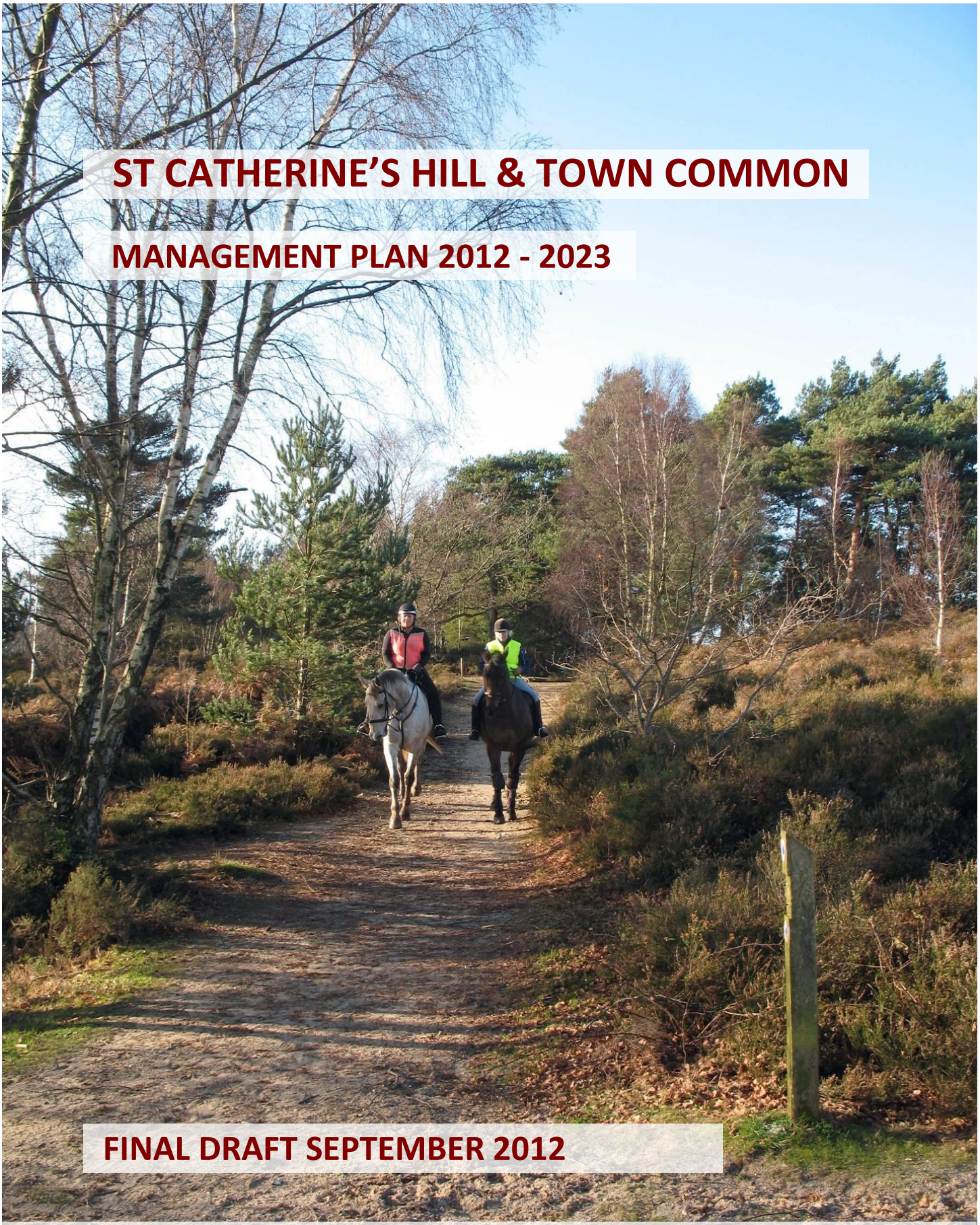
ST CATHERINE'S HILL & TOWN COMMON

MANAGEMENT PLAN 2012 - 2023



FINAL DRAFT SEPTEMBER 2012

We value our local countryside for its natural beauty and wildlife. This area has been influenced by past generations and is now cared for by a partnership that will take its needs into account for all to enjoy into the future.

St Catherine's Hill & Town Common Management Plan 2012 - 2023

Prepared by the St Catherine's Hill & Town Common Management Plan Steering Group, including Christchurch Borough Council Countryside Service in association with Jude Smith, Rick Minter and Alison Parfitt.

"On behalf of the Steering Group I believe that this Plan brings forward a balanced approach to securing the future management of the habitats and landscape on St Catherine's Hill and Town Common. This will ensure that the most important features are conserved and enhanced with the active involvement of local people. I therefore commend this Plan to you."

Chairman, St Catherine's Hill & Town Common Management Plan Steering Group

Citation

For bibliography purposes this management plan should be referred to as:

Smith, J.E., Parfitt A., Minter, R. & Christchurch Countryside Service. 2012. *St Catherine's Hill & Town Common Management Plan, 2012 - 2023*. Prepared for St Catherine's Hill & Town Common Management Plan Steering Group, c/o Christchurch Borough Council, Christchurch.

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1 INTRODUCTION

Background

1.1 St Catherine's Hill & Town Common is located on the north-west of the town of Christchurch, in south Dorset (*Fig. A1, Appendix 1*) and is a highly valued area of land, both due to significant nature conservation, geological and archaeological interests and as an important recreational resource for the local and wider community, not least those living in close proximity to the site. Covering 162 hectares (400 acres), and rising to 53m (174 ft) above sea level, it is an area of heathland, wooded heath and woodland that forms part of the much larger natural area known as Town Common SSSI. On the western boundary of the site is the A338, and, further south, the residential areas of Christchurch. A disused railway forms the south eastern boundary and to the east are the floodplains of the river Avon.

1.2 The area south of the A338 has been divided into three separate areas (*Fig. A2, Appendix 1*). This management plan is concerned with St Catherine's Hill and the *western* slopes of Town Common, an area of 52 hectares (128 acres). These form Areas 2 and 3 (*see Fig. A2*). It does not include the rest of Town Common including Area 1, and areas outside 1, including that to the east of the disused railway line. The land under consideration is owned largely by Christchurch Borough Council, CBC (Area 3[1]) and the Malmesbury Estate, the latter under lease by the Amphibian & Reptile Conservation Trust, ARC[2] (Area 2). Additional small areas include water reservoirs owned by Sembcorp Bournemouth Water, Christchurch Gun Club who runs a shooting range, and a telecommunications station leased by CBC. There are commoner's rights on Area 2, and Area 3 is designated as pubic open space.

Table 1 Site summary information

Grid reference	SZ145952
Map information	OS Landranger 1:50,000 No 195; OS 1:25,000 No OL22
Aerial photographs	See Gazetteer Appendix 2, Table A3
District	Christchurch
County Council	Dorset County Council , County Hall, Colliton Park, Dorchester, DT1 1XJ
District Council	Christchurch Borough Council, Civic Offices, Bridge St, Christchurch, Dorset BH23 1AZ
Parish Council	Hurn Parish Council (northern part of site)
Natural England Local office	Natural England, Government Building, Prince of Wales Road, Dorchester, Dorset DT1 1PY
English Heritage	English Heritage, South West Region, 29 Queen Sq, Bristol, BS1 4ND

[1] The detailed habitat restoration proposals within the management plan relate mainly to Area 3.

[2] Formerly Herpetological Conservation Trust HCT

Work of the Steering Group

1.3 The forming of the St Catherine's Hill & Town Common Management Plan Steering Group by Christchurch Borough Council, and the Steering Group's agreement on the need for a management plan, was an important step in a situation of differing views about management needs for the site, amongst different parties (*Table A1, Appendix 2*). In the context of there being conflicting views, formation of the group followed a recommendation of a Regional Advisory Committee which was called in by the Forestry Commission to consider a previous Felling Licence Application (FLA) on site which covered Areas 1 and 2. (*see Appendix 5*).

1.4 The role of the Steering Group is fundamental to this plan. The group first met in May 2009 and includes representatives of the main stakeholders:

Table 2 Groups that are members of the Management Plan Steering Group

Organisation	Purpose of organisation
Amphibian and Reptile Conservation (ARC)	Used to be called Herpetological Conservation Trust (HCT) and currently manages Areas 1 and 2 of Town Common
Christchurch Borough Council (CBC)	The local Borough Council, represented by officers
Christchurch Borough Council Ward Councillors	Two representatives from the local Borough Council
Dorset Urban Heaths Partnership (UHP)	Involving 14 partner organisations – the partnership was established to enable local communities to protect and enjoy their urban heathland by highlighting its importance and promoting responsible use of this fragmented resource in SE Dorset
Friends of St Catherine's Hill (FSCH)	Established 2007 to promote greater understanding & involvement of local community. Represented by HPC, ward Councillors, CBC, ARC, UHP, Royal Society for the Protection of Birds (RSPB), local historians and residents
Hurn Parish Council (HPC)	Parish Councillors representing Hurn Parish
Natural England (NE)	Government agency for wildlife protection, landscape and countryside access management. Represented by a Senior Conservation Officer
Sembcorp Bournemouth Water (SBW)	Manages two water reservoirs on site
West Christchurch Residents Association (WCRA)	Established 'to protect the environment that we all enjoy whilst living in this beautiful area'.

1.5 The objectives of the Steering Group have been to:

- Assist CBC and ARC to meet their statutory and other responsibilities to their nature conservation and other obligations of the site, through the development of a joint management plan;
- Oversee the production of a joint management plan and public consultation exercise to ensure that the user group and wider public views are fed into the process;
- Work together and in partnership with the other representatives, in a conciliatory way, with the aim of reaching consensus on the future management of the site;
- Support and encourage the exchange of information and champion the cause of the group in the wider community;
- Support the implementation of the agreed adopted plan;
- Agree on the appointment of a facilitator who will work with the steering group in support of the above objectives;

- Meet regularly and as necessary with the appointed facilitator to monitor the achievements and objectives of the programme.

1.6 In late 2009, the Steering Group appointed facilitators to assist in the production of a management plan.

1.7 To help agree future site management, the members of the St Catherine's Hill & Town Common Management Plan Steering Group have been meeting regularly and working together to develop an agreed plan. The group has worked well together, with all parties gaining an understanding of different positions and finding solutions to issues through compromise where there have been differences of opinions. This group will cease to function upon the satisfactory completion of the plan, but a new site management steering group, comprising the same members (*see 1.4*)[3], will form to oversee implementation and monitoring of the plan. This group will initially meet on a quarterly basis.

Guiding principles for the management plan and beyond

1.8 The preparation and subsequent implementation of the management plan is guided by the following principles:

- **Actions will be discussed not imposed**
  Actions to fulfil the Management Plan will only happen after full explanation and discussion amongst people and organisations who care for, use and enjoy the area.

- **Actions will be consensus-based**
  As much consensus as possible will be sought for all main objectives and actions.

- **Gradual change**
  Change brought about by the Plan will be gradual and incremental rather than sudden and sweeping.

- **Good neighbour protocol**
  A 'good neighbour' approach to operations will be adopted, to minimise noise, disturbance and any other potential effects of management operations, especially those involving transportation, burning and chipping of timber.

- **Responsible use**
  The site, its wildlife, and its amenity, is greatly valued by many people, from near and far, for a range of reasons. Everyone, whatever their main interest, has a responsibility to respect the sensitivities of the site and the interests of other users.

- **Ecological whole**
  The Management Plan does not cover all parts of the site, but the site must be appreciated as an ecological whole, which covers areas 1, 2, and 3, and which links to neighbouring heath, woodland, wood-heath, wetland, and river valley habitats.

- **Nature and people**
  The Management Plan will set out the needs of people, who live nearby and use the site alongside the wildlife and habitats found there. Whilst safeguarding, restoring and caring for the wildlife species and habitats present, it must also reflect the site's vital contribution to people's wellbeing and the wider natural environment.

[3] Those who wish to continue

- **A multi-purpose outlook**
  Many actions proposed in the Management Plan, such as vegetation management, wildlife management, woodland management, and path management, can fulfil several purposes beyond their primary role. When actions are taken they should serve as many objectives as possible.

- **Roles and resources**
  Actions will be implemented according to the lead roles and available resources, which are indicated in the management plan.

- **Monitoring**
  On-going monitoring will gauge the effects of change and will inform future actions. Those with the identified lead roles in the Plan will have lead responsibility for the respective monitoring. The results of monitoring will be placed in the public domain.

- **Steering the implementation of the Management Plan**
  The future delivery and monitoring of the Management Plan will involve periodic discussion amongst a newly convened, knowledgeable and representative management plan advisory group, based on the existing steering group (*see 1.4 for list of members*) to:
  - Gauge progress against the Vision, Objectives and Actions
  - Consider monitoring issues
  - Review the resources available to deliver main activities
  - Have an involvement in the detailed decision making on the ground
  - Ensure understanding of the activities as they are implemented
  - Maintain a high level of support and consensus for the Plan.

Framework for the plan

1.9 The management plan has been kept as simple as possible but follows a standard format used on nature reserves and equivalent sites. The first six sections are largely factual in nature and set out the background information for the more 'hands-on' and practical later sections which detail proposed actions.

1.10 Much of the information has been provided by CBC, other members of the Steering Group and other experts. Two further supplementary pieces of work were commissioned in 2010. These were a repeat survey of the vegetation undertaken by Dorset Environmental Records Centre, and an independent hydrological appraisal of the site.

1.11 The sections of the plan are as follows:

2. **Background** – lists key stakeholders in addition to site owners; describes the strategic and policy context; provides a summary of the site's management history.

3. **Physical features** – describes how the geology, soils and hydrology make up the landscape; sets the landscape in a local area context, summarises what we know about the hydrology and related geology of the site.

4. **Ecology** – describes the habitats and associated species; assesses which species contribute to the special character of the site, and evaluates the importance of these species in a local, regional, national and international context; discusses how the ecological interest can be maintained.

5. **History** – describes how the site has been used by humans in past times.

6. **Access and use** – describes how visitors can access the site, and how it is used in the present day.

7. **Objectives** - provides useful categories under which to list actions for the management and use of St Catherine's Hill & Town Common. Each objective addresses the key issues that have been discussed in a number of Steering Group meetings and facilitated workshops since late 2009.

