This is not only because of the large number of local rarities including some new county

A Management Plan for Troopers Hill Local Nature Reserve

records but the presence of an endangered species, *Nomada guttulata*, massively increases its importance. Not even the spectacularly productive Dolebury Warren has any species so rare. Records from previous years only serve to confirm these conclusions.”

A total of 137 invertebrate species were identified in 2000, 276 in 2006 and 262 in 2007 (the survey period in 2006 was longer). and 276 were recorded in 2006 (the survey period in 2006 was longer). This represents a surprisingly good record for such a small isolated site. In 2000 13 species found were Nationally Scarce or Red Data Book status. Red Data Book Categories are RDB1 - endangered, RDB2 - vulnerable and RDB3 – rare, while Nationally Scarce species are also sub divided into categories Na & Nb.

The 2006 survey identified 23 species of conservation significance. Five species this year were found which had Red Data Book status. *Nomada guttulata* was not recorded in this survey, although this does not cause major cause for concern, as small populations on isolated sites will inevitably be vulnerable. Red Data Book Categories are RDB1 - endangered, RDB2 - vulnerable and RDB3 – rare, while Nationally Scarce species are also sub divided into categories Na & Nb.

Table 1 Nationally Scarce Aculeate Hymenoptera

Species	Status	Pre-2000	2000	2001-2005	2006	2007
<i>Tiphia minuta</i>	Scarce b	X				
<i>Andrena humilis</i>						X
<i>Aporus unicolor</i>	Scarce a				X	X
<i>Arachnospila minutula</i>	Scarce b				X	
<i>Andrena fulvago</i>						X
<i>Crossocerus distinguendus</i>	Scarce a					X
<i>Nysson trimaculatus</i>	Scarce b	X				
<i>Philanthus triangulum</i>	RDB2		X		X	
<i>Andrena bucephala</i>	Scarce a			X		
<i>Andrena fulvago</i>	Scarce a	X				
<i>Andrena humilis</i>	Scarce b	X	X	X	X	
<i>Andrena labiata</i>	Scarce a	X	X			
<i>Andrena tibialis</i>	Scarce a	X		X		
<i>Andrena trimmerana</i>	Scarce b	X			X	
<i>Bombus rupestris</i>	Scarce b	X				
<i>Hylaeus cornutus</i>	Scarce a					X
<i>Nomada fucata</i>	Scarce a	X	X	X	X	
<i>Microdynerus exilis</i>	Scarce b					X
<i>Nomada guttulata</i>	RDB1		X			
<i>Nomada fucata</i>						X
<i>Nomada integra</i>	Scarce a		X	X	X	X
<i>Nomada lathburiana</i>	RDB3		X	X	X	
<i>Philanthus triangulum</i>						X
<i>Psenulus schencki</i>	Scarce a					X
<i>Sphecodes crassus</i>	Scarce b	X	X			X
<i>Sphecodes reticulatus</i>	Scarce a		X		X	
		10	9	6	9	11

A Management Plan for Troopers Hill Local Nature Reserve

Many of the bees mentioned are mining bees and there are also other more common mining bees on the hill. These can be seen on sunny days in spring and summer in the areas of bare earth on Troopers Hill, these areas of erosion therefore form one of the most important habitats on the hill.

The 2006 survey identified a species of particular interest as it was recorded here for the first time in the Great Britain. This tiny leaf-mining fly, *Phytomyza sedi*, is a European species so far known from France, Germany, Spain and Yugoslavia. Its host plant is stonecrop *Sedum* where it mines the leaves. At Troopers Hill it is associated with the extensive patch of reflexed stonecrop *S. rupestre* in compartment 8. This is not a native species in Britain. It is impossible to know if *P. sedi* is an introduced species associated with garden stonecrops or a previously undetected native.

Prior to David Gibbs' survey, insect recording had concentrated on the site's butterflies. Grayling (*Hipparchia semele*) was first seen on the site in 1985 and was recorded in most subsequent years until 1994 but unfortunately has not been seen since and it is unlikely that it is still present. While the fire may have been the cause of its demise there may have been other factors. Reintroduction has been considered but more information is required before a decision can be made. Other species of grassland butterfly, which have been recorded include common blue (*Polyommatus icarus*), small copper (*Lycaenaphlaeas*) and small heath (*Coenonympha pamphilus*). The

Common blue



only other group of insects for which there are reasonably complete records are grasshoppers and bush-crickets. The grasshoppers present include a large population of mottled grasshopper (*Myreomattix maculatus*).

The two reports from David Gibbs are available to view at the Parks and Estates office, in Brunel House or at www.troopers-hill.org.uk.

Birds

Few bird species have been seen on the grassland areas, although meadow pipits are often present outside the breeding season and buzzards often hunt over the site. The scrub areas support a larger range of birds. Species regularly present include willow warbler,

whitethroat, long-tailed tit, greenfinch, green woodpecker, house sparrows, tawny owl and bullfinch. Full species records are available to view at Brunel House.

Magpie



3.8 Cultural Heritage

The driving forces that created Troopers Hill as a place of public recreation and eventual LNR were industrialisation and the resulting difficult terrain to build on.

Troopers Hill is used for a variety of different activities many of which have health, social or educational benefits. Many of these events and activities are organised by the FoTH and include volunteers working parties, The St George Strollers a newly formed walking for health group, community events such as Music on the Hill and guided walks. Troopers Hill is also used for a number of informal activities such as children's play, family picnics and as a meeting place. In addition Troopers Hill is used by a

A Management Plan for Troopers Hill Local Nature Reserve

number of local schools for different educational activities including as an open air classroom, for workshops and informal learning and to learn about social history.

3.9 Built Heritage

3.9.1 Listed Buildings

There is a small fund held centrally by Bristol City Council to undertake emergency repairs on listed buildings and structures. Provision for their repair and maintenance is made alongside the other buildings in the city that Environment and Leisure Services maintain, prioritising a limited budget based on the outstanding works identified in the individual Asset Management Plan Surveys that the council has undertaken for each building that it is responsible for.

Listed Buildings are protected under the Planning (Listed Buildings and Conservation Areas) Act 1990. Specific Listed Building Consent is required for the demolition of a building or structure or the alteration or extension of the building or structure in any manner that would affect its character.

Works to listed buildings may require listed building consent. Specific Listed Building Consent is required for:

- The demolition of any building or structure in the area requires planning permission
- The alteration or extension of the building or structure in any manner which would affect its character



The listed chimney at Troopers Hill

The need for consent covers the monument itself, any object or structure fixed to it, and any freestanding object or structure that has been in its curtilage since before 1st July 1948. It is an offence under s.9 (1) of the 1990 Act to undertake unauthorised works to a Listed Building.

The current and standard inspection regime for all buildings managed by Environment and Leisure Services, is every 5 years. It has been agreed that the management plan for Troopers Hill will lead to an enhanced inspection regime, every two years.

A Management Plan for Troopers Hill Local Nature Reserve

Listed Buildings

St 629728 Grade II Listed early 19th century – pennant rubble with copper slag block dressing. Square 2-stage chimney previously attached to an engine house, now demolished. The upper stage is set back. Probably a former colliery engine house.

ST629731 Chimney circa 1863. Pennant rubble with brick dressings. A round chimney, has a plinth with a semicircular brick flue arch and a coping of blue engineering bricks. A pronounced lean. Probably part of William Butler's tar works which was founded 1863 to which it was linked by a flue running up the hillside. A prominent landmark.

Note: the date of 1863 may be an error. It seems very likely that the chimney was built in the 1790s, a view supported by Joan Day. It is certain that the chimney was built before 1826, since it is shown in a drawing from this date of the view from Arnos Court commissioned by GW Braikenridge. It was probably used first for copper smelting and then by a chemical works but not by the tar works.

3.9.2 Park Furniture

At present there is a mix of different types and styles of park furniture, i.e. seats, signs, dog mess bins etc. This detracts from any sense of coherent identity for the site. Therefore it is proposed that a survey be carried out of the existing furniture and a decision made as to the materials and manufacturer of all future items. New seats introduced in accordance with the seating plan (see 7.2.6.5) have been of two

designs - one for seats and the other for benches (without backs). Two older seats will be retained while they are serviceable and replaced with the new design if that becomes necessary. New dog waste bins have also been purchased to a standard four leg design, again the one remaining older bin will be replaced with the new style if it becomes necessary.

3.10 Legal Agreements

The only known underground service at Troopers Hill is the Avon Valley sewer in tunnel under the corner of the site Troopers Hill Road and Crews Hole Road.

A Management Plan for Troopers Hill Local Nature Reserve

4 Community Use

4.1 Visitor Facilities

The main function of Troopers Hill is that of a LNR and 'wild, romantic landscape' within the urban area. Therefore, facilities are minimal to ensure that they are in keeping with the function of the site. (See Map 3) The adjacent Troopers Hill Field provides additional facilities.

- Car parking in nearby residential roads is very easy.
- There is a path suitable for disabled access from the main entrance to the best viewing area.
- Interpretation and information boards.
- 4 Dog waste bins (+3 Dog waste bins on adjacent Troopers Hill Field).
- 5 seats, 2 benches (also 3 benches and logs on Troopers Hill Field).
- 1 children's play area (on Troopers Hill Field)
- 2 x five a side goal posts (on Troopers Hill Field).

Litterbins have been considered on the Nature Reserve but not provided to date. Several arguments have been taken into consideration that have prevented their installation including:

- 1) Fire hazard - fires, fortunately small, are occasionally lit on the site. Bins would be another source of materials for a fire that is a hazard to the heath and gorse.
- 2) A desire to minimise 'street furniture' which detracts from the 'natural' appearance of the site.

3) Most users of the site presently are local residents and are happy to take their own rubbish home; those who do not are unlikely to make use of bins in any case.

4) There are no sources of litter on the site (such as cafe's etc). When drinks or snacks are sold at events, sacks are provided for rubbish.

5) Two bins have been provided in Troopers Hill Field.

Since an initial clearing of rubbish by the Friends Group in 2004, levels of litter have been low and litter picks by the Parks and Estates Service and FoTH have been arranged around peak times such as Bonfire Night and half terms. One of the litter bins in Troopers Hill Field has been positioned next to the entrance to the Nature Reserve. This was specifically requested by dog walkers who wished to have a bin to deposit other people's litter they pick up as they walk around the Nature Reserve. The dog walkers donated money to the Friends Group to help fund its installation. An excellent example of the value the community place on the site. (See Asset Plan on page 34). It is intended to install an additional litter bin at entrance F 7.2.6.3.

4.2 Consultation

In 2002 the Parks and Estates Service delivered a questionnaire to 1,000 households in close proximity to Troopers Hill. Around 200 replies were received with many respondents showing an interest in getting more involved in Troopers Hill. As a result, a public meeting was held and this eventually led to the formation of the Friends of Troopers Hill.

The Friends of Troopers Hill ran a major consultation exercise during 2011 as part of their 'Stepping Forward' Project. Over 1,900 printed questionnaires were distributed and they ran several consultation sessions. There was also an online version of the questionnaire. This consultation received 75 online responses and 392 manual responses. Although aimed primarily at the proposed works to improve the steps on the site the questionnaire was framed so as to also gain people's views on the site generally. In view of this Parks and Estates have not carried out any further consultation (other than with the Friends Group) in revising this plan. A full report on the 2011 consultation can be seen at www.troopers-hill.org.uk/steppingforward/ConsultationResults.pdf

Consultation takes place on a regular basis between the Parks and Estates Service and the Friends of Troopers Hill. Officers attend the Friends of Troopers Hill meetings, and the group publicise their activities and news about

A Management Plan for Troopers Hill Local Nature Reserve



Bristol City Council
Neighbourhoods

Troopers Hill Nature Reserve
Asset Plan

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A Management Plan for Troopers Hill Local Nature Reserve

Troopers Hill on their website (www.troopers-hill.org.uk), on Facebook (www.facebook.com/troopershill), their quarterly newsletters and on the on-site noticeboards. The noticeboards are also used by the Parks and Estates Service to inform people about works taking place on site and other issues. The public can also access information from Bristol City Council's website: www.bristol.gov.uk/parks

4.3 Community Groups And Other Interested Organisations

The Friends of Troopers Hill are a very active community group that formally came in to existence with the election of a committee and the adoption of a constitution on 2nd December 2003.

They are committed to the site and are an excellent example of the community accepting the idea of 'ownership' for their own environment taking some of the responsibility for its management.

With the support of the Parks LNR and Estates Officers, The Friends of Troopers Hill has worked to meet the aims set out in its constitution 'to ensure that Troopers Hill Local Nature Reserve is maintained as a nature reserve, of benefit to both wildlife and people'. In August 2011 the Friends Group produced a report of their activities as part of their application to the RHS 'It's Your Neighbourhood' Scheme. The group was assessed at Level 4 'Thriving'. The full report can be seen at www.troopers-hill.org.uk/achievements.pdf

Highlights included:

- Over 2000 hours of volunteer time spent on work parties;
- Raising over £50,000 in grants and donations;
- Organising approximately 85 public events;
- Working with the Parks and Estates Service to produce and implement Management Plans;
- Working with the Parks and Estates Service to improve paths and access;
- Building a membership list of over 350 households;
- Producing and distributing newsletters 4 times a year;
- Launching and Developing a website at www.troopers-hill.org.uk;
- Raising the profile of Troopers Hill within various Bristol based organisations.

4.4 Access

There is free access over the whole site. However, it may from time to time be necessary to restrict access to parts of the site for operational reasons.

There are four entrances to the site on Troopers Hill Rd (C to F), the most used of these is entrance C which is where the Green Flag is flown. There is level access to the top of the hill via Troopers Hill Field to entrance A. There is easy parking on adjacent roads at all entrances. 7.2.10.6.

Disabled Access

A gate suitable for wheelchair access has been provided at Malvern Road and a path suitable for wheelchair access as far as the old chimney was installed in 2007. The path was grant aided by the Yanley and North Somerset Environmental Company, (YANSEC). The grant was applied for by the Friends of Troopers Hill. 7.2.10.3

Roads

There are no roads across the site. However Troopers Hill Road and the cul-de-sac, Greendown, bound it on the southeast side.

Paths

The only properly constructed footpaths are the ones from Troopers Hill Field Malvern Road open space to the ridge, from gate 'A' to 'F', from entrance A to C and parts of the path from gate 'E'. These were provided by the Bristol Development Corporation and maintained by adding loose stone material or the addition of wooden steps on steep slopes to minimise erosion.

The majority of the footpaths on Troopers Hill are narrow, uneven and unsurfaced. They are steep in places. See Map 3. There are also many 'desire' lines across the site.

In November 2011 The Friends of Troopers Hill were awarded a grant of £30,504.89 from the Community Spaces fund towards the cost of improving access for all to Troopers Hill including improvements to the existing paths and steps.

A Management Plan for Troopers Hill Local Nature Reserve

Whilst attempting to improve access to the site this has to be carefully balanced to ensure there is no damage to the existing wildlife habitats and biodiversity of the site. In developing this project the Friends of Troopers Hill wanted to enable as many people as possible to enjoy this unique environment while protecting the ecology and the wild and natural feel of the hill.

An Ecological report was commissioned as part of the bid and this confirmed that the paths should follow their existing routes to avoid damage to sensitive habitats. Without the steps and paths there would be over-trampling and the creation of many more desire lines destroying wildlife habitats. In the medium to long-term doing nothing would have the same detrimental effect as the existing routes become unusable.

Other improvements due to be made as part of this project include the installation of way marking to the woodland paths and improvements to drainage to access points into the adjacent recreational field.

Buses

The nearest bus route is on Air Balloon Road, c. 400 metres away.

Cars/Motor Cycles

There is no access for motorised vehicles onto the site. There is ample parking in the adjacent residential roads.

4.5 Informal Recreation

There is no organised sport on Troopers Hill. The main recreational activity is dog walking for which three dog bins are provided. Walking alone or with friends, jogging, kite flying and picnics are also popular activities along with enjoying the views from the seats and the natural environment.

There are few facilities for these activities; the 'natural feel' of the Troopers Hill is one of its main attractions. There are other sites in the city that provide for organised sport and recreational activities e.g. BMX bikes, or floodlit multi play areas. Ball games can be played on the adjacent site, Troopers Hill Field Malvern Road open space. The field also contains a slide, goal posts and log structures for play activities.

4.6 Events

A wide range of events take place at Troopers Hill each year. A programme of events for the year is put together by The Friends of Troopers Hill in consultation with the Parks and Estates Service. The group then works with Parks and Estates to ensure correct health and safety procedures are followed. Events on Troopers Hill LNR include wildlife walks, open air concerts, storytelling and craft events for children. The Friends Group also organise an annual fun dog show on Troopers Hill Field. Events take place with the following aims:

- To encourage more people to discover Troopers Hill
- To enable people to learn about the natural and cultural heritage of the site
- To encourage more people to become involved in helping to look after Troopers Hill
- To enable people to enjoy being in a natural green space
- To enable people to develop a sense of local community

All events are free of charge, being funded through donations and grants.



An open air music event on Troopers Hill

Guided walks at Troopers Hill are also organised for specialist groups, for example Walking for Health groups, the Barton Hill Local History Group, Bristol Magpies, Bristol Naturalists, Bristol Industrial Archaeological Societies have all had guided walks on the hill. The Friends of

A Management Plan for Troopers Hill Local Nature Reserve

Troopers Hill have also raised a grant to set up a local Walking for Health Group 'The St George Strollers' who regularly use the hill.

Every year an Easter service takes place on Troopers Hill on Good Friday, organised by local churches.

There is a Site User and Access Guide to provide information to any external groups that wish to hold an event on the site www.troopers-hill.org.uk/plan/SiteUserGuide.pdf 7.2.12.8

Photographs and details of past events along with the current programme can be seen at www.troopers-hill.org.uk/events

4.7 Children and Young People

Children's events are frequently organised at Troopers Hill and have included minibeast hunts, storytelling, bird box making and kite making.

4.8 Educational Use

The Troopers Hill events programme enables both children and adults to learn about wildlife and history in an informal and enjoyable way. In 2011 Friends of Troopers Hill held their first 'Forest School', it is hoped to hold more of these in the future. The Friends Group has also helped with visits from a Summerhill Junior School and given presentations at the school in both 2010 and 2011. Three local schools were also involved in tree planting on Troopers Hill Field in January 2011. These followed earlier events such as a major project with Air Balloon

School in 2005. Details of events held for young people are at www.troopers-hill.org.uk/

Work parties on the site also provide people with a chance to learn new skills and develop an understanding of nature conservation management. The Friends of Troopers Hill organise monthly work parties, which are attended by both adults and children. Outside organisations have also taken part in volunteer

work at Troopers Hill, for example, Crime Concern's Youth Inclusion Project, Groundforce (from Barton Hill) and the Ministry of Defence, who ran a team-building day on the site, mending steps. Plant identification workshops took place in 2007, organised by the Friends of Troopers Hill and funded by the Big Lottery's Breathing Places fund.