8. **Action Plan** – under main objective headings more precise management actions are outlined. A rationale is also included to help justify each action and help explain the underlying principles.

A 25 year vision

1.12 This Management Plan, and subsequent Plans, will be designed to achieve the following vision for the site over the coming twenty-five years[4]:

- Enhance the site's restful sense of place.
- Through careful management, sustain and restore heathland, wooded heath and woodland habitats and associated wildlife species, whilst acknowledging that there may need to be adaptation to climate change.
- Enable people to use, enjoy, and appreciate the special nature of the area through quiet forms of recreation such as walking, dog walking and horse riding.
- Help people appreciate how and why the heathland habitat is special.
- Take proper account of water issues relating to the site, improving the resilience to rain water, run off, and water absorption.
- Continue to use positive-wardening to engage with visitors and encourage sensitive use of the area.
- Actively involve local people in the site's use and management, having due regard to the views and opinions of local residents and site users.
- Maintain and enhance the collective spirit in managing and caring for the site.

[4] The vision for a 25 year period was requested by the Forestry Commission to give them an insight into future plans for the site following the approval of any felling licence application

2. BACKGROUND

2.1 This section sets out the strategic and policy context, and provides a summary of the site's management history.

Legal background and designations

Common land

2.2 Of the land covered by this plan it is only Area 2, the land on top of the Hill leased by ARC, which is registered common land[5] (*Fig. A2, Appendix 1*). This land is part of Town Common, which together with Coward's Marsh and Ogber, was registered as common land in 1967 under the Commons Registration Act 1965 (*Fig. A3, Appendix 1*). The more recent Commons Act 2006 is now the principal legal point of reference.

Christchurch Commoners

2.3 The ancient association of Christchurch Commoners has written records dating back to 1752 and evidence of Commoners in the Borough centuries before that. Their rights, manorial in origin, are:

- estover – taking furze, heather or underwood for fuel
- turbury – cutting and taking turf and peat for fuel
- pasture – grazing cattle

2.5 The current Register of Common Land 1975 also includes the right of soil and confirms all these rights as being in use. Now, few, if any of these rights are being exercised on the part of the common covered by this plan. A separate issue from manorial rights is the granting of permission by the present Commoners Association for horse riding on the common.

Nature conservation and geological designations

2.6 St Catherine's Hill forms part of Town Common Site of Special Scientific Interest (SSSI) (*see Appendix 1, Fig. A2 and Appendix 3, for full citation and map*) which itself is part of the wider Dorset Heaths Special Area of Conservation (SAC), and the Dorset Heathlands Special Protection Area (SPA) and Dorset Heathlands RAMSAR site. SAC, SPA and RAMSAR are international designations which underline the importance of protecting globally threatened habitats and nationally scarce and rare flora and fauna. Under 15% of the original area covered by heathland now survives in Dorset and what is left is badly fragmented; this is a situation reflected in other parts of northern Europe where suitable soils and temperatures exist.

2.7 SPAs and SACs are natural habitats and species interest features of international importance. They are governed by the Birds Directive 2010 and the Habitats Directive 2010 respectively. They impose obligations to maintain and where appropriate restore the habitats and species. Social, economic and cultural requirements, and regional and local characteristics can be taken into account in meeting this aim. The Conservation of Habitats and Species Regulations 2010 legislation provides the UK framework for the Directive. Government authorities and public bodies are required to have regard to the Habitats Regulations.

[5] Registered common land also includes Areas 1 and other parts of Town Common, owned by the Malmesbury estate. This includes small sites leased by the Gun Club and owned by Sembcorp Bournemouth Water

2.8 Town Common SSSI was first notified by the Nature Conservancy in 1951 and was subsequently revised and added to under Section 28 of the Wildlife & Countryside Act 1981 (*see Appendix 3*). Forming one of the most extensive blocks of heathland in Dorset, the SSSI was notified for the following reasons:

- Extensive areas of dry heath, with flushes on slopes giving rise to wet heath and valley mire, the latter of which can be floristically rich.
- Hummocks and pools in the floodplain supporting bog-mosses and other associated vegetation including the nationally scarce Brown Beaked Sedge[6].
- Breeding populations of all six reptile species native to Britain including Smooth Snake and the Sand Lizard[7].
- Breeding birds dependent on the mosaic of heathland, wooded heath and woodland, including Dartford Warbler, Nightjar, Woodcock and Great Spotted Woodpecker. Heathland and woodland raptors such as Hobby and Buzzard making use of the site.
- A large number of dragonfly and damselfly species including the 'nationally scarce' Scarce Chaser, Hairy Dragonfly and Downy Emerald.
- Other insect groups including the Heath Grasshopper and the Silver-studded Blue butterfly.
- Wet heath and pools which provide habitat with a variety of wintering and breeding wildfowl and waders, such as Snipe and Redshank.

2.9 The SSSI is 257 ha (634 ac) in extent, and, as well as St Catherine's Hill includes Sopley Common located on the north side of the A338. It is divided into 21 Site Management Units for monitoring purposes. Units 9, 10, 11, 12, 13, 14, and parts of 15 and 17 are included at St Catherine's Hill.

2.10 The SSSI also contains the St Catherine's Hill Geological Conservation Review site (SMUs - 22 and 23), with exposures (pits) and deposits that are of the Eocene era, originating some 35 – 40 million years ago when, unusually, the deposits were laid down in fluvial or estuarine conditions.

2.11 The designation of SSSI ensures that legal protection is given to the best sites for wildlife and geology. All owners are then bound by laws protecting the SSSI; in practice this means that consent is required for certain operations which might damage the site's special interest. In addition, local authorities have a general duty to take reasonable steps to further the conservation and enhancement of the special features found on SSSIs, as defined by the Natural Environment and Rural Communities (NERC) Act 2006, and The Countryside & Rights of Way (CRoW) Act 2000.

2.12 In practice this means that these authorities are legally bound to bring land under their control into a condition where the features for which they are designated are protected or enhanced. In other words, they are expected to achieve 'favourable' condition. Since the site is of international importance, there is also a requirement under the Habitat Regulations to get the site into favourable condition, forming part of DEFRA's Public Service Agreement target (*see also Section 10 Objective A*).

2.13 The condition of SSSIs is monitored on a six year cycle so that Natural England can advise on the type of management required. Units within sites may be determined as: favourable; unfavourable-recovering; unfavourable-no change; unfavourable-declining; part-destroyed or destroyed. Landowners are expected to achieve 'favourable' or 'unfavourable-recovering' condition.

[6] For Scientific names see *Table A5, Appendix 2*
[7] For status of Smooth Snake and Sand Lizard see *Table A6, Appendix 2*

2.14 The following species, species groups (assemblages) and habitats are monitored on the SSSI as part of Natural England's Conservation Objectives (Natural England 2008) for the site:

2.15 *Species*: Dartford Warbler; Nightjar; Woodlark (not known to occur in Area 2 or 3); Hen Harrier; Merlin; assemblages of lowland heathland breeding birds; Smooth Snake, Sand Lizard; assemblages of breeding dragonflies and damselflies; assemblages of heathland invertebrates; assemblages of breeding bird species in broadleaved woodland.

2.16 *Habitats*: Lowland mire (SMUs 9, parts of 15 and 17); Lowland broadleaved and mixed woodland – this habitat includes pioneer Scot's and Maritime Pine woodland fringing heathland (SMUs 9, 10, 11, 12 and 14): Disused quarries (SMUs 13 & 14).

2.17 The units of Town Common SSSI that form the area covered by this plan are assessed by Natural England on a regular basis, with one unit being assessed in September 2011. The following summary table shows the current condition and recommended remedial action for each unit. It also shows the main reason for the 'unfavourable' status is the reduced extent of heathland and its replacement by trees and scrub.

Table 3 Natural England's assessments of the condition of SSSI SMUs relating to Areas 2 and 3 of St Catherine's Hill & Town Common

SSSI Site Management Unit (SMU)	**Condition (date last assessed)**	**Area (ha)**	**Summary of recommended remedial action (NE)**
9 Blackwater Hill	Unfavourable, no change (20/9/2011)	15.88	Predominantly dry heath on the mainly south facing slope of St Catherine's Hill. There is no wet heath (M16) although there are some small damper areas with cross-leaved heath at the bottom end of two of the valleys. Some 34% of the unit area is covered by mature trees, mostly pine. Much of this could very easily be restored to good quality heathland, as indicated in the conservation objectives, and the issue is being considered by the site management plan, currently being prepared. The open heath is dominated by Calluna with few associates (bell heather, dwarf gorse, bristle bent) although it is rich in lichens and bryophytes as the sward is rather open. This may be partly a natural function of the hot dry conditions due to the south facing aspect and very well drained soils. The heather structure is diverse and quite open with gaps in the canopy with bare ground and lichens. Additional structural diversity could be introduced by selective mowing of small areas but this is not essential. There is little good quality bare sand and the unit would benefit if more were created. The young pine and birch on the open heath are at a stage where, although not yet affecting the heather, they soon will be and control is required this coming winter over much of the unit. There is still some mature Rhododendron on the open heath (and much under conifers). The SSSI remains in favourable condition for the 3 SPA birds (nightjar, woodlark and Dartford Warbler).

10 St Catherine's Hill	Unfavourable, no change (14/10/2011)	18.24	The unit comprises a good part of the relatively flat plateau on the top of St Catherine's Hill together with south and west facing slopes. Some 70% of the unit is taken by mature pine with much of this having a Rhododendron understorey, all in areas that would have good prospects of heath restoration. This is the main reason for the unfavourable assessment. The open heath is all dry heath and relatively free from invading trees, scrub and bracken. There were relatively few areas of single species scrawny appearing Calluna (an issue noted in the last assessment - this is more apparent in unit 9) and the effects of shading and leaf fall from retained trees was less evident. There have been small improvements in the condition of the open heath since the last assessment with areas previously cleared of trees and scrub having recovered their heath vegetation and further tree and scrub removal has taken place in a few small areas. However, overall the changes since the last assessment have been relatively minor. The SSSI remains in favourable condition for the 3 SPA birds (nightjar, woodlark and Dartford Warbler) although this particular unit has high levels of public access which may affect its ablility to support breeding nightjar.
11 Reservoirs	Unfavourable, no change (10/6/2009)	1.27	No change since last assessment. Much of unit a reservoir with disturbed grassy surrounds. Heathy presence could be encouraged by removing dense scrub and thinning out pines and linking and extending the heath to adjacent units. Lots of invasives - buddleja, cotoneaster, laurel, strawberry trees etc
12 Disused reservoirs	Unfavourable, no change (10/6/2009)	0.54	Some scrub removal has taken place but not at a sufficient rate. A pine tree stand to the east still needs pushing back. Bramble and piri piri are found over the redundant reservoir structure which would benefit from grazing.
13 The Pit / 22 GCR	Unfavourable, no change (10/6/2009)	1.44	Some scrub removal but pines still require removing and thinning around quarry edge. Patches of piri piri and sycamore and ash.
14 Rifle Range / 23 GCR	Unfavourable, no change (10/6/2009)	2.40	Some management work has taken place with respect to scrub and pine and birch seedling removal and this has resulted in some heather regrowth to the north east of the site. The north and the west of the site have a dense covering of pine growth which if thinned out could result in a further extent of heather regrowth.

Archaeological designations

2.18 St Catherine's Hill is rich in history (*see Section 5*). Some of the archaeological and historic sites on the hill are designated as Scheduled Ancient Monuments (SAMs) (*see Fig. A7, Appendix 1*).

2.19 Scheduled monuments are designated and added to a 'Schedule' by the Secretary of State for Culture, Media and Sport under powers contained in the Ancient Monuments & Archaeological Areas Act 1979, as amended.

2.20 Owners, such as CBC, of land where there are SAMs must now apply for permission from the Secretary of State to carry out any works. This is known as a Scheduled Monument Consent. English Heritage, the agency that advises the Secretary of State, encourages owners and occupiers to maintain their scheduled monuments in good condition by adopting sympathetic land use. This often requires nothing more than ordinary good land management such as the control of erosion or vegetation growth.

2.21 The scheduled monuments are:

- Eight barrows or tumuli, largely thought to be Bronze Age and labelled on the map (*see Fig. A7, Appendix 1*) DO8221, DO822a, DO822b, DO822c, DO822d, DO822n, DO822g, DO835.
- DO822j is the complex site of possible Roman Signal Station, site of chapel(s) and site of beacons at least up to early 1800s. Sometimes referred to as St Catherine's Camp.
- DO827 is the leaf shaped banked enclosure, it has been suggested this is Early Iron Age.

Planning policies

2.22 *Borough of Christchurch Local Plan*. The CBC Local Plan was adopted in March 2001 (amended 2007). Policies ENV 11, ENV 12 and ENV 13 are of relevance to St Catherine's Hill and Town Common SSSI. These policies will not permit proposals for development that are likely to adversely affect the integrity of any SSSI/SAC/SPA/RAMSAR or any 'specially' protected species or its habitat therein unless an assessment show that the site / species are not adversely affected, or that there are 'imperative reasons of over-riding public interest'.

2.23 The Council-owned part of the site (Area 3) is designated as public open space and as such is subject to byelaws (*see Appendix 4*).

2.24 The Council's approach to tree management varies dependant on location. To avoid confusion it is important that a distinction is made between these approaches. Generally, the Council's policy regarding trees on open space and highway land is that work is only carried out to trees that are dead, diseased or dangerous. However, where there is a requirement to remove trees (e.g. for nature conservation purposes), as in the case of the management plan area, work can be carried out to trees to achieve this aim. In most situations this will require the granting of a Felling Licence from the Forestry Commission.

2.25 Some trees, usually, but not always, on private land, may be protected by a Tree Preservation Order (TPO) or equivalent (such as a covenant, planning condition or conservation area). These are usually put in place to protect the public amenity value that individual or groups of trees provide. There are a significant number of such trees located on the residential area to the west of the plan area. Any work to these trees, with certain exceptions, requires permission from the Council. Trees that are dead or imminently dangerous are exempt but advice should always be sought in those instances. Work without permission can carry significant fines but the application process is simple and applicants have a right to appeal.