A bug hunt on the Hill

A Management Plan for Troopers Hill Local Nature Reserve

5 Current Management

5.1 People With Responsibilities For Troopers Hill

The day-to-day management of Troopers Hill rests within the operations section of the Parks and Estates Service. The Parks Grounds Maintenance Manager (GMM) is responsible for all the parks and green spaces in the whole city including delivery of relevant council policies.

The GMM is assisted by the Assistant Grounds Maintenance Manager (AGMM) and two Area Park Managers (APMs). Their role is to assist the GMM to deliver policy, manage all changes and monitor day-to-day maintenance to ensure that there is one standard for high quality ground maintenance across the city. They are responsible for directly managing in-house grounds maintenance services and monitoring externalise grounds maintenance contracts divided into set geographical areas and are the first point of contact for the service users.

The Nature Conservation Officer (NCO) has responsibility for providing ecological advice and promoting Troopers Hill as an important wildlife site in Bristol.

Troopers Hill has a dedicated park keeper and an important part of whose duties is to use his discretion in the level of maintenance carried out on the Hill to ensure that it maintains its natural feel and does not become overly

formalised or manicured. The park keeper is managed by the Area Team Leader (ATL) who in turn reports to the APM. The ATL also deploys members of a mobile grounds team to assist and support the park keeper as required. There are other specialist officers that the Parks Operations Section can call on for advice on subjects such as landscape or children's play.

5.2 Contractors

At present Troopers Hill is managed through an in-house grounds maintenance service. In addition, other contractors may be employed from time to time to carry out specialist works such as e.g. trees, listed buildings, paths or fences etc.

5.3 Specifications

(Copies are available at the Bristol Parks Office, Brunel House)

The present grounds maintenance specifications uses performance or standards based criteria. The role of the APM is to assist the GMM to deliver policy, manage all changes and monitor contracts to ensure quality standards are achieved. The in-house team monitor and report on the success of the operations and the Area Park Manager (APM) also checks the work on site. The in house team and the APM both have responsibilities

for grounds maintenance contracts elsewhere in the city. The checking of the specifications is used to manage the quality and frequency of works carried out on the site. The work on site is inspected and recorded in two ways.

1. Formal inspection sheets are raised by the Quality and Monitoring Coordinator on a monthly basis. These are geographically based and are randomly chosen.

2. The APM and Area Team Leader carry out informal inspections as they attend to other duties on the site. Formal reports sheets are filed and any problems discovered through the informal inspections are also recorded.

5.4 Resources

Existing Expenditure and Resources

Grounds maintenance is presently carried out to a written specification and implemented through an in-house grounds operations team.

Planned Maintenance is work carried out through the in-house grounds maintenance service every year, such as litter-picking, scrub and wildlife management and it amounts to £31,180.51 p.a.

Response Works e.g. vandalism repairs or fly-tipping is dealt with by the APM and ATL.

A Management Plan for Troopers Hill Local Nature Reserve

Other Support

In addition to the APM who has control for the day-to-day site management, there is technical and administrative support e.g. arboriculture, natural environment officers to carry out surveys or consultations provided through the Parks and Estates Service. Support for archaeology, planning etc. is also supplied through council officers.

Income

Additional (new) expenditure and resources

These can be categorised as either financial or as people and their skills.

Financial

Capital expenditure can be sought through:

- Section 106 contributions see 2.3.1
- Grant aid from external bodies.
- The sponsorship of leaflets / notice boards etc.
- Donations of materials e.g. wood for steps or fences.
- Seat or interpretation board donations

Revenue expenditure is more difficult to raise, because it is an ongoing commitment.

However, it is possible to seek it through:

- Annual sponsorship of particular events such as education.
- Grant aid.

People and their Skills

Volunteers are becoming more important to both local government and private institutions as an important resource. There may well be training and health and safety issues but these

are more than offset by the benefits. Examples of where volunteers can assist include:

- The provision of lists of plants and animals identified on particular areas.
- Assistance with counts of plants and animals.
- The provision of guided walks and talks.
- Volunteer Rangers to report on incidents of antisocial behaviour. They don't necessarily have to get involved to be effective. Their presence alone may deter people from being antisocial.
- Working parties e.g. litter picking, scrub control.
- Research into historical facts about buildings or structures or visitor surveys.



A Troopers Hill working party at rest

The Friends of Troopers Hill are engaged in all of the following activities:

- Running work parties to undertake conservation tasks on site.
- Providing an opportunity for local people to get involved in activities on Troopers Hill and to give their views on site management issues.
- Raising the profile of Troopers Hill and attracting more visitors and positive publicity.
- Reporting issues on site to Parks and Estates and the police e.g. Vandalism.
- Running community events.
- Recording and researching the wildlife and history of the site.
- Fund-raising for events and site improvements.

Options

- The new Bristol City Council policy for developers' contributions under Section 106 agreements (known as Supplementary Planning Document 4) could mean that works could be financed from these funds.
- Seek to maximise donations of seats when replacements are required.
- Investigate and monitor the changing situation with grant-funded opportunities.

A Management Plan for Troopers Hill Local Nature Reserve

5.5 Standards

The main measure of standards is carried out through the implementation of the contract documentation, which is available to view at the Parks and Estates Office, Brunel House. The specification details the quality and frequency of work tasks and this is monitored and recorded by the APM teams.

Troopers Hill attained Green Flag Award status in 2007 and this has been retained in subsequent years.

5.6 Interpretation and Promotion

5.6.1 Leaflets

Three site leaflets, covering the wildlife, history and geology of Troopers Hill were produced by The Friends of Troopers Hill, and funded by The Big Lottery Fund in 2007.

5.6.2 Interpretation Panels and Signage

There is one interpretation panel on Troopers Hill by the chimney but this is in need of replacement. An additional interpretation panel is required by the lower chimney. Further funding needs to be sought for these projects see 7.2.7.1. There is a sign from Summerhill Road for pedestrians to Troopers Hill via a footpath and there are signs welcoming visitors to the site at all entrances except the one from the woodlands.



An interpretation panel on Troopers Hill

5.6.3 Displays

The Friends of Troopers Hill have produced two displays: one on the history of the site, and the other on their group's activities. These displays are usually shown at events and, on occasion, at local community centres.

5.6.4 Publicity

Press releases are produced at every opportunity to promote positive action taking place at Troopers Hill as well as events and other initiatives. The Friends of Troopers Hill produce a newsletter 4 times a year, which is sent out to around 300 local households. The Parks and Estates Service WildCity Project produces a newsletter twice a year, which focuses on Bristol's Local Nature Reserves and

advertises the programme of wildlife events taking place.

Other opportunities to promote Troopers Hill are taken wherever possible, for example at the Parks and Estates Service stall at the annual of Festival of Nature.

5.6.5 Web-pages

There is a Troopers Hill page within the Nature Reserves section of the Bristol City Council web site – www.bristol.gov.uk/troopershill parks. Those pages are linked to an excellent web site provided by The Friends of Troopers Hill see www.troopers-hill.org.uk.

5.7 National Organisations

Natural England is responsible for providing advice on LNR declaration and management.

5.8 Bristol Parks Forum

Bristol Parks Forum is a network of individual community groups and organisations that are working to improve parks and green spaces or have an interest in them. It is supported by the Parks and Estates Service but acts independently. It has around 80 members representing many different neighbourhoods and green spaces across Bristol. (The Friends of Troopers Hill are active members). Membership is free.

A Management Plan for Troopers Hill Local Nature Reserve

5.9 Sustainability (Including Pesticides Policy & EMAS)

Environmental Strategy

Bristol City Council is committed to improving the local environment and helping to protect it for the future. We recognise that our wide range of activities and services have positive and negative impacts upon the environment, and that we have a leading role to play in creating a sustainable city. To achieve this goal an Environmental Policy is in place and an environmental management system was implemented in 2006 called EMAS ('Environment Management Audit Scheme'). EMAS is an independently verified system that ensures that significant environmental impacts are monitored and managed, and overall environmental performance is continually improved. The Environment and Leisure Department is EMAS registered, as part of the corporate system.

Most aspects of Troopers Hill come within the remit of EMAS, and are open to external audit. Each Section and Department within the City Council is required to keep their own environmental register of principle environmental legislation; to be aware of the parts of the corporate register that apply; and to know how to keep up to date with new developments. Parks are using the legislation register originally compiled by the Landscape Design team, and will continue to customise this. (7.1.12.6).

The council also subscribes to a quarterly database that is available on the intranet called CEDREC to enable departments to keep up to date with legislation. See Appendix 4 for headline targets of the Environmental Policy and EMAS actions relevant to operations on Troopers Hill.

5.10 Risk Assessments

Risk Assessments are filed at the Parks and Estates Office in Brunel House.

The Parks and Estates Service also has a Health and Safety Support Pack that is used to ensure that all works carried out on site by volunteer groups are carried out safely. Copies available to view at Brunel House. This involves training individuals to carry out risk assessments in advance of the work that are countersigned by the APM and how to give a talk on tool use before every work party starts work. No work should be carried out unless such a trained person is present on site. The Property Services Department checks the condition of all monuments and other structures.

A Management Plan for Troopers Hill Local Nature Reserve

6 A Five-Year Work Plan

The five-year work programme will be subject to change from outside influences, including pressure from site users, from the results of surveys or monitoring and the availability of finance. Therefore it will be reviewed annually so that it remains a five-year programme. Some objectives have been identified as being desirable but they cannot be scheduled at present until finance has been identified. They have all been recorded in Year 10 as >5.

Troopers Hill Field

This area is owned by Bristol City Council. It is not included within the Management Plan and is not part of the area included in the Green Flag application. However, since this site provides the main access route to Troopers Hill LNR its management affects Troopers Hill LNR.

Work Guidelines (affecting Troopers Hill LNR)

- Maintain the main access path from Malvern Road the Field to Troopers Hill LNR such that it can be used by wheelchairs and buggies.
- Maintain gates and fences to prevent access by motorcycles to Malvern Road Troopers Hill Field open space and Troopers Hill Nature Reserve.
- Provide signage at entrances giving directions to Troopers Hill LNR.

Crews Hole Woodland

This adjacent area is also owned by Bristol City Council. Again it is not included within the scope of this Management Plan or the area covered by the Green Flag application.

This area of woodland has developed on an old tip. There has been little management work done here in the past other than keeping the two paths clear.

As part of the Stepping Forward Project waymarking is being provided to the paths in the woodland which form a circular route that includes Troopers Hill LNR. Steps into the woodland from Troopers Hill Field are also being rebuilt.

It is Parks and Estates and Friends of Troopers Hill's intention to improve the management of this area where it can be done without diverting resources from the LNR.

6.1 Compartments

The site has been arbitrarily divided into separate geographical compartments, mainly using the footpaths as the boundaries. This is to make it easier to identify and prioritise the site works. See Compartment Plan on page 48.

Compartment 1

Description

This compartment is the boundary with the allotment site. It is mainly scrub, *Crataegus*, *Quercus*, *Fraxinus*, *Betula*, *Fraxinus* and *Rubus* growing in a ditch all along the boundary. Between the line of scrub and the path there is a wide area of fine (*Festuca*) grassland with some good size anthills and a very few plants of *Erica cinerea*. Along the edge of the path the grass is coarser, possibly due to a richer soil, from path construction.

Work Guidelines

- Manage this compartment as fescue rich grassland within a boundary strip of scrub.
- Retain the scrub along the boundary as a foil against the allotment site.
- Prevent the scrub from maturing and becoming woodland.
- Prevent the scrub from spreading into the grassland.
- Do not damage the anthills.

A Management Plan for Troopers Hill Local Nature Reserve

Compartment 2

Description

This compartment is bounded by the allotments to the north-west and Greendown to the north east. The north-western corner was almost 100% vigorous bramble in winter 2006, management over the last five years has meant that this has been replaced by a mix of grassland and tall herb vegetation. The majority of this compartment is a grassy slope with fine, fescue type grasses at the top being replaced with coarser grasses further down the slope. There are some dicotyledonous plants in the grassland including, Dock *Rumex*, Buttercup *Ranunculus*, Plantain *Plantago*, common nettle *Urtica dioica* and various *Fabaceae*.

The compartment is bounded to the north-east by a steel estate fencing erected in 2009 (see <http://www.troopers-hill.org.uk/yansec08.htm>). Inside this is a hedge planted by the Friends Group in January 2006 composed of hawthorn, blackthorn, rose, holly, field maple and hazel.

Work Guidelines

- Remove bramble scrub and restore the grassland
- Manage this compartment as a flower rich 'meadow'.
- Cultivate the hedge until maturity and then maintain at the height of the existing fence. Identify all the plant species growing in the grassland to help advise on the future maintenance of this compartment.



Bristol City Council
Neighbourhoods
Troopers Hill Nature Reserve
Compartments

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Date: 12/12/2011

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Environmental and Leisure Services
Stone House Phone 0117 922 3719
St George's Road bristol@bristol.gov.uk
Bristol BS1 5UY www.bristol.gov.uk/yansec

A Management Plan for Troopers Hill Local Nature Reserve

Compartment 3

Description

A large area aligned east-west, along the ridge with the prominent chimney set in acid grassland. There is a path for the disabled from gate 'A' along the ridge, ending close to the chimney from where the best views are available. At the far end of this grassland there is a large patch of nettles and willow herb. There is no path as a boundary between this compartment and compartment 4. The boundary is the top of the steep slope. For information about mine shaft subsidence in this area www.troopers-hill.org.uk/MineShaft2010.htm

Work Guidelines

- Manage the plateau as fescue rich acidic grassland.
- Maintain access path and rest area for the disabled.

Compartment 4

Description

Below the plateau / ridge that forms Compartment 3, the ground slopes steeply down into the gully where there is open grassland, heath and invading scrub with bracken. There is some erosion of spoil in the south western part of this compartment.

Work Guidelines

- To maintain the open grassland and acid heath.
- Maintain open rock faces.
- To manage eroded areas for invertebrates.

Compartment 5

Description

An area of spoil or quarrying that forms the southern banks to the gully. At the south western corner there is bare soil and rock where there is erosion. The tops most of the mounds have fine grasses with mosses growing on them with heath on the slopes. There is a little invasion by oak, birch and bracken in places. This compartment has quite a lot of gorse *Ulex europaeus* growing on one rocky outcrop with bramble invading it. There are some isolated patches of scrub, *Cotoneaster*, bramble, hawthorn and ivy *Hedera helix*.

Work Guidelines

- Manage for as much heath and grassland flora as possible.
- Remove competition with the heathland flora.
- Prevent the scrub from maturing into woodland.
- Maintain open rock faces.
- Maintain areas of bare ground for the benefit of invertebrates. Maintain small areas of gorse but prevent its spread into grassland.

Compartment 6

Description

A steep bank with a path along the western boundary. There is a 4 rail wooden fence at the lower, eastern boundary between the site and Troopers Hill Road. A section of this fence was removed in 2010 to allow the bank against the highway to be regraded. Part of this work included planting of hawthorn, hazel, spindle and

rambling rose. Access on to the site is prevented by the density of the scrub and therefore the fence was not replaced.

This compartment includes entrance C which was remodelled to provide better, safer access in 2009. As a road safety measure a bed of native shrubs and plants, retained by tree trunks was built up from the side of the road to prevent pedestrian access close to the junction of Greendown and Troopers Hill Road.

This compartment is composed of a mix of scrub including, Hawthorn *Crataegus*, oak *Quercus*, bramble *Rubus*, bracken *Pteridium*, sycamore *Acer pseudoplatanoides* and nettles.

Work Guidelines

- Maintain as scrub but prevent it from maturing into woodland.
- Cut back scrub from the highway.
- Remove any broken sections of fence, replace only where scrub does not form sufficient barrier.
- Seek funding to replace wooden fence with estate fencing at entrance D.
- Maintain entrance C bed including weeding, mulching and pruning shrubs.

A Management Plan for Troopers Hill Local Nature Reserve

Compartment 7

Description

A continuation of compartment 6, bounding Troopers Hill Road. However, this compartment is much more open and contains a few plants of broom *Cytisus*.

Work Guidelines

- Maintain scrub along the boundary but keep the grassland area as large and open as possible.
- Control the spread of scrub and bracken
- Seek funding to replace wooden fence with estate fencing at entrance E, in the meantime ensure existing wooden fencing is maintained to prevent motorcycle access.
- Consider installation of contractor access gate adjacent to entrance E.

Compartment 8

Description

A complex area with spoil in some parts. The northern most part, to the west of entrance 'E' is a gentle grass bank sloping to the east with abundant Heath-grass *Danthonia decumbens* and a small amount of heath. It is being invaded by sapling oak and bramble in places. There is hawthorn preceded by bracken invading from the base of the slope. The southern part of the compartment is very steep sided spoil or quarrying. The tops of the spoil heaps have heathland plants growing. Moving down the slopes this changes through broom *Cytisus*, to bramble *Rubus* and at the bottom mature hawthorn, *Crataegus* with young

sycamore *Acer pseudoplatanoides*. These species are all invading up the slopes.

Work Guidelines

- Manage as acid grassland, with heath and broom scrub in places.
- Prevent the scrub and woody plants from spreading and competing with heath or maturing into woodland.
- Remove scrub at the top of the slope to prevent it invading heathland.
- Seek funding to replace wooden fence with estate fencing at entrance F (in accordance with design produced in 2008 <http://www.troopers-hill.org.uk/plan/EntranceF.pdf>), in the meantime ensure existing wooden fencing is maintained to prevent motorcycle access.

Compartment 9

Description

This compartment is very similar to compartment 8 at the southern end. It has a steep, west facing bank with hawthorn, bramble and sycamore invading up the slopes to where there is open grassland and broom, *Cytisus*. At the top of the slope there are a large number of bell heather plants. The northern part of this compartment is much more open, but it follows much of the rest of the site in that bramble and scrub is invading from the bottom of the site preceded by a 'band' of broom. There is open grassland close to the top of the area and some mature heath at the very top. There are a few maturing trees (oak) in the gullies.

Work Guidelines

- Manage for as much heath and grassland as possible with scrub at the south and west perimeter of the site.
- Remove competition with the heathland flora.
- Prevent the scrub from maturing into woodland.

Compartment 10

Description

An area of scrub that is tending to woodland with oak, willow, blackthorn, birch, and *Buddleija* in places. Prior to 2007 the scrub was advancing from Crews Hole woodland to the west and encroaching onto grassland and heath on section 9 (at 2 metres a year in places). Management over the past ten years has reduced this and some woodland has been cleared. Crews Hole Woodland is on an area used for tipping in the 1960s & 70s and this extends into this compartment, the edge of the tipping limits the area that could be returned to heath or grassland.

There is also a large colony of Japanese Knotweed *Fallopia* in this compartment but treatment over the last five years has reduced this.