2.26 The *Dorset Heathlands Interim Planning Framework.* In order to manage pressures on heathlands of national and international importance resulting from development, and to comply with the Habitats Directive, the Dorset Heathlands Interim Planning Framework was produced by the Planning Authorities in south east Dorset and Dorset County Council. The plan initially runs until the end of 2011 but an extension to 2014 is expected. The document provides a framework for local authorities to ensure that there is no increase in urban pressures on internationally important habitats as a result of additional residential development between 400m and 5km from the area. Within 400m of such a site, residential development is not normally permitted. A replacement document is pending.

Site summary information

Table 4 Site statutory summary information

Designation	All or part of site	Name & other details
SSSI	All of St Catherine's which covers 32% of Town Common	Town Common. Notified (1949 Act), 1951 (part); 1971 (Part). Last revision, 1981 Act, 1994
SAC	All	Town Common SSSI
SPA	All	Dorset Heaths SPA of which this site is a part. Designated 1998. Directive on the Conservation of Wild Birds
RAMSAR	All	International convention on wetlands to which the UK is signatory. Dorset Heaths RAMSAR of which this site is a part. Designated 1998.
Common Land	All	Town Common (not including Area 3).
Scheduled Ancient Monument	Part	St Catherine's Hill Camp & Round Barrows. AM 822 series; AM 827 & AM 835.
Geological Conservation Review site	Part	GCR no 589. Palaeogene Period (Cenozoic Era / Tertiary Sub-era).
UK BAP	All	UK Biodiversity Action Plan. Lowland heathland, lowland mixed deciduous woodland and ponds are identified as key areas for maintenance, improvement and habitat creation. BAP species found on site, include a mixture or birds, reptiles and invertebrates.
CBC Local Plan	All	Policies ENV 11, ENV 12 and ENV 13

Land management during the last 20 years

2.25 This section summarises land management during the last 20 years by CBC and ARC. It also includes a summary of public objections to felling proposals. Details of land management required to safeguard different habitat types and species can be found in the Ecology section.

Christchurch Borough Council

1990 – 2000 Three, 3 year management agreements with English Nature under Section 15 of the Countryside Act (1968); Wildlife Enhancement Scheme, Area 3

2000 Partner in Hardy's Egdon Heath HLF Project, undertaking five year 64% grant funded habitat management including phased tree felling. Legal commitment to maintain restored habitats until 2025.

2001 Partner in Urban Heaths LIFE Project, receiving 100% grant for four years to undertake education work and wardening

2004 Rhododendron clearance at north end of site. Year Four felling works as part of Hardy's Egdon Heath Project

2005 Year Five felling works stopped in February due to objections from local residents

2008- 2011 Higher Level Stewardship (HLS) Agreement for site management approved by NE to run for 10 years to 2018. Part of wider 'Dorset Urban Heaths

Grazing Partnership', which has to date involved rotational scrub control to maintain existing open areas and control of invasive plants. This work carried out largely by volunteers. Capital works including information board, kissing gate and post and wire fencing. Scope to include further funded management works (e.g. tree felling) following public consultation.

Amphibian & Reptile Conservation (previously The Herpetological Conservation Trust HCT)

1991 HCT begin 21 year lease of Town Common from Malmesbury Estate. This includes Area 1 and 2 plus additional areas of the SSSI on the north side of the Avon.

2003 HCT submit Felling Licence Application (FLA) for Areas 1 and 2. Public meeting held as form of consultation but proposals were perceived as a *fait accompli*. Many letters of objection together with a petition of over 2000 signatures were received by CBC. CBC objected to the application. Forestry Commission undertook to make the final decision.

2004 HCT, CBC, Hurn Parish Council (HPC), English Nature, West Christchurch Residents Association (WCRA) hold site meeting to discuss concerns of HCT's FLA. Later - mass spot-painting of trees occurs as a protest by some local residents and representatives.

2005 FC request SW Regional Advisory Committee to hold meeting to address concerns. Held in January.

2006 After consultation, HCT re-submitted Felling Licence Application to cover reduced area i.e. Area 1 only. Most parties accept this as a compromise with reservation and subject to co-operation on Areas 2 & 3.

2008-2018 HLS Agreement for site management is approved by NE to run for 10 years to 2018. Lease from Malmesbury Estate extended to cover this period.

2011 ARC finish works relating to final year of licensed felling in Area 1.

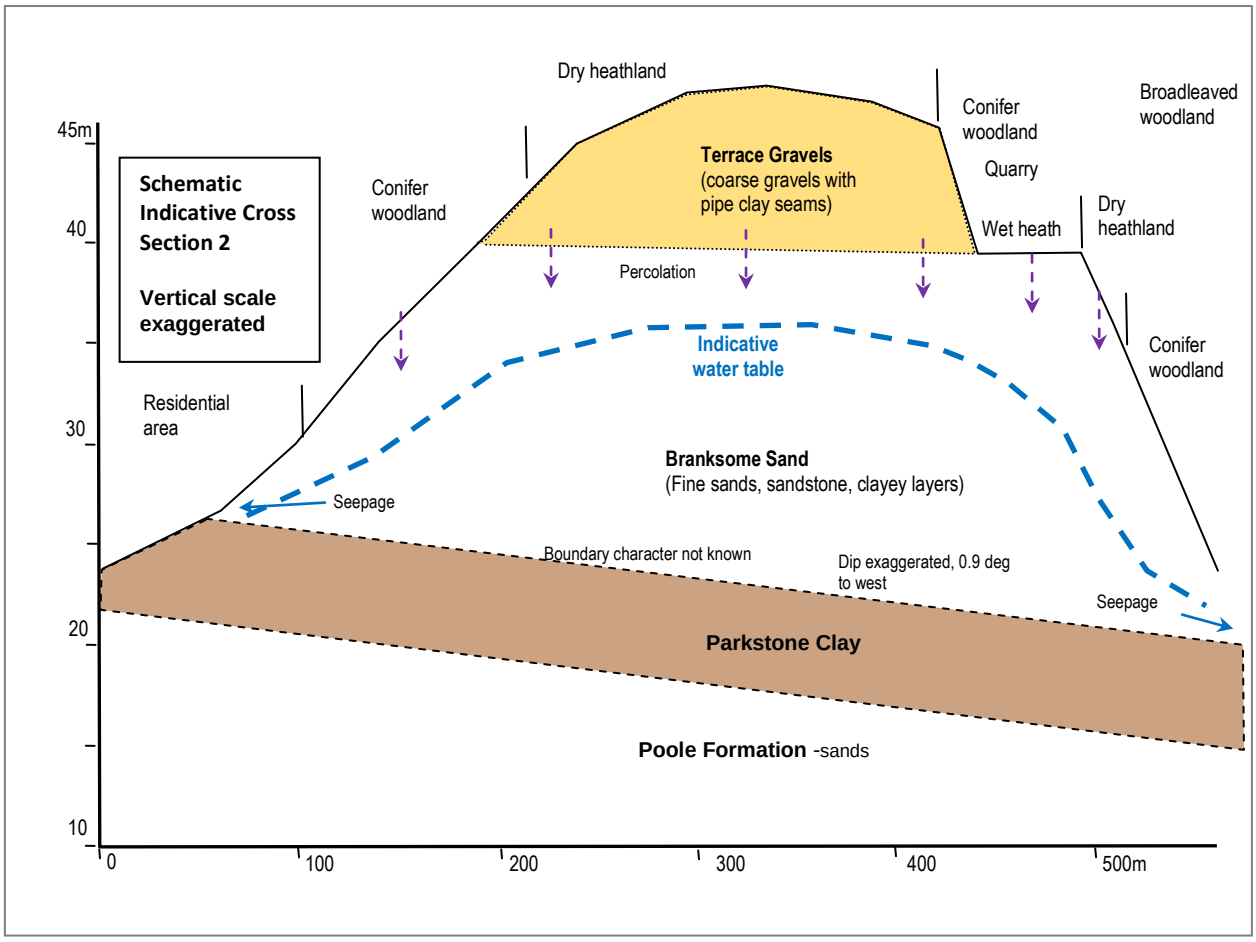
3. PHYSICAL FEATURES

Geology

3.1 A range of geological strata can be found at St Catherine's Hill and Town Common. The ridge at St Catherine's Hill peaks at 45m in the south and 49m in the north at Blackwater Hill. The south-west hillside varies in slope from almost level in the plateau top to c. 40 - 45°, and there are a number of side valleys. British Geological Survey (BGS) map 329 shows the geology is of the Eocene/Pleistocene era. Spectacular views from the summit show the broad floodplains of the Avon and Stour and help to illustrate the down-cutting power of these major rivers in Pleistocene/Holocene times.

3.2 The hill is capped by River Terrace Gravels, consisting of flintstones in a coarse sandy matrix. Sandwiched between these gravels and a bottom clay layer (Parkstone Clay) are stoneless sands (Branksome Sand). There are also thinner clayey layers in places in the Terrace Gravels and the Branksome Sands. The middle and upper strata can be observed in the faces of small gravel quarries/pits at the top and east side of the hill (this has contributed to its designation as a Geological SSSI).

Figure 1 *Geological cross section of St Catherine's Hill, west to east. Section 2 refers to map in Allen 2010*



Soil types

3.3 A range of soil types is reflected by the underlying geology and drainage. Nutrient poor, droughty podzols are found on gravels and to a lesser extent on sands. Locally, peaty soils occur where there is a high groundwater, and less permeable clayey soils are found in areas where there are clay lenses or associated with Parkstone Clay towards the base of the hill.

Hydrology and hydro-geology

3.4 There are no rivers or streams in the area for which this management plan is concerned (Areas 2 and 3). However, there are a number of ditches at the base of the west side of the hill. These ditches intercept water from seepages, and transfer it to the surface drainage network in West Christchurch.

3.5 Standing water is restricted to a pool in the largest quarry, and to small pools associated with excavations of naturally occurring wet heath areas. It appears to be formed where the relatively impermeable Parkstone Clay meets the more freely drained upper sands, and the groundwater within the sands is forced to the surface creating springs or more gentle seepages called 'flushes'. Standing water also remains on the surface where the water collects over the less permeable clayey substrates.

3.6 Issues relating to water have long been a concern for residents adjacent to the site, not least because their properties are downslope of the reserves. The key concern relates to existing water issues (such as water logging of gardens and surface water flowing off site) worsening, to a point where they may be an impact on properties, following any removal of trees.

3.7 In recognition of the above, in 2010, the Management Plan Steering Group commissioned The Environmental Project Consulting Group to produce an assessment of the interactions of the hydrology and geology ('hydro-geology') of the site, including the likelihood of landslip, flooding and erosion as a consequence of management (Allen, 2010). This comprised both desk-top and site-based appraisals. The report was mainly concerned with the hydro-geological properties of the west side of the watershed[8] given local residents concerns about flooding in this area. Selected households in West Christchurch with flooding problems were visited.

3.8 As can be seen, the hydro-geology of St Catherine's Hill is complex because of the layered nature of the rock strata and their relative permeability. For the purposes of the study, the plateau area and west slope was therefore divided into sub-catchments (*Fig. A4, Appendix 1*). The authors then selected a number of study areas, representative of different parts of the site (western catchment) in order to assess a range of site conditions. In order to assess the impact of tree removal (and conversion to heath), and without long-term research and detailed modelling, a number of assumptions had to be made about known evapotranspiration[9] / rainfall interception[10] rates of different broad vegetation types. The report's authors are careful to emphasise that standard data on conifers may over-estimate the role of the pines on the Hill, since the latter have a sparse canopy that may have less effect on soil hydrology than commercial forests as old trees do not absorb so much water.

[8] In this case, the watershed is the upper ridge-line of the hill, and from this line surface water will flow down one or the other side of this line. Watersheds define the boundaries of river catchments. On the Hill there are two main catchments, one flowing west, the other flowing east

[9] Evapotranspiration is a process by which water that enters the ground is dawn up by roots, passing into leaves and then passed (transpired) into the atmosphere.

[10] Interception is where water remains on vegetation and is then evaporated back into the atmosphere.

3.9 The following is a summary of findings and recommendations with regard to potential for tree removal / heath restoration for the west-sloping sub-catchments on different substrates, and is taken directly from the report in order to avoid any misinterpretation:

'The risk of adverse hydrological effects is thought to be greatest from tree felling on lower slopes close to the junction with the Parkstone Clay, especially in areas of complex geology such as where there are nearby thin gravels on the slopes over the Branksome Sand. There is a more intermediate risk when felling trees on thin gravel spreads on slopes, and least risk given felling on the Branksome Sands. It follows that areas with higher risk require greater levels of mitigation to reduce that risk to acceptable levels.

The risk of adverse hydrological effects on downslope urban areas is reduced by:

1. Avoiding felling on lower slopes adjacent to the urban boundary or on, or close to, the Parkstone Clay;
2. Felling small areas initially and restricting these areas to a. the top of the hill and uppermost slopes, to b. areas remote from housing and also c. locations where excess water can be more easily drained off-site;
3. Restricting felling so that only one area is felled initially within any one subcatchment and no more than five to six areas initially;
4. Avoiding felling on the steepest slopes where they occur close to housing;
5. Thinning trees in critical areas such that a more open woodland canopy can allow heathland to develop on the woodland floor (wood heath);
6. Using appropriate mitigation to reduce surface flows and encourage evaporation;
7. Closely monitoring the effectiveness of the heathland regeneration and any hydrological effects and proceeding with further phased felling when an assessment of the first phase felling confirms that it is safe to do so; and
8. Ensuring that all drains and ditches around the site, and any leading offsite, are maintained and functioning.

We recommend that initial first phase fellings on upper slopes should be restricted to five or six small areas of about 750sqm, equivalent to strips of about 10m x 75m. If larger areas are to be restored to heathland, these should be restricted to the plateau surfaces or consideration given to thinning rather than clear felling (or a mixture of both). The results of these initial fellings should be closely monitored, compared to control areas, and the results of such monitoring carefully considered prior to any further phased fellings.

Appropriate mitigation should be used to cope with the open ground situation in the time between felling and heathland establishment.

We have seen no evidence of past slumping or landslipping, the hillside having had many thousands of years to stabilise since the end of the last ice age and especially since the Bronze Age (or earlier) when woodland would have first been removed and heathland established. Given the precautionary approach to felling discussed above, landslipping would not be expected.