Work Guidelines

- Manage as mainly acid grassland with heath with broom scrub in places
- Prevent the woodland from Crews Hole invading Troopers Hill LNR and cut back along the boundary with compartment 9.
- The edge of the woodland should be kept as far as possible at the edge of the area used

A Management Plan for Troopers Hill Local Nature Reserve

- for tipping.
- Aim to maintain a narrow boundary of broom and birch scrub on the Troopers Hill side of the boundary.
- Prevent further colonisation of this area by coarse scrub and woodland species at the expense of the herbs and grasses
- Continue treatment of Japanese Knotweed until it is eradicated.

Compartment 11

Description

The higher parts of this compartment are open grassland with a little heath (*Erica* and *Calluna*). To the west there is some Japanese Knotweed and an area where encroaching bramble and sycamore woodland from Crews Hole woodland has been cut back.

Management over the last five years has cut back the invading scrub and woodland as far as the tipped area. Much of the Japanese knotweed has been eradicated; the tall herb vegetation that has developed includes some species of interest, such as tansy (*Tanacetum vulgare*) and the area is now of value for invertebrates. The focus now is on maintaining the current woodland boundary and returning as much as possible of the cleared area to heath. Cutting back the woodland has restored views over the City from this area.

Work Guidelines

- Maintain the grassland and heath flora as far as possible.
- The edge of the woodland should be kept as far as possible at the edge of the area used for tipping.

- Maintain a scrub boundary to the woodland and prevent this maturing into woodland.
- Aim to maintain a narrow boundary of broom scrub on the heathland side of the boundary.
- Prevent further colonisation of this area by coarse scrub and woodland species at the expense of the herbs and grasses
- Continue treatment of Japanese Knotweed until it is eradicated.

6.2 Table of Aims & Objectives

Source of funding

- E= Existing resources, e.g. officer wages
- R = Revenue budget (£) as indicated
- C = combination of Capital / Grant

Some of the costs associated with the maintenance of the site are included in the grounds maintenance specification held by BCC. Splitting this cost (£1,968.77) into the spending in each compartment is not a sensible action and so the actions covered by this expenditure are highlighted in the table with a *.

APM = Area Parks Manager

AAPM = Assistant Area Parks Manager

FoTH = Friends Of Troopers Hill

GMM = Grounds Maintenance Manager

EO = Events Officer

MT = Monitoring Team

NCO = Nature Conservation Officer

PO = Projects Officer

PRoWO = Public Rights of Way Officer

ATL = Area Team Leader

AEO = Area Environment Officer

NEO = Natural Environment Officer

CPK = Community Park Keeper

A Management Plan for Troopers Hill Local Nature Reserve

Objective	Comp.	Aims and Objectives	Lead Officer	Year 6 2012/13	Year 7 2013/14	Year 8 2014/15	Year 9 2015/16	Year 10 2016/17	Cost Per Annum £	Funding source
Aim 6.2.2										
To conserve and where possible enhance the extent and quality of acidic grassland and heath habitats, including its associated bare earth for the benefit of species diversity.										
6.2.2.1	ALL	Eradicate holm oak, <i>Quercus ilex</i> , turkey oak, <i>Quercus cerris</i> and Buddleia.	CPK / FoTH	#	#	#	#		£416	R
6.2.2.2	2	Cut back the bramble to retain a 5 metre wide strip close to the boundary to form a security barrier with the allotments and also diversify wildlife habitat on site.	CPK	#	#	#	#		*	R
6.2.2.3	4,5	Remove some patches of invading scrub in the gully and keep the remaining scrub cut back to agreed boundaries.	CPK	#	#	#	#		£832	R
6.2.2.4	5	Prevent spread of gorse and begin cutting on a rotational plan to encourage regeneration, reduce the fire risk and prevent it becoming old and degenerate.	CPK	#	#				£416	R
6.2.2.5	10,11	Retain existing line of woodland on boundary with Crews Hole. Maintain edge of woodland as scrub with trees removed before maturity.	CPK / NEO	#	#	#	>#		£1,560	R
6.2.2.6	10, 11	Spot treat Japanese knotweed as and when it occurs on site.	CPK	#	#	#	#		£3,224	R
6.2.2.7	ALL	Eradicate Bracken or at least reduce it to a minimum apart from in scrub at boundaries.	CPK	#	#	#	>#		£416	R

A Management Plan for Troopers Hill Local Nature Reserve

Objective	Comp.	Aims and Objectives	Lead Officer	Year 6 2012/13	Year 7 2013/14	Year 8 2014/15	Year 9 2015/16	Year 10 2016/17	Cost Per Annum £	Funding source
6.2.2.8	ALL	Removal of all tree species growing in scrub areas before maturity.	CPK / NEO	#	#	#	#	#	£208	R
6.2.2.9	ALL	Remove all tree seedlings from grassland, and heathland.	CPK	#	#	#	#	#	£208	R
6.2.2.10	2, 4,5,8,9, 10,11	Control bramble and scrub encroaching onto grassland and heathland.	CPK	#	#	#	#	#	£832	R
6.2.2.11	5,9, 10,11	Manage to maintain some areas of heath type scrub with broom.	CPK	#	#	#	#	#	£416	R
6.2.2.12	4, 5,9	Monitor and manage areas of bare ground and erosion. It may be necessary to take action to either stop / slow it down or create new area in places.	CPK	#	#	#	#	#	£104	E
6.2.2.13	9	Remove bramble and scrub from base of lower chimney in winter.	CPK	#		#		#	*	R
6.2.2.14	2	Manage newly cleared scrub as rough turf (cut 3 times per year) until it can be mown as meadow.	CPK	#	#	#	#	#	*	R
6.2.2.15	7	Manage newly cleared scrub around entrance 'E' as rough turf.	CPK	#	#	#	#	#	*	R
6.2.2.16	4	Manage newly cleared bramble as rough turf and coppice willows every 7 years.	CPK	#	#	#	#	#	*	R
6.2.2.17	All	Refer to and implement recommendations from site specific surveys.	APM	#	#	#	#	#	*	R

A Management Plan for Troopers Hill Local Nature Reserve

Objective	Comp.	Aims and Objectives	Lead Officer	Year 6 2012/13	Year 7 2013/14	Year 8 2014/15	Year 9 2015/16	Year 10 2016/17	Cost Per Annum £	Funding source
Aim 6.2.3										
To ensure that Troopers Hill landscape retains its strong landscape character and remains in good condition.										
6.2.3.1	2	Cut hay meadow in late July and remove arisings.	CPK / ATL	#	#	#	#	#	*	R
6.2.3.2	2	Remove patch of nettles close to gate 'C' and then manage as rough turf.	CPK	#	#	#	#	#	*	R
6.2.3.3	2	Record and monitor plant species growing in compartment 2 to inform future mowing regime.	NCO	#	#	#	#	#	£312	E
6.2.3.4	3 (by gate C)	Cut tall herbs in September and remove arisings.	CPK	#	#	#	#	#	*	R
6.2.3.5	2	Maintain recently planted hedgerow through weeding and pruning.	FoTH/CPK	#	#	#	#	#	£104	R
6.2.3.6	2, 7,8,9	Maintain and repair fencing round site boundary.	APM / CPK	#	#	#	#	>#	£624	R
6.2.3.7	7	Monitor effect of badger activity on regraded bank and clear any earth falls from the road.	NCO/CPK/FoTH	#	#	#	#	>#	£2600	E

A Management Plan for Troopers Hill Local Nature Reserve

Objective	Comp.	Aims and Objectives	Lead Officer	Year 6 2012/13	Year 7 2013/14	Year 8 2014/15	Year 9 2015/16	Year 10 2016/17	Cost Per Annum £	Funding source
Aim 6.2.4										
To conserve and where possible enhance the geological features of the site where this does not conflict with important biological interest.										
6.2.4.1	4, 5	Cut back Ivy <i>Hedera helix</i> where considered necessary in winter from rock faces.	CPK		#		#		£624	R
Aim 6.2.5										
To conserve the industrial heritage features.										
6.2.5.1	3 and 9	Maintain the two chimneys in line with results of regular inspections.	APM	#		#		#	£1560	R
6.2.5.2	ALL	Inspect / carry out risk assessment	APM	#		#		#	£208	E/R
Aim 6.2.6										
To provide suitable facilities and opportunities for public enjoyment of the site, for present and future generations of Bristolians and visitors to the city, providing that these do not conflict with nature conservation requirements.										
6.2.6.1	All	Continue with an active events programme.	AEO FoTH	#	#	#	#	#	£624	R / C
6.2.6.2	Entrances A, C, D, F	Maintain existing dog bins on site.	CPK	#	#	#	#	#		*
6.2.6.3	Entrances D, E, F	Entrances E and F - install litter bin at F and move dog waste bin to E.	APM	#					£700	
6.2.6.4	ALL	Maintain existing seats on site.	APM	#	#	#	#	#	*	R
6.2.6.5	ALL	Monitor the litter on site and re-valuate the question of placing litter-bins on site.	APM / CPK	#	#	#	#	#	£104	R