We have seen some evidence of the effects of surface washing below the existing pines leading to a slightly lowering of the sloping land surface; also the accumulation of material (such as upslope of tree stems). We assume that this slight erosion may arise when heavy storms have washed away leaf litter and exposed the sandy soils to surface washing. Heathland establishment would give better ground cover and reduce the potential for such erosion however, care would be needed to prevent such erosion in the time period between felling and heathland establishment.

We have noted that many of the tall mature pines have stems sloping back towards the hillside and that slight erosion on the downslope side of the tree stems may be destabilising some of the trees. We recommend that an assessment of their health and safety should be undertaken. Removal of any unsafe trees may provide opportunities for heathland regeneration in those locations.'

3.10 For practical purposes, the site has been divided into four areas (*see Fig. A5*):

A Plateau sub-catchments draining west (and/or south)
B Plateau sub-catchments draining east (and/or north)
C Slope sub-catchments draining west (and/or south)
D Slope sub-catchments draining east (and/or north)

3.11 Areas falling under C and to a lesser extent A are therefore the most hydrologically sensitive with regard to potential impact on properties, although it has been noted that it is currently not possible to quantify the contribution of groundwater flows to western sub-catchments from the other areas. Fig. A5 (*Appendix 1*) shows these areas and the plateau area as demarcated by 40 or 45 m contours. The sub-catchments have been sub-divided and numbered A1-A9, B1-B7 and D1 to D4 for easy reference and to act as future management compartments.

3.12 *Initial maximum*[11] allowable areas for felling in the various sub-catchments, without risk of adverse flooding of the residential area, were clarified in communication with the author of the hydrological report. Monitoring would need to take into consideration the cumulative effect of felling in an entire sub-catchment. These guidelines have been accepted by the Steering Group as follows:

Plateau

- Sub-catchments in A and level areas in sub-catchment B to be restricted to 0.75 ha (1.85 ac) [12] per sub-catchment (e.g. in irregular shapes) in any one block or coupe if all trees removed (i.e. equivalent to 1.50 ha (3.7 ac) if 50% thinning undertaken)
- Level areas in B that slope gently eastwards may support up to 1.5 ha of complete trees removal
- Monitoring (over the period of the plan) using dipwells would then need to demonstrate no adverse hydrological effects before further work.

Slopes

- Sub-catchments in C, where there is hydrological risk (e.g. on steep slopes close to housing), restricted to 5 or 6 in total across all of these areas with maximum block / coupe size of 0.075ha (0.19 ac)[13]
- No further felling until ground vegetation has re-established with no adverse hydrological effects. Monitoring using dipwells may be required over a longer period of time than on the plateau.

Landscape character

The national and regional context

3.13 At a broad scale and context, St Catherine's Hill and Town Common lie within the Dorset heaths National Character Area, neighbouring the New Forest National Character Area immediately to the east of the river Avon. There are 159 such areas which describe the landscape of England at a sub-regional scale – these can be read in full under 'landscape character' on the Natural England web site.

3.14 Relevant descriptions which summarise the Dorset Heaths National Character Area include:

[11] See *Appendix 6, Table B2*
[12] 0.75 ha can be represented as an area of 150m by 50m or about 500 x 160 ft.
[13] 0.075 ha is equivalent to an area of 10-25m by 30-50m or about 30-80 ft by 100-160 ft.

- A landscape which feels broad and open, with sweeping views. It contrasts strongly with the less open adjacent landscapes.
- The undulating heathland comprises tracts of heather, stunted pine trees, and gorse scrub.
- Stands of conifer trees form prominent local landmarks.
- The mix of heathland, farmland, woodland and scrub blend together in a mosaic appearance.

The Dorset Heathlands have a rich archaeological heritage and significant cultural associations, particularly through the novels of Thomas Hardy.

The district level context

3.15 At a more detailed local level, a landscape character assessment was produced for the CBC area in 2003 by Macgregor Smith Landscape Architects. The sections relating to St Catherine's Hill and Town Common confirm that the location is a prominent, highly valued and well used part of the Borough's landscape. The text describes the importance of managing the area for all its interest and securing a balance between all of the important ecological, landscape and recreational interests. Summary points which relate to St Catherine's Hill and Town Common include:

- The area encompasses a spine of coniferous forest and open heathland that divide the Borough into two.
- St Catherine's Hill forms a dominant landmark in the centre of the Borough.
- Town Common, Sopley Common, Avon Common and Barnsfield Heath, represent the main areas of heathland within this area and within Christchurch as a whole.
- The rolling landform, distinct landscape of the heathland and pine trees gives this area a strong sense of place. The landscape provides a very strong and distinctive setting to the A338 as an approach to Bournemouth and Christchurch. This area plays a significant part in the perceived character and quality of the Borough as a whole.
- The area is an accessible and well used recreational landscape.
- To maintain both the landscape and ecological interest, these areas will require continued management.

3.16 From the different landscape character descriptions above, the main factors which influence and define the site's landscape character can be broadly summarised as:

- Openness, especially the more open tracts of heathland.
- The internationally important wildlife habitats.
- Woodland, including coniferous woodland, offering landmarks and identity.
- Mosaics of heath, wood and scrub.
- The elevation of the site, which both affords views and is itself a local landmark.
- The importance of managing the area, and avoiding disturbance to it, to protect its wildlife value and its landscape importance, and maintain its valued recreational use.

4. ECOLOGY

Background

4.1 St Catherine's Hill and Town Common are part of the Town Common SSSI which extends northwards to include Sopley Common and East Ramsdown (*see Appendix 4 for SSSI map*). The site supports a variety of habitats including wet and dry heath, coniferous and broadleaf woodland and scrub.

4.2 Town Common SSSI, lies adjacent to further large tracts of semi-natural floodplain and heathland habitat, namely the Avon Valley SSSI, Moors River SSSI and Hurn Common SSSI. Due to their ecological connectivity, these extensive natural habitats contribute to an area of outstanding importance for wildlife on both national and international scales.

4.3 The approximate size of different habitats occurring within St Catherine's Hill and Town Common, Areas 2 and 3, have been calculated (*Table 5*) from the recent vegetation survey (Walls & Crew 2010). Coniferous woodland covers approximately 52% of this area.

Table 5 Phase 1 habitats present at St Catherine's Hill & Town Common, Areas 2 & 3

Habitat	Area 2 (ARC managed land)	Area 3 (CBC land)
Conifer woodland	9.38 hectares / 23.18 acres	18.24 hectares / 45.07 acres
Broadleaf woodland	1.65 ha / 4.08 ha	0.54 ha / 1.33 ac
Mixed woodland	0.00	0.61 ha / 1.51 ac
Scrub including gorse	0.10 ha / 0.25 ac	0.00
Dry Heath	5.29 ha / 13.07 ac	15.18 ha / 37.51 ac
Wet heath	0.12 ha / 0.30 ac	0.63 ha / 1.56 ac
Acid grassland	0.18 ha / 0.44 ac	0.00
Grass / heath mosaic	1.16 ha / 2.87 ac	0.00
Bare ground	0.16 ha / 0.39 ac	0.00
TOTAL	18.04 ha / 44.58 ac	35.20 ha / 86.98 ac

Habitats

4.4 St Catherine's Hill and Town Common (Areas 2 and 3) support a range of wet and dry heath, mire[14], coniferous and deciduous woodland and scrub habitats of varying ecological importance. The majority of the existing coniferous woodland appears to have been self-seeded, growing up over the last 60 years, with younger aged trees spreading out from the main woodland block. Whilst the larger Area 3 has twice the cover of coniferous woodland than Area 2, the latter has a third less heathland (mainly dry heath).

4.5 The first comprehensive botanical survey was a Phase 1 habitat survey undertaken in 1982-83 by surveyors at the Dorset Environmental Records Centre. A further vegetation survey, using the National Vegetation Classification (NVC) system (Rodwell 1990 *et seq*) was commissioned by CBC in 2000. An update of this was commissioned by CBC, NE and ARC and completed in February 2010 by the Dorset Environmental Records Centre (Walls & Crew 2010). NVC surveys classify particular groupings or communities of plants, providing a standard for the whole of Britain. These communities are affected by physical conditions and management (or lack of), so NVC surveys provide very useful information about past and potential future management.

[14] Mires habitats are found on nutrient-poor, peaty soils with a water table near the surface

National Vegetation Classification survey 2010

4.6 The following (*Table 6 below*) is a tabulated summary of the results of the NVC survey in 2010, with Areas 2 and 3 of St Catherine's Hill and Town Common shaded (in addition, there are a few additional, small, uncategorised habitats such as ponds and bare ground in all areas).

4.7 The survey covered a large, complex area, and so the site was sub-divided into 'parcels' based on gross differences in the structure of vegetation and/or the domination of plant species. These parcels were numbered and entered onto a GIS[15] database, and annotated with information that is useful for the future management of the site.

4.8 It is apparent from the survey that there is a much greater diversity of mire and wet heath communities in Area 1 (outside this management plan) than in Areas 2 and 3. (*Fig. A6, Appendix 1*) shows the distribution of habitats / vegetation types mapped.

Table 6 Vegetation communities recorded at St Catherine's Hill & Town Common (Areas 1-3). Habitats in bold are equivalent to the simpler Phase 1 habitat characterisation

NVC	**Description and occurrence at St Catherine's Hill (i.e. Areas 2 & 3)**	*Importance & Distribution on the site*
Woodland 'W' communities		
W4	Downy birch – Purple Moor-grass **woodland**. Stands of recent woodland in damp patches where Sallow is common	Damp deciduous woodland of interest locally
W16	Oak – Birch – Wavy Hair-grass **woodland** This woodland is dominated by conifers comprising 95% Maritime Pine to 5% Scots Pine. The designated stand-type indicates the dominant species that would occur should natural colonisation occur and not indicative of what is there now	Dominance by pine with poor understory and ground layer and low wildlife interest
W23	Common Gorse – Bramble **scrub**. This largely constitutes gorse but there are scrub stands	
Heathland 'H' communities		
H2	Common Heather – Dwarf Gorse **dry heath**.	Lowland dry heathlands are Biodiversity Priority Habitats and included in Annex 1 of Habitats Directive. This dry heathland type is found throughout the site
H3a	Common Heather – Bristle Bent heath. This is a community that is **intermediate between wet and dry heath.**	Lowland dry heathlands are Biodiversity Priority Habitats and included in Annex 1 of Habitats Directive. Unclear whether this occurs in small transitional areas in Area 3
Mire 'M' communities		
M16a	Cross-leaved Heath **wet heath**, typical sub-community Some of this vegetation is dry with varying amounts of Purple Moor-grass indicating impoverishment of the community perhaps caused by fires.	Wet heaths such as M16 are Biodiversity Priority Habitats Where this occurs in Areas 2 & 3 also has characteristics of M25
M25	Purple Moor-grass – Tormentil **mire** Dominated by Purple Moor-grass. Hare's tail Cotton-grass found beside a pool in Area 3	Associated with all areas, see also M16a above. Hare's tail Cotton-grass is scarce in southern England

[15] GIS – a Geographical Information System consisting of a relational database and software that will allow the analysis of data and the production of digital, scaled maps

4.9 Areas of heathland, (*shown in lilac and purple on Fig. A6, Appendix 1*), are characterised by a high cover of Common Heather, together with Dwarf Gorse and Bracken. In wetter areas Cross-leaved heath or Purple Moor-grass and other species replace the heather. The 2011 survey assessed the stage of heather growth (*see Table 10 for explanation*) as well as the degree to which pine and Downy Birch had invaded the vegetation. The results showed that all but five of the 35 heathland parcels[16] were subject to 'scattered' trees, of these 15 parcels supported young pines and 25, older pines. Wooded-heath can be best described as heathland that is able to persist underneath a scattered canopy of trees. Wooded-heath can be of significant conservation value, and a further definition and implications of this will be discussed later in this section.

4.10 Mature pine woodland, largely dominated by Maritime Pine, but also with some Scot's Pine, forms a dense block in the centre of Area 3, where it occupies both the plateau and the western slope (compartments C4, C5, A6 and parts of A7 and C3). The even-aged woodland in these areas had less than 5% cover of young trees, indicating there is little to replace woodland, immediately the mature trees start to die (and this process has already begun). The woodland then extends northwards along the western slope (compartments C2, C1 and D1). In the south, there is another block of mature trees (C6), but these are of mixed origin, with both pines and broadleaved trees, including Aspen in wetter areas. Likewise there are small areas of broadleaved trees including Grey Willow and Downy Birch with a more open, damp field layer along the bottom of the eastern slope (*see Appendix 1, Fig. A6*).

Comparisons with earlier surveys

4.11 In comparing the 2010 survey with previous surveys, Walls & Crew note the continuing encroachment of pine and Rhododendron onto the heathland, and that in places Rhododendron is now the dominant cover. Old maps show that most of these woodlands have developed over the last 50 to a hundred years, although ring counts of felled trees suggest that the largest individuals were about 50 years old. The report concludes that the even-aged structure and sparse understorey of the mature pine canopy appears to contribute little to the biodiversity of the site.

Non-native plants

4.12 There are a number of non-native plants on the site. Rhododendron, Piri-piri Burr, Maritime Pine and Strawberry Tree have become invasive, and now dominate some areas thereby reducing native plant diversity. Whilst the non-native species add to the diversity, or variability of the ecology of the site, it is recognised that site managers have a legal obligation to control them and they contribute little in providing habitat for other plants and animals. There will always be a few exceptions.

4.13 Rhododendron occurs in large blocks on St Catherine's Hill. Whilst it has attractive purple flowers for a few weeks, this is a dense shrub which produces soil toxins, reducing competition from other plants. It also is a main carrier of two recently identified fungus-like *Phytophthora* pathogens, sometimes causing what is popularly known as '*Sudden oak death*' which can cause death to a range of shrubs and trees including garden shrubs, oaks and bilberry. The disease is now spreading rapidly from the south west of the UK. Whilst Rhododendron has almost no value to wildlife, it does currently fulfil a role of forming screens along boundaries with houses.

4.14 The spread of pine onto heathland has been discussed and a large proportion of the coniferous trees on site are Maritime Pine. This rapid growing species, native to the Iberian and Mediterranean region, was systematically planted from the 19th Century. Value to

[16] It is important to note there is a great variation in parcel size

wildlife, compared to Scot's Pine, is very low and mature trees rain down seed-filled cones to produce the next generation. Unlike Scot's Pine, mature trees also drop lower limbs to produce a high umbrella shaped canopy. Many of the large blocks of these trees on site appear close to the end of their natural life.

4.15 Piri-piri Burr is a small prostrate plant native to New Zealand, thought to have been imported on wool for the textiles industry on the Tweed. It is abundant in short grassland where it smothers out native plants. It is found around the water reservoirs and is also likely to occur in other areas. The plant establishes itself on bare ground. It is frost sensitive, and its burr encased seeds hook themselves onto the socks and trousers of visitors or the fur of dogs.

4.16 Strawberry Tree, a member of the heather family, is another species that has become established widely. It can also 'smother-out' other species, for example, native heathers, and has benefited from climate change.

Important plant and animal species

4.17 Whilst the heathlands have a range of specialised plants and animals associated with them, the dense pine woodlands, particularly where Maritime Pine dominates, currently support little wildlife, although the annual occurrence, in autumn and early spring, of small flocks of Crossbill is of interest. These birds appear to be associated more often with mature Scots Pine. Most woodland blocks do not have a layered structure. The canopy is dominated by mature trees and as a result the ground vegetation is either patchy and open, or covered in Bramble or Bracken. However, the damp broadleaved or mixed woodland habitats, and the scrubby edge habitat between these habitats and heathland, make a significant contribution to the variety of plants and animals that are found on site.

4.18 A wide range of species have been recorded at St Catherine's Hill and Town Common (Areas 2 & 3) and over 1,000 have been recorded to date, for the site as a whole. The three tables below list species that are important internationally and nationally or that are protected by statutes or planning guidance. A summary of the number of species with designations, that range from local to international importance is given in Table A6, and a full list in Table A7, both in Appendix 2.

4.19 Several groups of animals are of particular importance on the site because they are mainly heathland specialists and cannot survive in other habitats. As heathland is a nationally scarce habitat, the component species are likewise very scarce. Included are breeding birds, the reptile assemblage - in particular the Smooth Snake and Sand Lizard - and a number of invertebrates which are dependent upon the habitats found on site, the largest group of which are the Ants, Bees and Wasps (collectively known as *Hymenoptera*). Of 77 species of the group recorded in Areas 2 and 3, there are 14 scarce or rare members (including five Red Data Book species). Whilst evidence of breeding has not been recorded, a large number of dragonfly and damselfly species have been seen. Some of these species are likely to breed within the more extensive mire habitat of Area 1, and some such as the Scarce Chaser are strongly associated with the nearby rivers Stour and Moors.

4.20 It is recognised that there are plants and animals, many of which may be common, that contribute to the biodiversity of the site and are of considerable importance to people; these occur in a range of habitats on site. Popular birds include the Hobby, Buzzard and Raven, as well as others such as Green and Great Spotted Woodpecker and Song Thrush which are associated with woodland and scrub habitats, most of which are, unfortunately declining countrywide. Cuckoo is often heard from the site but is likely to be breeding in adjacent areas. Mammals, in particular Roe deer and a number of bat species, also add interest to the area.

Table 7 Important breeding birds

Species	Status	Comments
Nightjar	Annex 1 Birds Directive; Red-listed[17] (globally threatened or recent serious decline); BAP[18]	2 territories in largest block of heathland in north of Area 3 in 2009
Dartford Warbler	Annex 1 Birds Directive; Amber-listed (less serious decline than Red); Schedule 1 of Wildlife & Countryside Act (WCA) 1981 & amendments[19]	2 territories in largest block of heathland in north of Area 3 in 2009
Linnet	Red-listed; BAP	4 territories in 2005 (area 1)
Tree Pipit	Red-listed; BAP	4 territories in 2005 (area 1)
Song Thrush	Red-listed; BAP	2 territories based on 2005 survey (area 3)
Bullfinch	Red-listed; BAP	2 territories based on 2005 survey

Table 8 Reptiles

Species	Status	Comments
Smooth Snake	Legally protected; nationally rare; WCA 1981, BAP	Dorset Heaths hold c. 90% UK population
Sand Lizard	Legally protected; nationally rare; restricted to south England, WCA 1981; BAP	Dorset Heaths hold c. 80% UK population
Adder	Local and declining; WCA 1981; BAP	
Grass Snake	Local and declining; WCA 1981; BAP	
Common Lizard	Widespread; WCA 1981; BAP	
Slow Worm	Widespread; WCA 1981; BAP	

Table 9 Selected invertebrates

Species	Status	Comments
Andrena argentata	RDB 3[20] (rare)	A solitary bee, Area 2
Dusky Cockroach	Nationally scarce[21] (Nb)	
Heath Grasshopper	Red Data Book (RDB) 3	
Potter Wasp	RDB 3 (rare)	Area 2
Scarce Chaser dragonfly	RDB 3 (rare)	
Silver-studded Blue butterfly	BAP, Nationally scarce (Nb)	Listed under Section 41 of the Natural Environment & Rural Communities (NERC) Act[22]
Small Heath butterfly	BAP	Section 41 species
Grayling butterfly	BAP	Section 41 species
Mottled bee fly	BAP	Section 41 species
Hornet Robberfly	BAP	Section 41 species
Grey Dagger moth	BAP	Section 41 species
Erratic Ant	BAP	Section 41 species

[17] A national classification for bird 'Species of Conservation Concern'. 'Red listed' species are globally threatened, or recent serious decline or contraction in range in UK; Amber Listed – decline / contraction but less sharp

[18] BAP or Biodiversity Action Plan – included in UK plan that aims to address declines for species or habitats

[19] Schedule 1 birds are protected by legally enforced penalties

[20] RDB includes nationally rare spp (plants / animals such as invertebrates) placed in a Red Data Book – they are sub-divided according to IUCN categories of 1'endangered', 2'vulnerable', 3'rare'

[21] Nationally scarce – occur in range of 16 – 100 10km squares in the UK, sub-categories are Na & Nb

[22] A list of habitats and species of principal importance for the conservation of biodiversity in England

How the ecological interest can be maintained

Background

4.21 The nature conservation interest is represented largely by the presence of lowland heathland supporting a range of characteristic plants and animals because this habitat is declining internationally. However, on the Hill, there exists a mosaic of natural habitats that includes heathland, coniferous and deciduous woodland, scrub and small wetlands arising from springs or pits, which support other plants and animals. The SSSI citation (*Appendix 3*) states that heathland has been replaced by pine woodland in some places, whilst in others is at a transitional wooded-heath stage, where trees are actively invading. This latter stage can be good for many species initially but without management causes a decline and eventual loss of heathland interest.

4.22 Therefore there is a delicate balance to be achieved in conserving and where appropriate enhancing the habitats and species of national and international importance. At the same time, it is important to protect other, often more common-place species and habitats of importance on a local scale but of particular value for people who frequent the site. The following sub-sections show how ecology can be enhanced whilst ensuring that the site remains dynamic. This includes transitions and mosaics between heathland with scrub and deciduous or mixed deciduous and coniferous woodland.

Heathland ecology

4.23 Pollen records in the UK show that heathland developed from the Bronze Age (c. 3000-4000 years ago) onwards, following gradual clearing of the land during the Mesolithic Period. This heather and gorse dominated habitat has persisted on nutrient-poor, sandy soils until the 19th century. Gradually, as rural populations declined and land-use changed, the existing heathlands and commons became fragmented, giving way to areas of arable land, plantation forestry and the increasing effects of urbanisation.

4.24 Because heathland is a semi-natural landscape that has been created by human activity over millennia, modern management has to replicate the historic use of its vegetation by humans, but in a modern context. Today, commoners are less likely to collect firewood, there are no grazing animals, bedding is not needed for livestock (furze, bracken), peat is not burnt and cottages are no longer thatched with heather. The cessation of these activities, together with active reforestation, have resulted in the loss of heathland to woodland, especially new, non-native and invasive species such as Maritime Pine and Rhododendron, as well as an increase in the frequency of Purple Moor-grass and Bracken in some areas.

4.25 **Fragmentation**

Habitat change from heathland to woodland in several areas has led to fragmentation and the formation of isolated open areas on a local scale. Many species, particularly invertebrates and reptiles (e.g. Silver-studded Blue butterflies) are unable to move through the barrier of trees to other open areas. This prevents recolonisation of otherwise suitable habitat and genetic mixing. Forming corridors to reconnect these open areas, allows wildlife movement and creates additional edge habitat which is valuable to many species, particularly birds associated with woodland, which largely only occupy the outer edges.

Heathland management

4.26 Whilst most of the plants and animals found on heathlands will benefit from general heathland management involving the rotational clearance of young trees and scrub by

coppicing, rejuvenation of heather by cutting or grazing[23], creation of fire breaks and sand patches, there are some species that will benefit from localised measures. The extent to which these measures are undertaken may depend on the specialists that are present.

4.27 The following sub-headings are examples of requirements for different heathland specialists that are present at St Catherine's and Town Common (Areas 2 and 3); this reinforces that the best management for the range of heathland specialists is in providing a mosaic of small areas of bare sand and different age classes of heather and/or gorse. Some scrub and woodland edge are also required for good biodiversity.

4.28 Complete eradication of most invasive (usually exotic) plants is difficult. The broad-spectrum systemic herbicide glyphosate has been used to control Piri-piri Burr by spraying; however alternatives such as smothering with mats and burying have been used with some success.

4.29 Rhododendron and Strawberry Tree have been controlled by cutting and spot treatment of stumps or stems with glyphosate. Repeat treatments may be necessary, depending on weather conditions at the time of application and other factors. Bracken and Purple Moor-grass are both important components of habitats (the latter being of particular benefit to reptiles) but may need control in some situations. Bracken may be controlled by bruising or herbicide, and Purple Moor-grass is probably best cut or grazed.

Nightjar

4.30 These migrant birds from Southern Africa nest on ground under leggy heather close to clearings and need individual trees for song posts. The most extensive area of suitable habitat at St Catherine's Hill and Town Common is in C2 in the north of Area 3 and it is no surprise that two territories of Nightjars are found here. About 5ha of suitable habitat (heathland or young wood-heath) is required for one pair of breeding and foraging Nightjars. This area of relatively open heathland and wood-heath also has strong interconnections with the large swathes of adjacent heathland in Area 1 with larger populations of Nightjar.

4.31 Research has shown that Nightjars are highly susceptible to disturbance, particularly when they nest close to footpaths. Here, they fly off the nest more readily in the presence of dogs than of people alone. Paths within 225m of breeding birds have been strongly correlated with nest failure (Murison, 2002). In studies elsewhere dogs have been recorded trampling nests and predating the birds. Suggested management within suitable habitat (Symes & Day 2003) includes creating or maintaining about 20 open bare patches for nesting per hectare[24].

Dartford Warbler

4.32 Dartford Warblers nest off the ground in dense shrubby vegetation, especially gorse but also mature heather. Although they are not as sensitive to disturbance as Nightjar they will chose locations where people and dogs are less likely to venture. Resident all year they are particularly vulnerable to harsh winters. Territories were recorded in 2009 in compartment C2 in the north of Area 3 and in compartment A7, to the south, in 2011. These warblers prefer a mix of mature heather and gorse which needs to extend to approximately 4ha. However, heather needs to be grazed, cut or burnt in order to continually rejuvenate itself and therefore a realistic territory density is likely to be similar to that supported by Nightjar.

Birds associated with woodland

[23] Restoration of grazing by eg cattle or ponies delivers more habitat diversity than manual or mechanical techniques and is generally more sustainable

[24] Equivalent to about 8 patches per acre

4.33 While there needs to be focus on species that are largely restricted to the less common habitats such as heathland, management can also be beneficial to species associated with woodland and around 40% of the plan area will continue to be managed as woodland. Most woodland birds are more prevalent in the outer edges of wooded areas. An increase in the amount of these areas by creating corridors through woodland or by creating an undulating edge with other habitats, are likely to be beneficial to populations. Enhancing the species composition, age structure and by encouraging a native understorey will also be beneficial.

Sand Lizard and Smooth Snake

4.34 These species thrive best in small scale mosaics of low level vegetation, bare ground within mature heather. A guideline for the management of Sand Lizard is about 5% bare sand to the remainder of mature dry heath. Whilst Sand Lizards prefer dry heath, Smooth Snakes are also associated with wet heath and mires. These reptiles need open areas of soft sand for egg-laying that are quickly warmed by the sun such as south facing banks and hummocks. Since both species are protected by UK and international legislation, care is needed to manage vegetation so as to avoid disturbance and this may include seasonal timing of operations.

Invertebrates

4.35 Specialist invertebrates that are present include the Heath Grasshopper (*Table 9*). This grasshopper prefers areas of open sand adjacent to bushy heather and Dwarf Gorse. The largest groupings of invertebrates recorded are the Ants, Bees and Wasps (collectively known as *Hymenoptera*) and all of those listed of note are associated with heathland. These include the RDB listed *Andrena argentata* 'solitary bee' species, and the Potter Wasp which lays its eggs in an urn-shaped nest attached to the branches of mature heather. Solitary bees, wasps and some flies require areas of bare sand for nest burrows. The Dusky Cockroach is a scarce insect that lives in the leaf litter amongst mature and scrubby heather. It is intolerant of cutting and burning.

4.36 Silver-studded Blue butterflies breed in compartment C2 (and have started to establish in C3) in the north of Area 3. This butterfly is almost exclusively dependent on dry and humid heaths where they prefer the pioneer (young) or building phase of heather. In managing the various age-classes (stages) of heather, it is important to provide continuity and connectivity of the earlier stages as the home range of this insect is restricted to little more than 50m, in part due to the dependency of the caterpillar on colonies of two species of ant. This can be achieved at the local level by cutting sinuous strips of heather on a rotation and ensuring that these link with the colony area.

Management targets in order to maintain main habitats found on site

Heathland

4.37 It would seem difficult to balance the varying needs of species that are strongly associated with heathland, but a mosaic of different micro-habitats and therefore management treatments is generally agreed to be the best solution. Guidance from the UK Joint Nature Conservation Committee (JNCC 2004) that can be applied to heathlands in Dorset (and echoed in the HLS agreements for the site) includes:

- cover of bare ground of 1-10% as a mosaic in with vegetation
- a mixture of stages of heather comprising 10-20% cover of pioneer, 20-80% cover of building / mature, <30% degenerate phase dwarf shrubs and <10% dead ericaceous cover.