A Management Plan for Troopers Hill Local Nature Reserve

Objective	Comp.	Aims and Objectives	Lead Officer	Year 6 2012/13	Year 7 2013/14	Year 8 2014/15	Year 9 2015/16	Year 10 2016/17	Cost Per Annum £	Funding source
Aim 6.2.7										
To provide maximum opportunities for interpretation and encourage educational use.										
6.2.7.1	Entrance F and 3	Produce and install on-site interpretation at entrance F.	NCO	#					£2,340	R
6.2.7.2		Maintain information on BCC website and the Friends of Troopers Hill website.	APM/ FoTH	#	#	#	#	#	£104	E
6.2.7.3		Review information leaflets.	FoTH	#	#	#	#	#		E
Aim 6.2.8										
To encourage community involvement in the site, and encourage active involvement in the care and management of the site.										
6.2.8.1		Maintain notices on site notifying people of working parties and how to contact both the council and the friends group.	APM / CPK / FoTH	#	#	#	#	#	£52	E
Aim 6.2.9										
To assist organisations or individuals with any scientific research.										
6.2.9.1	ALL	Maintain up to date lists of species on site. The results will be used to inform decisions about future management for inclusion in reviews of this plan.	NCO	#	#	#	#	#	£1,040	E/R
6.2.9.2	ALL	Carry out regular Invertebrate Surveys and Butterfly Transects. The results of these surveys will be used to help decide on the priorities for management of heath and scrub. Troopers Hill will be suggested to academic institutions and other bodies as a subject for research that could include these surveys.	NCO		#		#		£1,040	C
6.2.9.3	ALL	Continue the 5 yearly photographic monitoring project.	NCO					#	£624	E

A Management Plan for Troopers Hill Local Nature Reserve

Objective	Comp.	Aims and Objectives	Lead Officer	Year 6 2012/13	Year 7 2013/14	Year 8 2014/15	Year 9 2015/16	Year 10 2016/17	Cost Per Annum £	Funding source
Aim 6.2.10										
To ensure that Troopers Hill is safe and accessible to all within the natural constraints of the site.										
6.2.10.1	All	Carry out regular health and safety audits.	APM	#	#	#	#	#	£200	E
6.2.10.2	All	Cut back vegetation adjacent to and overhanging footpaths and entrances.	CPK	#	#	#	#	#	£208	R
6.2.10.3	3	Maintain access for new path in a suitable condition for use by wheelchairs and pushchairs.	APM	#	#	#	#	#	*	R
6.2.10.4	All	Implement programme of footpath and step repair work funded by Community Spaces Fund.	APM / NEO	#					£30,504.89	C
6.2.10.5		Install pedestrian direction signs from Roads and River Avon Trail.	APM		#				£208	E
6.2.10.6	ALL	Continue to investigate improvements to entrances that have not recently been upgraded.	APM		#				£432	E
6.2.10.7	1, 2, 8,9,10	Public Rights of Way are being reviewed. The intention is to divert them to follow existing paths on site. Potential to install new path to Crews Hole Rd in the woodland.	APM & PROWO			#			£2,080	R
6.2.10.8	6 and entrance C	Maintain raised bed at entrance C for road safety to prevent pedestrians crossing close to junction of Greendown and Troopers Hill Road.	CPK	#	#	#	#	#	*	R

A Management Plan for Troopers Hill Local Nature Reserve

Objective	Comp.	Aims and Objectives	Lead Officer	Year 6 2012/13	Year 7 2013/14	Year 8 2014/15	Year 9 2015/16	Year 10 2016/17	Cost Per Annum £	Funding source
Aim 6.2.11										
To ensure that antisocial behaviour is controlled and its impacts reduced.										
6.2.11.1	2, 7,8,9	Repair any fence or gate, which may allow motorbike access within 20 days of being reported.	APM	#	#	#	#	#	£2080	R
6.2.11.2	ALL	Report anti-social activity on site to police.	APM / CPK / FoTH	#	#	#	#	#	£54	E
6.2.11.3	ALL	Wherever possible, engage with all users of the site e.g. dog walkers and young people to explain the value and importance of the site to them and to hopefully recruit them to assist in	ALL	#	#	#	#	#		E
Aim 6.2.12										
To ensure that Troopers Hill is well managed, and well resourced, balancing all the various public uses with the wildlife and heritage value of the site.										
6.2.12.1	ALL	Remove graffiti on site within 20 days of it being reported (5 days for graffiti on the chimney, notice boards and information panels and 48 hours offensive graffiti), unless specialist equipment is required.	CPK	#	#	#	#	#	£156	R
6.2.12.2	ALL	Remove burnt out vehicles within 5 days of being reported, dependent on location and conditions.	APM	#	#	#	#	#	£208	R
6.2.12.3	ALL	Remove fly-tipped litter within 2 days of being reported.	APM	#	#	#	#	#	£312	R
	ALL	Implement fixed penalties for littering and dog fouling and investigate ways of reducing the incidences of dog fouling.	APM	#	#	#	#	#		

A Management Plan for Troopers Hill Local Nature Reserve

Objective	Comp.	Aims and Objectives	Lead Officer	Year 6 2012/13	Year 7 2013/14	Year 8 2014/15	Year 9 2015/16	Year 10 2016/17	Cost Per Annum £	Funding source
6.2.12.4	ALL	Carry out regular litter picks on site.	CPK	#	#	#	#	#		*
6.2.12.5	ALL	Recycle as much litter as possible when carrying out litter picks.	FoTH	#	#	#	#	#		
6.1.12.6	ALL	Audit the site from the EMAS perspective.	APM	#	#	#	#	#	£520	E
6.2.12.7	ALL	Revise the 5-year work plan.	APM	#	#	#	#	#	£520	E
6.2.12.8	ALL	Review site user and access guide and publish.	EO / FoTH			#			£520	E
6.2.12.9	ALL	Review the management plan.	APM					#	£1,040	E
6.2.12.10	ALL	Review SNCI status.	NCO					#	£520	E
6.2.12.11	3, 8	Inspect and report on listed structures.	APM	#		#		#	£520	E
6.2.12.12	ALL	Apply for Green Flag Award status.	APM	#	#	#	#	#	£520	E

A Management Plan for Troopers Hill Local Nature Reserve

7 Monitoring and Review

5 Yearly

- Parks Services will review the whole management plan document. 7.2.12.9
- SNCI to be checked for favourable conservation status. 7.2.12.10
- Monitor satisfaction of site users through user surveys (see section 4.2)
- Keep photographic record. 7.2.9.3

Biannual

- All listed buildings and structures inspected by Property Section from Central Support Services. 7.2.12.11
- Risk assessments carried out by the APM 7.2.5.2
- Invertebrate surveys 7.2.9.2

Annual

- The Parks and Estates Service will review the 5-year work plan and set out a new 5-year plan 7.2.12.7
- Review the EMAS Action Plan 7.2.12.6
- Seek to attain and maintain green flag status. 7.2.12.12
- Parks Operations Grounds Maintenance Manager reviews the Departmental Asset Management Plan for the maintenance of structures.
- Monitor income and expenditure against annual budgets.
- Monitor and record the number of events.

- Review community group agreement.
- Monitor plant and other species to inform management of compartments. 7.2.3.3.
- Maintain regular liaison with the Friends of Troopers Hill through email and council officers to attend Friends group meetings when necessary.
- AGM of The Friends of Troopers Hill.

6 Monthly

Detailed work plans agreed with the Friends of Troopers Hill.

Every 6 weeks

Friends Group meetings (APM to attend at least 2 p.a.). All management issues to be raised with the Area Park Manager in the first instance.

Monthly

Monthly spending monitored by APM against annual budget.

The APM informally monitors quality of work against specifications (approximately monthly).

A Management Plan for Troopers Hill Local Nature Reserve

Appendix 1—Local and National Policies

Local Policies

Overview

This Management Plan complements the wider strategic context of Bristol City Council and its partners. It seeks to achieve the objectives of the strategic framework by translating those that are appropriate to Troopers Hill.

Anti-social behaviour Strategy 2008-11

To reduce anti-social behaviour in Bristol by working together in partnership with citizens to improve quality of life and to create safer, peaceful, tolerant communities.

Bristol Development Framework

Bristol City Council is producing a new suite of planning documents to guide development decisions in the city over a 20-year period. Together these documents make up the Bristol Development Framework (BDF), which will gradually replace the Local Plan. Documents in the BDF are shorter than the Local Plan and can be produced and reviewed independently as required. A programme for preparation of these documents can be found in the Local Development Scheme (see below).

Bristol Biodiversity Action Plan (2008)

The Bristol Biodiversity Action Plan provides the over-arching framework for habitat and species conservation in Bristol. Importantly, it also recognises the benefits of wildlife to people and helps to identify ways to better promote, and engage people in, biodiversity conservation in the city.

Bristol City Council Corporate Plan

- Increasing participation in sport and other physical activity.
- Improving recycling and waste management.
- Improving the cleanliness of the city

Bristol City Council Education Development Plan 2005-2006

Multiple actions about raising standards and increasing inclusion e.g. Raising attainment in Early Years and Primary Education.

Bristol Climate Protection Action Plan

Bristol has a wide range of parks, historic gardens, woodlands, nature reserves and open spaces that are rich in wildlife. Two are of international importance – the Severn Estuary and the Avon Gorge – although at present it is uncertain what the impacts of climate change will have on these sites. The indirect ones could include the need to construct more flood defences, thereby possibly damaging existing wildlife sites. Climate change could also lead to changes in water table levels, which could affect sensitive habitats and species.

A Management Plan for Troopers Hill Local Nature Reserve

Bristol Community Strategy

Vision for Bristol

A city that realises its full potential and exerts influence appropriate to its status at the regional, national and European level;
A modern, cosmopolitan, ambitious city at the heart of a prosperous and confident area that is the gateway to the South West;
A diverse and accessible city made up of vibrant and balanced communities;
Where everyone is valued and can thrive economically, culturally and socially;
A safe city that promotes health, learning and sustainable development;
A city where no one is disadvantaged.
Implement cycling and walking schemes to provide alternative modes of transport to the car (Bristol City Council with partners).