4.38 The following table illustrates the different stages of the heather life cycle as described above.

Table 10 *Stages of the heather cycle* (adapted from Gimingham 1972).

Stage	Period	Timing
Pioneer	Establishment phase, Height less than 10-15 cm. Recently mown, burnt or grazed swards can be included here	0-5 yrs
Building	Heather grows vigorously and forms a closed canopy, growing to 40 cm	5-15 yrs
Mature	Plants become woody and leggy, 60 -100 cm, canopy uneven and more open	15-25 yrs
Degenerate	Central branches die off and plant collapses. Plants die off, sometimes new seedlings establish	25- >40 yrs

4.39 There are few tracts of truly open heathland in Areas 2 and 3. Scattered young trees between 2 – 6m tall and of a density of around 100 trees per hectare[25] is the norm. Some of these trees may form clumps amongst more open patches of heather. There will be localised shading but the habitat remains very beneficial to reptiles, heathland invertebrates and birds.

Wooded heath

4.40 Over time, and without management, these scattered young trees become mature. New trees are seeded and the canopy begins to close, eventually shading out all the heather and dependent wildlife. Wooded-heath can be described as the in-between stage of development between open heath and woodland. It is heathland that is able to persist underneath trees or clumps of trees that do not make up a continuous canopy. The Forestry Commission use the following definition of wooded heath for their Forest Design Plans:

"*areas managed as heathland but with less than 20% tree cover either in isolated groups or individual character trees."*

4.41 The level of cover of trees or scrub (i.e. dense young trees or gorse) that heather can tolerate is largely site and sub-site specific. There is a need to consider the tree types and age, among other factors. There may even be differences in growth forms according to aspect. For example heathland that persists under wooded-heath on a south-facing slope may not survive at the same densities of tree cover on a less sunny north slope, so there will be a large range of possibilities.

4.42 The Higher Level Stewardship scheme for heathland habitats requires coniferous tree cover to be no more than 10 - 15% of open areas, including woodland edge, after which it is stated that there will be a general decline on heather cover. With a cover of over 40% scrub (c. 3 – 4m high woody vegetation), all heather is shaded and heathland dependent wildlife is lost (Symes & Day 2003).

4.43 Even where there are about 20 mature trees (over 25 years old) per hectare[26], heather is lost from underneath the canopy (Symes & Day 2003). However, this habitat still retains some wildlife value. It is an open wooded-heath habitat that still supports some heathland wildlife as well as being considered to be of intrinsic landscape value. A similar tree density and local heather decline occurs in compartment C2 (GR SZ139960), with a range of middle-aged trees, and can be illustrated by the photograph below (*Fig. 2*), taken within compartment A3 (of Area 3), the result of progressive thinning over several years. It will be difficult to predict the percentage of trees that will need to be cut in a particular locality to achieve a wooded heath of conservation value for the reasons described above (*see 4.40*). Thinning of any area is therefore perhaps best phased until the desired effect is achieved.

[25] Equivalent to approximately 40 young trees per acre
[26] Equivalent to 8 trees per acre

4.44 Conversely, wooded-heath with 80 - 100 trees per hectare[27], as can be seen in the south of Area 2 (GR SZ145953), at best supports a very patchy heather ground layer of poor condition. The photograph (*Fig. 3*) below was taken in a stand bordering compartments B6 and B7 and shows patchy Bracken, Heather and grass.

4.45 Fig. 4 below shows heather persisting under a more open birch canopy; pine needles suppress growth of the ground layer, and needle-fall from Maritime Pine is the densest.

Woodland

4.46 Woodland forms an important part of the mosaic of habitats found on site, particularly around the fringes, where it also forms a wooded backdrop to properties. If the woodland was denser alongside the A338 it would buffer the road noise more, although the landform itself contributes most to noise absorption. Whilst a large amount of the woodland currently consists of large stands of even-aged conifers, there are opportunities to enhance ecological value through management.

4.47 As with other habitats, exotics (e.g. Rhododendron) form much of the understorey when it is present, and their phased removal is important to allow native species, more beneficial to wildlife, to establish. Maritime Pine (*see 4.14*) is also dominant in large blocks, with many even-aged trees in apparently declining condition. Around 6-10 large trees are dying annually and this dieback is likely to continue. Due to the dense shade found in these areas, no new trees are able to grow through to replace those that are lost. These habitats will benefit from the phased removal of these trees in favour of native species, by allowing the creation of a more varied age structure within the woodland, with more broadleaf native trees.

4.48 Mixed and broadleaf woodland (*see Appendix 1, Fig. A6*), which has greater relative value for wildlife compared to coniferous woodland is also found on and adjacent to the site (particularly to the south and south east). These are of particular value for fungi and woodland bird populations. Management in these areas needs to focus on maintaining the ecological interest, enhancing it where possible.

4.49 Planting of young broadleaf trees in woodland areas (when conditions are suitable for growth) is generally not necessary as there is a clear natural succession from open heathland to woodland over time. Any cleared areas are rapidly recolonised by a variety of plants, including both native and non-native tree seedlings. Selective removal of unwanted seedlings should allow the creation of a desired species composition in any area of woodland. However, planting of native species will be considered where natural regeneration does not occur or to enhance specific locations, such as high profile public areas.

4.50 Woodland strips directly behind properties, particularly where individual trees stand directly behind fence lines and cause concern to adjacent residents (e.g. over risk of trees being windblown, limb, needle or cone drop, shading of gardens or fire), need slightly different treatment. These strips again often include a dense understorey of Rhododendron, which on one hand forms an evergreen screen but on the other, is a fire risk, less ecologically beneficial and prevents the growth of other plants. Residents have mixed opinions of trees and scrub directly adjacent to their own boundaries. Discussions concerning the management of these are, and will continue to be, only carried out on a case by case basis, in order that the needs of individual residents are given proper consideration.

4.51 Dead wood, especially when left standing, is an important habitat in its own right and this should be left in woodland blocks, where it is safe to do so. This habitat is beneficial to many

[27] Equivalent to 32 – 40 trees per acre

invertebrates, particularly beetles, which in turn provide food for many bird species, including woodpeckers, which also use dead wood for nesting.

Figure 2 Open wooded-heath in Area 3

Figure 3 Closed canopy wooded-heath in Area 2

Figure 4 Mixed wooded heath with birch dominating foreground, B7, Area 2

Photographs © R. Harley

Climate change

4.52 Climate change is an extremely complex subject, influenced by many factors and it is impossible to pass comment in any great detail. However, it is of great importance and proposed actions are likely to have an impact (albeit small in a national context).

4.53 Predicted climate change for the south of England is likely to lead to drier summers and wetter winters. The dry summer conditions not only make the site more vulnerable to fire but may eventually mean widespread drought and a fundamental change to wildlife and habitats. Vegetation management may therefore need to be adapted to accommodate changes to the habitat over the long-term.

4.54 Plants and not least trees, through the process of photosynthesis, take carbon from the atmosphere and use it as a building block (e.g. in the creation of woody material). The carbon is then locked inside the plant until it is eaten or destroyed. When destroyed, the carbon can be released back into the atmosphere and potentially contribute to climate change.

4.55 Felling of trees may be perceived as leading to an increase in carbon in the atmosphere but at this point, although the trees are prevented from the uptake of further carbon, none has been released into the atmosphere. Disturbance to the ground during felling operations, although largely beneficial to heathland restoration, can lead to additional loss of carbon.

4.56 Burning of material is the best way to release carbon but burning timber only releases what has been locked away during the life of the tree (i.e. no net increase over that period), unlike fossil fuels, where the carbon has been locked away for millions of years. If the timber is used for fencing or paper production then the carbon remains stored in the end product. If the material is composted then the carbon is released very gradually into the atmosphere.

4.57 Some of the carbon lost is also absorbed by other plants establishing where the trees were and certain habitats which may be created by the felling of trees (e.g. bogs and mires) also act as carbon sinks[28].

4.58 Climate change is a global concern and efforts should be made by everyone to minimise and offset unnecessary release of carbon into the atmosphere. In the restoration of heathland, management options are available which may have other benefits or consequences and these will be taken into account by the new steering body. Examples include:

- Use alternative methods to burning, such as chipping
- Produce arisings from the site that have a commercial value and use (e.g. timber for fencing, woodchip for biofuel or compost)
- Encourage the growth of new trees both on site and elsewhere locally

[28] a natural or artificial reservoir that accumulates and stores some carbon-containing chemical compound for an indefinite period

5. HISTORY

5.1 The ridge of St Catherine's Hill has long been a feature; a lookout, beacon site and more recently a trig point overlooking the marshy lower reaches of the Rivers Avon and Stour. This significance and character is described by Robert Southey[29] in his poem, For the Banks of the Hampshire Avon (1799):

… let thy leisure eye behold and feel
The beauties of the place. Yon heathy hill
That rises sudden from the vale so green
The vale far stretching as the view can reach
Under its long dark ridge …

5.2 A later description by John R Wise in *The New Forest: its History and its Scenery* first published in 1883 talking of the Avon valley says:

To our right rises the range of St Catherine's Hills, where remain the mounds of watch-towers and traces of a camp and also of a chapel … branches of the Avon here and there fringed by willows, islands of osiers and rushes … the whole backed by the gloom of St Catherine's Hills crested by their dark pines.

5.3 Past descriptions and old maps show the inevitable changes on the hill, so that sometimes there have been more trees and less heath and sometimes more heath and less trees.

Early history[30]

5.4 People have always been attracted to the hill. Finds of Palaeolithic flint tools indicates the presence of early hunters and the remains of 15 tumuli or barrows (South Wessex Archaeological Association 1974) around the ridges (some now hard to see on the ground) are Bronze Age monuments. Later, Iron Age farmers may have built the leaf shaped banked enclosure immediately south west of the telecommunications mast.

5.5 In 1921 W G Wallace (son of the famous naturalist who wrote the original paper on natural selection with Darwin) and Heywood Sumner, the Wessex archaeologist, published their survey, 'Ancient Earthworks of the Bournemouth District'. Subsequently Wallace excavated earthworks on St Catherine's Hill, but little is recorded (Cunliffe 1985).

5.6 More recently in 1974, local archaeologist Mike Tizzard made a find on one of Wallace's previously excavated tumuli. The faint remains of an embedded circular pot were excavated by him and colleagues from the South Wessex Archaeological Association and discovered to be a cremation urn for a youth together with a small cup. The finds are now at the Hampshire Museum Service stores at Chilcomb, Winchester.

[29] Robert Southey 1774 -1843 one of the English Romantic poets, a contemporary and friend of Wordsworth and Coleridge and Poet Laureate for 30 years
[30] Information supplied by local historians Sue Newman & Mike Tizzard

5.7 Little is known about The Hen Ditch but it is possible that this too is a pre-history feature, perhaps Iron Age. It runs between the River Avon across the top of the hill and down to Hurn Road and the River Stour. Marked on an eighteenth century map[31] as Hen Ditch or Hen's Ditch, it probably marks an ancient boundary. Fig. A7 (*Appendix 1*) gives the location of these earthworks.

The last millennia

5.8 A legend from Saxon times tells how monks started to build a church or chapel on the hill. The present name of the hill, St. Catherine's, probably comes from the story of the chapel. The construction of the mediaeval chapel is uncertain but during the 1300s the chapel was said to be "constructed on the soil of the Priory", "on Rishton Hill". Rishton or Richedon is a long lost hamlet somewhere at the foot of the hill on the west side.

5.9 In 1302, it is recorded that Prior Quyntyn (1302-17) of Christchurch Priory was reprimanded by the Bishop of Winchester for holding mass in the unlicensed chapel on Rishton (Richedon) Hill. Several others were reprimanded for the same offence until in 1332 the chapel was finally licensed. So although it has been suggested that the legendary first chapel might have been built to displace pagan activity, the chapel was attached to Christchurch Priory by these dates.

5.10 The site was excavated in 1862 by Sir George Pocock of the short-lived Christchurch Archaeological Association[32], and in 1921 by the Bournemouth Natural Science Society. In 1968, archaeologist Michael Ridley excavated. He found medieval roof tiles, bits of Portland stone, glazed floor tiles and many different kinds of building stone which suggests use of recycled stone and perhaps leftovers after the Priory was commenced in 1094. The chapel is presumed to have been demolished during the Reformation around 1540.

5.11 The excavation also turned up fragments of Roman glass and possibly pottery. Ridley suggested that there had been an earlier small Roman fort or signal station here surrounding the chapel site, and overlooking the River Stour which in Roman times was navigable as far as Pamphill beyond Wimborne. He also suggested that part of the site which extends north east from banked square could be a later site of a Roman watchtower, linked to another on the Avon River side of the hill. The Hill was used as a beacon site until the eighteenth century.

5.12 The evidence on the ground was disturbed when the site was used by the Royal Horse Artillery and Dragoons from Christchurch Barracks at the time of the Crimean War in the 1850s and again in World War One for grenade and trench digging practice and then again in World War Two for tank training. A World War One bomb even exploded here.

5.13 Much less is known about Old Town Common bank, an ancient feature but we don't know when it was made. The bank, which is not always easily seen, is clearly prominent going through woodland on the top of the hill. Town Common, on the southern and eastern slopes of St Catherine's Hill ridge, is largely beyond the area covered by this plan although Area 2, the land on the top of the hill, is within this plan and is registered as common land, part of Town Common. Old Town Common bank clearly marks an older boundary for the common.

[31] 9M73/G288/3

[32] The Christchurch Times 03 January 1863

5.14 Nonetheless, the history of the places we now think of as Town Common and St Catherine's Hill are intertwined. For instance, further south down the hill towards Christchurch town, on land adjacent to that covered by this plan but once part of the Common, are several plots. These plots were created when the manorial waste or common land was enclosed for cottages. Records over several generations[33] talk about cottagers keeping livestock, pigs and goats, chickens and ferrets for rabbiting. Undoubtedly the people living here would have used the hill and the Common for grazing and foraging anything of use such as turf, wood and faggots of furze for fuel, materials for building and roofing as well as anything to eat.

The Twentieth century

5.15 Sand and gravel quarrying, mainly from the eastern side of the ridge plateau, is very evident. The Rifle Club is in an old quarry and the sand quarry on top of the hill, which now has water in the bottom, is a conspicuous feature. Quarrying has included the destruction of archaeological remains - a 1933 local newspaper reports that a tumulus near the cottages was 'sold off at 1 shilling a load' [34].

5.16 Other Twentieth Century features on the hill include the reservoirs, Wireless Transmission Station and an emergency bunker. The first reservoir was built in 1895 but it was replaced in 1930 and a second was added in 1960. Each holds 2 million gallons of water which supplies Christchurch and as far as New Milton. The present telecommunications masts, modern beacons, have replaced the earlier Wireless Transmission Station. The bunker, now sealed shut, is a relic from the Cold War period after the Second World War. A Royal Observer Corps facility, it was intended that four people in this bunker could monitor disaster after an invasion or nuclear strike.

5.17 The modern history of this place must include the building of homes on the western boundary after the Second World War and the arrival of neighbours, the increased use of this newly 'suburban' site for recreation and enjoyment and an increased awareness of the value of this place to people as well as to wildlife.

Today

5.18 The place is rich with the evidence of its history, from ancient built features that are not always easily seen, through to the very evident cultural landscape of its heathland that formed as a result of human activity of the Bronze Age several thousand years ago.

[33] Dr G Archard, John Arnell, amongst others

[34] The Christchurch Times 08 August 1933

6. ACCESS AND USE

Byelaws and rights of access

6.1 Area 3 is Public Open Space (see *Section 2, Legal background* for information on the Common). Byelaws, which only apply to land owned by Christchurch Borough Council, Area 3, have accumulated over decades; some are obscure and have not been reviewed collectively within living memory (*see Appendix 4 for details*).

Public rights of way

Bridleway

6.2 The site contains a statutory bridleway (no.41) running along the north-south axis, offering varied terrain and commanding views along the ridgeline. The bridleway is used by walkers, cyclists and horse riders. Under Section 34 of the Road Traffic Act 1988 it is an offence to drive a mechanically propelled vehicle without lawful authority along a bridleway.[35] The land managers (and those working on their behalf) and various other organisations have a right of access for vehicles which can be occasionally encountered on site. Contractors and Sembcorp Bournemouth Water use the route to access the telephone mast site and water reservoirs respectively. It is a vital emergency access route for Dorset Fire and Rescue Service.

6.3 The lower reaches of the bridleway, along St Catherine's Hill Lane, are also lawfully used to access properties. However, there has also been increasing (and apparently unlawful) use by site visitors who often park along the verges, causing obstructions, erosion and damage to vegetation. Residents have requested 'authorised access only' signage and wooden dragon's teeth along verges to prevent parking.

6.4 The bridleway is waymarked and easy to follow for cyclists and horses. No other cycling and horseriding routes or facilities are available on the site but hoof prints are occasionally found on other tracks and sensitive areas. There are permissive (horses only) and statutory routes within Area 1 and it is possible to do a circuit using these. Some of the permissive routes are closed at certain times of the year to protect wildlife. Signs indicating 'No horse riding' and waymarkers are located in some areas.

6.5 Reptiles and invertebrates use open sandy areas to bask and breed, including along track edges such as the bridleway. Site managers point out that intensive use and pressure from wheels and hooves, particularly when away from the bridleway, could damage the reptile population.

Footpaths

6.6 Three rights of way of footpath status cross the western side of the site, linking the residential areas to the bridleway. One further footpath runs along the lower south west boundary of the site from St Catherine's Hill Lane and Sandy Lane to Hillside Drive.

[35] Dorset County Council, Rights of Way Team

6.7 In practice, visitors to the site use the footpaths and several other permissive routes which are established throughout the site. Some of the permissive routes are across more fragile areas of heathland. In the main, these routes are able to cope with the foot traffic, although occasional re-routing has to occur when some sections need to recover from wear and erosion. Some of these routes are also quite dynamic and work as 'desire lines', occasionally growing over with vegetation and being replaced by new routes as walkers' habits change.

6.8 Public footpaths are waymarked with small yellow arrows throughout the site.

6.9 Ensuring that rights of way are maintained and kept open is the responsibility of Dorset County Council, although it usually falls upon the landowner to carry out works. Maintenance works in the past have largely consisted of repairs to the potholes in the main bridleway, carried out in partnership by Sembcorp Bournemouth Water, Christchurch Borough Council and ARC.

Access for All

6.10 Site managers have a duty to ensure that the site is as accessible as is reasonably possible to all site users. Whilst little can be done about the steep gradients or uneven terrain found on site, in practice this means that access points should not form barriers to any type of site user and where necessary should be enhanced to improve access.

Wayleaves, easements & licence

6.11 A summary of wayleaves and easements over area 3, supplied by Christchurch Borough Council is provided (*see Table A7, Appendix 2*).

6.12 Many properties along the western boundary have licensed gate access from Christchurch Borough Council.

Vehicular access

6.13 The small number of vehicles accessing the site do so via St Catherine's Hill Lane or Dudmoor Lane, and are provided with a key for the respective entrance gate (*see Section 6.3 above for more information*). A separate access track from Sandy Lane, which interlinks with the bridleway is used as the main vehicular access to Christchurch Gun Club but again suffers from additional use by site visitors.

6.14 Vehicle access needs to remain restricted; because of the lack of highways on site, the bridleway-only status of St Catherine's Hill Lane, and to ensure that people's quiet enjoyment of the area is not disturbed.

Public enjoyment

6.15 Public enjoyment is a more than usually significant aspect of this place. This edge-of-town hill and plateau, with fine views and interestingly varied vegetation, is much valued for its amenity and attractiveness, for its history, as well as for its habitats, wildlife and rare species. Many local residents can walk onto the site from their homes. A large number of people come here frequently and even daily.

6.16 People who use and visit the site can be:

- Enjoying the natural environment, tranquillity, open space and views

- Walking (much of the ridge plateau on top of the Hill is accessible for the less able and all-terrain buggy users)
- Dog walking (including professional dog-walking - there can appear to be more dogs than humans on the Hill)
- Encountering and learning about wildlife
- Children playing or in guided groups
- Geocaching[36]
- Orienteering
- Bird watching
- Jogging
- Surveying and species monitoring
- Cycling
- Horse riding
- Gun Club members, who come to shoot in one of the quarries.

6.17 Workshops and informal discussions reveal that people visiting the site like the contrasting feelings of openness and enclosure in different parts and that this variety of experience is important. Some people spoke of the site's relative tranquillity; others are more intent on gentle and refreshing exercise.

Community involvement

6.18 Community involvement has been key to resolving some of the disagreements about the management of St Catherine's Hill and the adjacent part of Town Common. The Steering Group acknowledge that vital to the success of this management plan is the continuing proper involvement of local people and consideration of their views.

Urban Heaths Partnership

6.19 The Urban Heaths Partnership, involving 14 partner organisations enables Bournemouth, Poole and Christchurch communities to protect and enjoy their urban heathland by highlighting its importance and promoting responsible use of these fragmented but particular places in SE Dorset. Wardening, events and promotional materials, special events for school groups help to raise awareness of the importance of the heaths and their wildlife and their need for management. St Catherine's Hill and Town Common are amongst the sites covered by this project.

Christchurch Countryside Volunteers

6.20 Christchurch Countryside Volunteers, coordinated by Christchurch Borough Council Countryside Service, some of whom live close by, have been undertaking practical management on the Hill since 1997. Most habitat maintenance (pine 'pulls', and Rhododendron 'bashing') is carried out by volunteers. An average of 10 volunteers contribute to each task-day on site, with approximately 9 – 10 tasks taking place per year. Other wardening activity includes advice to visitors about sensitive locations of heathland and responsible management of dogs, and ensuring that intrusive or damaging activities do not occur.

[36] A treasure hunting game where players find 'caches' of treasures left by others and leave treasures for the next finder

Amphibian & Reptile Conservation Trust

6.21 ARC also involves volunteers in their work on Town Common including Area 2, including a programme of volunteer days for practical conservation tasks on the site. ARC also offers seasonal reptile rambles to help people learn about and experience wildlife.

Friends of St Catherine's Hill

6.22 The creation of FSCH in 2007 was a significant and welcome step towards increasing positive community involvement. It quickly established itself as a positive force in influencing the management and care for the site. The Friends group brings together nearby residents with local historians and archaeologists, natural historians and others with specific knowledge and interests as well as those who enjoy the site as a local amenity, as well as forming an important link with site managers Christchurch Borough Council and Amphibian & Reptile Conservation. The Friends have very successfully put on year round programmes of events including guided walks, talks and events on the site for families and all ages, and in the nearby community hall in Marlow Drive.

St Catherine's Hill & Town Common Management Plan Steering Group

6.23 At the same time, neighbouring residents concerns and fears about possible effects after any tree removal or changes in ground cover continue. Other people in the community also have strongly held views about the loss of heathland habitat and rare species as the trees encroach. This led to the forming of the St Catherine's Hill & Town Common Management Plan Steering Group bringing together community representatives such as Parish and Ward Councillors, representatives of the neighbouring residents, representatives of the owners and managers of the land as well as conservation organizations and agencies. All parties are committed to community involvement in principle as well as practice. Community involvement, a collaborative approach and a collective spirit are undoubtedly part of the future for the Hill and the Common (*see Section 1, Work of the Steering Group*).

Participation in site related groups and committees

6.24 Site related activity mainly involves Friends of St Catherine's Hill (see above) and the Town Common Advisory Committee, supplemented by input from the Urban Heaths Partnership, and provide advice on the management of the site. They allow a wide range of relevant interest groups and local resident representatives to influence the site's management and to learn about the different uses and perspectives people have for the site.

6.25 Hurn Parish Council and West Christchurch Residents Association, although not necessarily directly involved in management of the site, are represented on the Steering Group, have a keen interest and have expressed their views. Hurn Parish produced a Parish Plan in 2010. The northern third of the site (Areas 1 and 2) is within the Parish boundary. A question in the residents survey which contributed to the plan showed that 81% of Hurn residents did not want to see trees felled to create more heathland. Similar views were expressed in a public consultation by West Christchurch Residents Association in Feb 2010.

Participation in projects and initiatives

6.26 A range of additional volunteer input is made through specific events and projects such as the bi-annual history day, where people demonstrate crafts and activities, and in a photography competition run by FSCH, which attracts a range of photographs from visitors, illustrating wildlife, landscape and recreational use of the site.

The dog walking community

6.27 Dog-walking is a highly popular activity at St Catherine's Hill and Town Common, and therefore deserves further attention in this Plan. Its popularity is confirmed by a survey of 201 visitors at the site in October 2007 – August 2008, which included the following results:

- 70 per cent of visitors were walking their dog. Some of these visitors had other interests and motivations for coming to the site, such as enjoying nature and scenery, and gaining exercise for themselves. Hence dog walking may often be combined with other ways of experiencing and enjoying the site – it is not always people's sole motivation.
- Almost half the sample had been bringing their dog to the site for more than three years.
- More than half the interviewees said they came to the site to let their dog off the lead. This conforms with many other surveys of dog walking elsewhere, which indicate that 'dogs off a lead' is a major factor influencing dog walkers' choice of location.
- Thus it is evident that a significant proportion of the site's recreational use is for regular dog walking by people from the local vicinity.

6.28 Other anecdotal observations on dog walking at the site indicate that:

- The catchment for some dog walking use of the site may be beyond Christchurch Borough. Apparently some people visit the site from as far away as Poole to walk their dog.
- Pack walking of dogs occurs regularly at the site, including by individuals who may be exercising a group of dogs together, usually because they are caring for dogs on a professional basis. Pack walking may or may not be undertaken in a responsible way.

6.29 Much of the heathland on the site has the status of 'open access land' (as defined under the Countryside and Rights of Way Act 2000). On this land and on common land (*see Appendix 1, Fig. A3*), the formal situation is that dogs be kept on a short lead (except on public rights of way) between 1 March and 31 July in order to prevent disturbance to ground nesting birds'. Land owned by Christchurch Borough Council is also subject to byelaws relating to dogs:

- *Byelaw 37* states that a person shall not cause or suffer any dog belonging to him or in his charge to enter or remain in the pleasure ground, unless such dog be and continue to be under proper control, and be effectually restrained from causing annoyance to any person, and from worrying or disturbing any animal or waterfowl, and from entering ornamental water
- *Byelaw 46* designates the footpaths under the Dogs (Fouling of Land Act 1996) and therefore dog waste must be removed from these areas and properly disposed of.

6.30 The boundaries of different tracts of land subject to the above different restrictions relating to dogs are not straightforward for people to identify. Despite the heavy use of the site however, the majority of dogs are walked in a responsible way and kept to main paths. The site managers are keen to continue this situation and encourage responsible use, particularly in the bird nesting season.

6.31 Signs at the main entrances of the site remind dog owners to take a responsible approach to exercising their dog, including a 'bag it and bin it' approach to dog mess. The Urban Heaths Partnership produces printed dog waste bags which are handed out free to dog walkers or sold in larger quantities.

6.32 Site wardens from Christchurch Borough Council, Urban Heaths Partnership, and Amphibian & Reptile Conservation, enjoy good rapport and relationships with the dog walking community. This dialogue is a constructive way to encourage people to manage their dogs in a responsible way and to alert them to sensitive issues and locations on the site, where dogs need to be under particularly close supervision.

6.33 Events on site, usually guided walks, are arranged where generally dog walkers are welcome. In addition, the Urban Heaths Partnership has run 'guided walkies' - guided walks for dog walkers. These have been well received.

Monitoring by visitors and dog walkers

6.34 Feedback from visitors and dog walkers about management needs and incidents at the site is valued by the Borough Council Countryside Service and by ARC. These staff have many places to attend to and cannot be everywhere at once – the local monitoring by regular users of sites is thus of great worth to the staff, and helps inform them of needs and priorities.

Educational use and facilities

Explanatory leaflet

6.35 'St Catherine's Hill Nature Reserve – A Guide' describes the main wildlife, habitats, and history of the site, and provides information on recreational opportunities. This leaflet is available on the Dorsetforyou.com web site. The paper version is currently out of print.

Information and interpretation boards

6.36 There are the following interpretation boards explaining aspects of the site:

- Several boards on the south east side, provided by the Amphibian and Reptile Trust, describing the heathland habitat, the specialist wildlife and the reptiles, and explaining their distinct management needs.
- A main general information board explaining the main wildlife of interest and the principal access routes, at the entrance track and small car park at St Catherine's Hill Lane, and close to the entrance on Marlow Drive.