Bristol Core Strategy

Troopers Hill is protected by Bristol Core Strategy Green Infrastructure Policy BCS9. Troopers Hill receives protection under this policy due to its designation as a Local Nature Reserve (LNR), Site of Nature Conservation Interest (SNCI) and as one of Bristol's Regionally Important Geological and Geomorphological Sites (RIGS).

Additional Designations:

- Conservation Area
- Conservation Area Boundary (CA)
- Management plan boundary
- Open Access Land (CRoW 2000)
- Public Rights of Way (PROW)
- Scheduled Ancient Monuments (SAM)

Bristol Parks Service Delivery Plan 2009-2012

Eco Management Auditing System (EMAS)

Health Strategy 2006-2009

The Joint Local Transport Plan 2006/7 - 2010/11 (The Walking Strategy)

Parks and Green Space Strategy 2008 (See section 2.1.1)

Playing for Real 2004 and Making Play Matter 2003

Parks Wildlife Strategy

Public Art Strategy

Public Consultation Strategy 2001 and update 2004

Safer Bristol Partnership Plan 2008-11

Sustainable Energy Strategy Bristol City Council

A Management Plan for Troopers Hill Local Nature Reserve

National Policies

CABE Space Guidance:

A Guide to Producing Parks and Green Space Management Plans

Adapting Public Space to Climate Change: Public Space Lessons

Decent Parks? Decent Behaviour? The Link Between the Quality of Parks and User Behaviour

Making contracts work for wildlife: how to encourage biodiversity in urban parks

Parks need parkforce

Parkforce fact pack

The Value of Public Space: how high quality parks and public spaces create economic, social and environmental value

Green Spaces Better Places

This is the final report of the Urban Green Spaces Taskforce published by the DTLR in 2002. The document provides a baseline assessment and comprehensive review of the state of public open spaces within England. The report highlighted a number of issues in relation to the decline of urban parks in England through a process of poor strategic planning, weak leadership, a lack of core and sustainable funding and the noticeable absence of information and data in order to inform the decision making process.

In the context of park management plans, the report formed the precursor for the renaissance of urban green spaces. The report established the need to invest in parks and open spaces and recognises the need that the open spaces have a much wider role to play in the local community in terms of the health, community safety and the social renewal agendas.

The Government's response to the Urban Green Spaces Taskforce was published in 2002 as part of the Living Places: Cleaner, Safer, Greener document. This report set out to respond to the issues highlighted by the Green Spaces Better Places report and committed the Government to providing a Strategic Framework for the improvement and betterment of green spaces over the next five years. This is manifested in a Government Champion for parks and open spaces Cabe Space and the release of substantial funds for park renewal pilot schemes through the Liveability Fund.

Developing Accessible Play Space

This good practice guide was published in 2003 by the Office of the Deputy Prime Minister to act as a reference for providing stimulating and accessible play for all children. With the Disability Discrimination Act the guide recognises that each child is different and that access to the social experience of play is key. The principal recommendation of the guide is 'that developers should concentrate on making the environment fit for the child'.

A Management Plan for Troopers Hill Local Nature Reserve

Parks and Green Spaces: Engaging the Community

Published by Green Space (formerly the Urban Parks Forum) in July 2002, this local authority guide outlines the reason for engaging local communities and encouraging community participation in the management of parks and open spaces. The guide gives pragmatic advice on the benefits of involving people in the decision-making process and shows examples of how this can be achieved. In conclusion the guide suggests that:

The Park Keeper

Compiled by English Nature, this short history contributes to the ongoing debate in relation to skills within the parks sector. This document charts the history of the park keeper and the changing role of curators, superintendent, foreman and gardeners and recognises their past skills and contribution to the legacy of public parks in England.

Park Life, Urban Parks and Social Renewal

Published by Comedia and Demos in 1995, this report provides the first real assessment of the state of urban parks and green space and is the starting point of the current renaissance in urban parks. For the first time the wider social benefits of high quality open spaces were recognised and the need to invest and put open spaces and people at the heart of modern urban regeneration was documented.

Policy Planning Guidance 17

Policy Planning Guidance 17 and the accompanying guide; assessing needs and opportunities, sets out the Government's objectives for delivering high quality and sustainable open spaces that meet the aspirations and needs of local communities. The long-term aims of this document are to deliver:

- Networks of accessible, high quality open spaces, which are both economically and environmentally sound and meet local need;
- An appropriate balance between new and existing open space provision;
- Clarity for developers in relation to the requirements and expectations of the local planning authorities.

Through PPG17, local planning authorities are now required to demonstrate that the local portfolio of public open spaces meets local demand based upon *quality, quantity, accessibility* and *primary purpose*.

- Community engagement is not about reaching an end point but is a dynamic process requiring high and sustained levels of involvement;
- It is important to establish the reason for engaging the community;
- Community based activities ought to compliment the aims of the organisation;
- Developing site management plans in partnership with the community helps to ensure ownership;
- Linking community groups together as part of a wider supportive umbrella can add more support to the local authority.

A Management Plan for Troopers Hill Local Nature Reserve

Appendix 2—Index of Environmental Legislation

LD Landscape Design Team		Office Handbook	
Planning Transport and Sustainable Development, Bristol City Council	Environmental Legislation		
Index of Environmental Legislation: A – Z			

A	<i>Air Quality Regulations, 2000</i>	Pollution Control - Air Quality
B	<i>Badgers, Protection of, Act 1992</i>	Protected Species
	<i>Biodiversity Action Plan, UK, 1994</i>	Biodiversity Action
C	<i>Circular 02/99: Environmental Impact Assessments, published DETR 12 March 1999</i>	Environmental Impact Assessments
	<i>Conservation (Natural Habitats, & c.), Regulations, 1994</i>	Protection of habitats and species
	<i>Countryside and Rights of Way Act, 2000</i>	Common Land Public Rights of Way
E	<i>Education Act, 1996, s.508 -</i>	Facilities for recreation and social and physical training.
	<i>Environment Act, 1995</i>	Pollution Control - Air Quality
	<i>EU Council Directive 85/337/EEC(1)</i>	Environmental Impact Assessments
	<i>EU Council Directive 97/11/EC(1)</i>	Environmental Impact Assessments
H	<i>Habitats Regulations, 1994</i>	Protected Species
	<i>Hedgerow Regulations, 1997</i>	Protection of Hedgerows
L	<i>Local Authorities (Recovery of Costs for Public Path Orders) Regulations, 1993 (SI 1993 No 407)</i>	Public Rights of Way
	<i>Local Government (Miscellaneous Provisions) Act, 1976</i>	Trees and Excavations

A Management Plan for Troopers Hill Local Nature Reserve

N	<i>National Parks and Access to the Countryside Act, 1949</i>	Local Nature Reserves
P	<i>Pollution Protection and Control (PPC) Act, 1999</i>	Pollution control agencies' responsibilities
	<i>Planning and Compulsory Purchase Act, 2004</i>	Planning System change, including Local Development Framework.
	<i>Protection of Badgers Act, 1992</i>	Protected Species
	<i>Public Path Orders Regulations, 1993 (SI 1993 No 11)</i>	Public Rights of Way
R	<i>Rights of Way Act, 1990</i>	Public Rights of Way
	<i>Road Traffic Act, 1988, s. 34</i>	Offence to drive vehicle on common land
T	<i>Town and Country Amenities Act, 1974</i>	Trees
	<i>Town and Country Planning Act, 1990</i>	Compulsory Purchase Orders Planning Obligations. Planning Process Public Rights of Way Tree Preservation
	<i>Town and Country Planning Act, 1990, s. 197</i>	Tree and Tree Group protection Trees in Conservation Areas
	<i>Town and Country Planning Act, 1990, s. 202</i>	Tree Preservation Orders, powers to make
	<i>Town and Country Planning Act, 1990, s. 210/1</i>	Punishment for damage or destruction of TPO tree.
	<i>Town and Country Planning (Amendment) Act, 1985</i>	Woodland
	<i>Town and Country Planning (Environmental Impact Assessment) (England and Wales), Regulations 1999</i>	Environmental Impact Assessments
	<i>Town and Country Planning (Trees) Regulations 1999, SI 1999/1982</i>	Trees
	<i>Town and Country Planning (Public Path Orders) Regulations, 1993 (SI 1993 No 10)</i>	Public Rights of Way
	<i>Town and Country Planning (Tree Preservation Order) (Amendment) and (Trees in Conservation Areas) (Exempted Cases) Regulations 1975</i>	Tree and Tree Group protection Trees in Conservation Areas

A Management Plan for Troopers Hill Local Nature Reserve

U	<i>UK Biodiversity Action Plan, 1994</i>	Biodiversity Action
W	<i>Water Framework Directive</i>	
	<i>Water Industry Act, 1991</i>	Pollution Control - Pollution control agencies' responsibilities
	<i>Water Resources Act, 1991</i>	Pollution Control - Water Resources
	<i>Weeds Act, 1959</i>	Weed Control
	<i>Wildlife and Countryside Act, 1981</i>	Areas of Special Protection Public Rights of Way Protected Species Trees

File Ref: S:\Parks\ADMIN3\wp\Vicki\PARKS\Troopers Hill Management Plan\Troopers Hill MP Final Draft 28.11.11.doc	Originator/Date: SH, 26.8.05
	Updated by:/ Date:

A Management Plan for Troopers Hill Local Nature Reserve

Appendix 3—Approved Pesticides

Only materials containing the following active ingredients shall be used. If for a specific problem an alternative pesticide is required then the contractor shall obtain the Supervising Officer's written agreement. The Unitary Authority Pesticide Management Group is responsible for the approval and authorisation of the pesticides used. This schedule of materials may be altered from time to time as a result of decisions taken by this group.

Chemical Active Ingredient

Aluminium Ammonium Sulphate	Glyphosate
Ammonium Sulphamate	Iprodione
Bupirimate	Maleic Hydrazide
Captan	Mancozeb
Carbendazim	MCPA (with restrictions)
Chlorothanil	Mecoprop (with restrictions)
Chlorpyrifos	Metalddehyde
Cypermethrin	Methiocarb
Deltamethrin	Myclobutanil
Dicamba	Oxycarboxin
Dichlobenil	Pichloram
Dichlorophen	Pirimicarb
Ferrous Sulphate	Propyzamide
	Pyrethrins
	Thiabendazole
	Thiophanate Methyl
	Trichlopyr

A Management Plan for Troopers Hill Local Nature Reserve

Appendix 4—Environmental Policy and EMAS actions relevant to operations on Troopers Hill

Providing leadership and support for environmental management within the Council through elected representatives and senior managers
Support is given from the EMAS implementation team.

Providing for identification and compliance with all environmental legislation, policies and codes of practice relevant to our activities and services

Maintain an updated environment register based on the one currently compiled by the Landscape Design team and ensure that it is maintained up to date and relevant to Troopers Hill. A copy is included in Appendix 2.

Work with other directorates and management teams to ensure legislation relating to all aspects of Troopers Hill is complied with i.e. events, street scene, planning, waste management etc.

Continually improving overall environmental performance through the implementation and review of objectives and targets

Annual review of the 5-year work plan [7.2.12.7](#).

Annual review of EMAS Action Plan [7.2.12.6](#).

Identifying and managing environmental aspects relevant to Council activities and services

Improvement will occur through continual service and management plan review ([See 8.0](#)) Actions relevant to Troopers Hill will be identified, agreed, implemented and monitored through EMAS and the 5 year work plan ([See 7.0 and 7.2.12.6](#)).

The City Council Events and EMAS teams are currently seeking to identify policies and operations, to reduce the environmental impact of events ([See 7.2.6.5](#)). A draft checklist for events organisers already exists (Jan 2007) and will be issued to all events organisers in 2007.

Ensuring that the environmental consequences of all new policies and practices are assessed

The service and management planning procedures will ensure that the introduction of any new policies and operations will be assessed for their environmental impacts. This will be undertaken through officer team meetings and management plan reviews. ([See 8.0](#)).

Prevention of pollution

The council has a Pest Management Policy (see next section).

Standard corporate procedures for chemicals use and storage exist; these apply to all depots and operations

Prepare a Site Use and Access Guide for Event management and contractor operations. ([See 7.2.12.8](#))

Contractor operations are discussed at regular monthly client-contractor meetings.

A Management Plan for Troopers Hill Local Nature Reserve

Minimising the effects of resource use by conserving water

No water is used on Troopers Hill LNR.

Reducing the consumption of fossil fuels by conserving energy and promoting the use of renewable sources

Vehicles and machinery are maintained to high standards to ensure that they are energy efficient. Service records are kept and monitored with Fleet Management.

Investigate the use of bio fuels by events organisers.

Minimising the disposal of waste through reduction, reuse, recycling and recovery

Develop recycling for all arisings and as much litter as possible (See 7.2.12.5).

Evaluate the arguments for and against the provision of litter bins and the cost thereof (See 7.2.6.7).

Used Oil will be disposed of through Fleet Management.

Forest Stewardship Council (FSC) timber will be specified for all repairs of benches, fences etc, if locally grown timber is unavailable.

Metals removed from this site and others are collected in a skip and when full removed for recycling. (See 7.2.12.5).

Evaluating and monitoring air, noise, water and land pollution, and influencing others to reduce such pollution

The creation of a Site Use & Access Guide for Events organisers will be investigated to better control noise and waste generated by events throughout the city. (See 7.2.12.8)

Herbicides, chemicals, paints and other materials are all COSHH (Control of Substances Hazardous to Health) regulated and usage is kept to a minimum. There is an approved chemical list.

Monitoring and protecting biodiversity

The preferred option of the City Council timber policy is to source all timber from Forest Stewardship Council (FSC)

'Environmental Guidance for Landscape Design' will be prepared in 2007 for material specifications covering hard and soft work and will include guidance on materials, embodied energy, toxicity, use of pesticides, treatments, paints, drainage, material durability etc. This will be reviewed against current material and maintenance specifications.

Develop wildlife monitoring program for Troopers Hill (See 7.2.3.3, 7.2.3.7, 7.2.9.1, 7.2.9.2).

Encouraging suppliers and contractors to improve their environmental performance in order to reduce any detrimental environmental impact of the goods and services used by the Council. This will be achieved through the Council procurement strategy and by controlling the on-site activities of contractors

The proposed 'Site Use & Access Guide' (7.2.12.8) will demand more comprehensive production schedules, sites plans and risk assessments from event managers so that environmental impacts can be reduced and monitored.

'The Bristol First Guide to construction, planning and development' provides guidance for all construction and maintenance operations.

The relevant content will be extracted as a separate leaflet to be called 'Construction Sites - Environmental Good Practice'.

The City Council will ensure waste carrying contractors are chosen from the approved lists where their annually renewable waste carriers licenses and Waste Transfer Notes (WTN's) for removed material are regularly checked.

A Management Plan for Troopers Hill Local Nature Reserve

Contractors will be encouraged to explore green energy providers and undertake energy efficiency audits at offices and depots.

Actively involving our staff through training and awareness programmes to ensure that they improve their environmental performance

The Parks and Estates Service will review and record all directly relevant training undertaken by City Council directorates with responsibility for Troopers Hill.

There are Environmental Awareness Representatives (EARS) in all departments that are kept up to date on all developments in environmental performance.

Regularly reviewing and reporting on progress which will include producing an annual Environmental Statement for departments that have been verified

Bristol Parks Management will provide input into the Environmental Statement and will make this available as appropriate for communication to stakeholders.

Communicating with interested parties and making this policy publicly available

This management plan is available to the public and has been distributed to all stakeholders.

Pest Management Policy (Available to view at Brunel House)

Bristol, Bath and North East Somerset, North Somerset and South Gloucestershire Councils (hereafter referred to as the Council) are committed to providing, maintaining and positively promoting a health and safety environment at work. A Pest Management Policy has been produced in conjunction with Trade Unions, Safety Representatives and other representatives of the Council. The Policy has been adopted by Bristol City Council and is evidence of the Councils commitment to ensuring the safety and well being of all its employees.

The Council recognises and accepts its responsibility as an employer and will ensure as far as practicable the protection of employees, occupiers of its premises and the general public from exposure to harmful chemicals, and to minimise the impact of the use of such chemicals on the environment. All employees of the Council who use pesticides must abide by the Policy, which applies to all Departments of the Council.

Approved Pesticides

Chemical usage is kept to a minimum. There is an approved pesticides list that is part of the contract specification (see Appendix 3).

Recycling

All rubbish collected by working parties is sorted into materials for recycling.

Peat

There is no peat usage on Troopers Hill.

A Management Plan for Troopers Hill Local Nature Reserve

Appendix 5—Achievements Since 2007

Habitat Management

The majority of the work undertaken by FoTH since 2007 has been habitat management which is carried out in winter to avoid disturbance to nesting birds. The aim of the work is to prevent the spread of trees and scrub into the heathland and grassland and to return areas to heathland where possible.

The Friends of Troopers Hill carried out work throughout the five years at their work parties. This mostly focused on clearing bramble by hand from areas where use of a strimmer would cause too much damage to broom or heather.

In the first two winters some quite large trees were cleared. In the following years there has been consolidation in cutting back regrowth in cleared areas. Areas of hawthorn scrub and bramble have been cleared to expose quarrying rock faces in the gulley, inc. the felling of a large 30ft+ Sycamore, and to open paths/areas to improve access and expose the views.

Bracken has been actively controlled to reduce 'shade canopy' which has resulted in a resurgence of coarse grasses and some heathland plants in these areas. On the steeper slopes hand control of bramble has been used to prevent further incursion into the remaining heath, with a view to further removal/eradication in future years as part of the revised plan.

The area of coarse grasses has been actively managed as a wildflower meadow.

One of the main paths was suffering from erosion due to badgers, a small metal bridge was installed across the damaged section to make the path safe without impeding the passage of badgers.

New Path

A new path was constructed in April 2007 to provide wheelchair access to the top of the hill.

Troopers Hill Road Bank

Work to regrade this bank was carried out to prevent a major fall of earth onto the road.

Mine Shaft Subsidence

A crater near the top of the hill was fenced off while Bristol City Council and the Coal Authority investigated some subsidence. This was due to old mine workings collapsing. Excavations were needed to check whether there was a danger of any further collapse and to make the area safe.

A Management Plan for Troopers Hill Local Nature Reserve

YANSEC Project

Following the installation of the wheelchair path, this was the second major project to improve access to the hill. The work included improvements at entrance C, new benches and new entrance signs. This was funded by a grant from YANSEC (Yanley and North Somerset Environment Company). The Stepping Forward Project will build on this work.

Dog Waste and Litter Bins

An additional bin was added to Troopers Hill LNR and 4 new bins were provided on the adjacent Troopers Hill Field.

Design for Entrance at Lower Chimney

This was produced but has not yet been priced. It will form part of a future bid to include restoration work to the lower chimney, possibly to the HLF.

Stepping Forward Project

A bid to the Big Lottery Fund Community Spaces Fund was approved in November 2011 and the work to improve the paths and steps across the site will commence in January 2012.

More details of the above can be seen at www.troopers-hill.org.uk/2007plan

A Management Plan for Troopers Hill Local Nature Reserve

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