Educational use by groups for visits and outdoor projects

6.37 These include school groups, Wildlife Watch, Guides, Brownies and Rainbows, Scouts, Cubs and Beavers. Activities range from walks to learn more about wildlife or history, practical site management (e.g. pine pulls) or construction projects such as bird and bat box making workshops. Many groups also run self-led events on site.

6.38 The Urban Heaths Partnership offers education across parts of south east Dorset, including Christchurch. For St Catherine's Hill and Town Common, formal education can be delivered to schools close by, particularly visits to the heathlands with Key Stage 1 and 2. Highcliffe Comprehensive works with the UHP for their Year 7 Emergency Services Day – and address the issue of arson as a threat to their local communities. Non-formal education has been delivered to young people's groups in and around Christchurch. Main activities entail a walk through the site as an introduction to heathlands and the local environment.

Valuing heathland as a resource

6.39 Whilst the historic and traditional use of the site's resources has almost ceased there are opportunities to add value to the site by encouraging the community to make use of the same resources in a sustainable way that fits modern living. There is the obviously recreational use but also existing opportunities to take products from the land. This may be

as simple as taking part in the annual cut your own free Christmas tree event (which has become a popular family event and helps maintain the habitats) or providing fire wood or woodchip mulch for residents to take away. Aside from timber, arisings from management works could also potentially be used as biofuel.

Event programmes on site

6.40 Both CBC Countryside Service and ARC hold occasional guided walks and events on site. These are supplemented by a diverse programme of activities throughout the year coordinated by the Friends of St Catherine's Hill. This programme includes guided walks, talks, demonstrations, and active involvement of participants. Events include moth trapping, dawn chorus walk, litter picking, and a well received history and archaeology day of crafts and re-enacted activities associated with the past uses of the area and the way that heaths were used for local livelihoods.

Web site information

6.41 The dorsetforyou.com web site includes the main site leaflet, the FSCH events programme, and details of wildlife, access and a health walk on the site. (see http://www.dorsetforyou.com/fsch).

6.42 Amphibian & Reptile Conservation Trust have their own website with information on events, latest news and how to get involved in volunteering (see http://arc-trust.org/).

6.43 Natural England's website has comprehensive coverage of wildlife and landscape issues (see http://www.naturalengland.org.uk/).

6.44 More information on the Urban Heaths Partnership can be found online (see http://www.dorsetforyou.com/index.jsp?articleid=3310). They also run the Dorset Dogs website which is full of information and advice about all aspects of dog walking (see http://www.dorsetdogs.org.uk/).

7. OBJECTIVES

7.1 The following Objectives form a framework for the detailed actions (prescriptions) which are described in the next section. As such they need to be succinct and to define the desired direction of management for St Catherine's Hill and Town Common (Areas 2 and 3). The objectives are not in any particular order. All the Objectives are 'ideal' positions and the practical measures deriving from them will be undertaken as far as is practical. Much work to achieve broad support for these objectives has been made by the Steering Group and the consultant facilitators in the preparation of this Plan.

- **Objective A**
  Enhance ecological integrity, manage and protect habitats and species that are a feature of the site

- **Objective B**
  Safeguard and interpret the features of historic interest

- **Objective C**
  Maintain and enhance the valued sense of place – its informality and tranquillity, while ensuring informal public access allows people to enjoy and appreciate the site

- **Objective D**
  Provide opportunities for education, so people can learn about the site's wildlife, history and use

- **Objective E**
  Continue to engage community support for the site's care and management

- **Objective F**
  Have regard to the provisions of statutory obligations and to the rights of people who use the site and those who live nearby

8. ACTIONS

8.1 The Objectives listed in Section 7 are discussed here, and actions to address issues are proposed. Following adoption of the plan, agreed actions will be overseen by the site management steering group (*see Section 1.7).* This will ensure ongoing dialogue between interested parties and direct involvement in the implementation of the plan. Due to the level of public interest and concern over changes to the site, Objective A is completed in greater detail than most of the other objectives. Steering Group discussions have led to the creation of a series of maps showing agreed proposals for habitats and other management over the period of the plan.

A Enhance ecological integrity, manage and protect habitats and species that are a feature of the site

Rationale

8.2 The natural history and ecology of St Catherine's Hill and Town Common have been discussed above, detailing the important habitats and associated species, for both nature conservation and for people. As well as the internationally important heathland, semi-natural broad-leaved or mixed (broad-leaves with some conifers) woodlands are also a feature of the site for both biodiversity and landscape. Therefore, whilst, expansion of the heathland is desirable, it is recognised that this needs to be balanced with the maintenance and improved management of other habitats including all of the semi-natural broad-leaved and mixed woodlands.

8.3 A well managed mosaic of habitats interlinking heathland patches, and opening up small wetlands such as pools, flushes and ditches will create a site of considerable ecological interest.

Deciding where to expand the heathland

8.4 The main reason for the formation of the Steering Group, representing a number of different interest groups, was to agree a way forward on the management of the habitats found on site and in particular the future management of trees. It is not surprising, therefore, that the members of the committee, representing different groups, hold varying opinions about how the site should be managed ecologically. Some representatives place a high value on the peace and tranquillity provided by some mature stands of pines, in places preferring woodland to that of heathland. Others emphasise the importance of reverting past losses of heathland habitat and associated species to woodland, believed to be due to changes in land use practices such as a loss of grazing and the decline of traditional uses.

8.5 There has been genuine concern about effects of tree and scrub clearance on the hydrology and water holding capacity of the site, particularly on the western slopes below which are houses. This resulted in the commissioning in 2010 of a 'hydrological appraisal' of the Hill and Common (*see Section 3*).

8.6 The hydrological study took a precautionary and risk averse approach to tree removal, but indicated that with care, some tree removal could be taken forward provided that initially it was small-scale, considered constraints posed by the differing geology and topography in the sub-catchments, and involved long-term hydrological monitoring. If there was no adverse affect on the hydrology from this initial phase, then it should be possible to implement a longer term programme of tree removal.

8.7 The report and its conclusions have been accepted by the Steering Group provided that any future thinning or clearing of conifers is guided by recommendations of block size and where continuing hydrological and botanical monitoring indicates a low risk of flooding in different sub-catchments (see *Sections 3.8 – 3.11)*.

8.8 The following table summarises the limits on complete tree removal determined by hydrology (for thinned areas this depends on thinning density, so that where 50% of trees are removed the area can be doubled). For sub-catchments, see maps in *Appendix 1, Fig. A4*.

Catchment area (includes Sub-catchments A1, B2 etc)	*Topography*	*Maximum area that would support tree removal*
A	Plateau	0.75 ha per Sub-catchment ie 150m by 50m or about 500 x 160 ft
B	Plateau	>0.75 ha per Sub-catchment[37]
C	Slope	0.075 ha i.e. 10-25m by 30-50m or about 30-80 ft by 100-160 ft. Total of 5 to 6 in Catchment C
D	Slope	>0.075 ha = Total of 5 to 6 in Catchment D[38]

8.9 Having carefully considered all the influencing factors and using the hydrology report for guidance, the Steering Group has agreed areas of heathland for enhancement and/or expansion. In many places, this can be achieved by removing unwanted Rhododendron and mainly targeting Maritime Pine. Most of the mature pines at St Catherine's Hill & Town Common are Maritime Pines, many of which are at the end of their lives, and which could present a danger to the public (*see also Objective F*). In this condition the trees also have a greatly reduced ability to absorb water (*see Section 3.8*). This non-native conifer supports little biodiversity and with a straight trunk and spindly canopy has less aesthetic appeal than Scot's Pine, which is also present in good numbers. Rhododendron is a carrier of the infective pathogen sometimes referred to as Sudden Oak Death which, without control, is in danger of spreading (*see Sections 4.12 – 4.16*).

8.10 The quantity of Maritime Pine that may be removed will depend on the aim of restoration i.e. whether to 'open heath' - with only a sparse scattering of young trees, or 'wooded heath' - a combination of heath and trees of varying age-classes, where heather is still thriving in the ground layer. In many places this can be achieved by phased thinning of trees (*see Sections 4.36-4.39*).

8.11 Actions to convert selected woodland compartments to open heath or wooded heath have been determined by the Steering Group, on the ground. The group has also looked closely at and agreed areas where little more than maintenance of existing habitats is necessary. The deliberations have been guided by aesthetics and ecological principles e.g.:

- removal of Maritime Pine
- creation of wildlife corridors and connecting formerly isolated heathland
- widening and improving footpaths to create traditional and open rides
- creation of a new permissive bridleway for horse use
- opening up flushes or marshy areas and allowing light into pools

[37] Where plateau sub catchments effectively drain to the east these maximum figures become less relevant as long as a common sense approach is adopted

[38] Where sub catchments drain to the north, east or into gullies away from houses these maximum figures become less relevant as long as a common sense approach is adopted

- clearance of trees and scrub from historic features (ancient monuments and banks) to protect archaeology from roots and windblown trees
- opening views and sightlines to enhance people's enjoyment of hidden landscape and topography.

8.12 In addition, it was agreed that there should be minimal management in some areas where there was a strong 'sense of place' or landscape feel, with conifers and other trees retained. Examples of this include the area of land along the west boundary to form noise and security buffers adjacent to houses, the A338 and Christchurch Gun Club. Tree removal directly adjacent to properties is not in general proposed and, if it does take place, will need to be in agreement with adjacent residents. Any such proposals of any scale will also be considered by the new steering committee.

Implementation

8.13 Maps 1 – 3 and Table 12 below show proposed habitat targets for each part of the site and indicate where there is a change from the current situation (*Appendix 6 lists these principles in greater detail*).

8.14 These measures, including monitoring, will be introduced gradually over a period of up to 11 years. The detail will be agreed by a Management Committee with representatives from the different interest groups (*see Section 1.6*). Best practice mitigation techniques and options for felling and thinning have been agreed and will be implemented in order to prevent erosion and increased water impacts and to reduce impacts of site operations. These are described in detail in *Appendix 6*. Some of the active drains below felling areas will be de-silted, with particular regard to where work will be done the following season. Long neglected drains will be restored and new features created, provided it is established this may alleviate potential flooding of houses but only under the expert advice of a hydrologist.

8.15 In year one, baseline hydrological monitoring, tree safety works and scrub removal will take place, followed by two periods of felling governed by two Five Year Felling Licences[39]. To minimise impacts, felling will be phased both across the site and within individual areas. Length of phases will need to be on a location by location basis, as agreed through the management steering group. In the more sensitive areas work will be done more gradually, over the length of the whole plan, although there will also be increased cost implications of phasing operations. A hydrological monitoring programme will be set up to run concurrently with the Felling Licences, in the knowledge that the annual results of monitoring (which will be made available) may influence the rate of tree removal in any sub-catchment if they indicate a risk of flooding.

8.16 Monitoring will include as appropriate: assessment of soils and geology; boards or tree trunks across direction of flow to assess build up and 6-10 lockable dipwells installed within / downslope of key felling coupes and controls to replicate as far as possible the conditions of coupes; depth of flow in drains and fixed point photography. Monitoring will need to take into consideration the cumulative effect of potential felling in adjacent plateau or slope areas within the same sub-catchment as well as effects of heavy sustained rainfall as experienced in recent years. It will also need to be costed as far as possible and added to any HLS agreement.

8.17 A summary of hydrological monitoring will be made available each year and be used to inform future management decisions, in particular the implementation of tree felling.

[39] Prior to felling licence application it will need to be established if the Forestry Commission requires an Environmental Impact Assessment

8.18 Vegetation monitoring will determine whether there is adequate ground vegetation cover and/or heather re-establishment following tree removal. Techniques may include quadrat or transect vegetation survey and/or fixed point photography. In this respect, it is particularly important that vegetation cover is well established on slopes, and shown that there will be a low risk of any resultant erosion and off-site water problems. These monitoring programmes will be drawn up in more detail, following plan approval.

8.19 The expectation, from previous experience on the Hill where similar work has taken place is that there is a still a viable seed bank under most mature conifer areas, so that where pines are removed, the return of vegetation should be expected in most areas of the site within about five years (e.g. cpts A7, D2, C3 – *see Maps 1-3 below*). Recovery speed is dependent on many factors however (e.g. light penetration, level of tree removal, depth to mineral layer, species in seed bank etc) and on-going follow up operations will be necessary to ensure success. It may also be possible to accelerate the process through seeding or translocation.

Table 11 Essential actions regarding new habitat creation

Action	Detail	Timescale
A1	Management Group with representatives from interest groups to be formed[40]. This group will ensure that the felling Licence and work programme for the site are in line with this plan and will be consulted on the results of monitoring annually (see A7)	2012
A2	Engage hydrologist to scope and agree baseline and five year hydrological & ecological monitoring phase, at same time as Felling Licence / HLS applications. Install monitoring equipment such as dipwells and begin baseline monitoring before felling starts e.g. first winter	2012
A3	Initial approach FC to determine if environmental impact assessment (EIA) is necessary. Apply for first felling licence / HLS agreement (felling programme to include monitoring requirements)	2012-2013
A4	Clean drains below or connected to areas of work upslope. Additional drainage features such as retention ponds with hydrological advice and NE agreement	2012 and a/c detailed Programme
A5	Felling period 1; engage contractors; Management Group to monitor progress etc All works to set methodologies and any site damage (e.g. tracks) repaired.	2013-2018
A6	Engage hydrologist; set up hydrological monitoring equipment. Engage ecologist to assess / monitor vegetation, or train up volunteers	2012-2023
A7	Continuing hydrological / vegetation monitoring and annual reporting with summary report at end of each 5 year licence period. Annual meeting with hydrologist to assess results of monitoring and to inform future decisions. Results to be made publically available.	2013-2023
A8	Extend plan for heathland restoration over agreed period	2014
A9	Initial approach FC to determine if environmental impact assessment (EIA) is necessary. Apply for second felling licence: five years period, dependent on the results of hydrological / vegetation monitoring	2018
A10	Second felling period, All works to set methodologies and any site damage (e.g. tracks) repaired.	2019 – 23

[40] Based on existing members of Steering Group

Interpretation of proposals maps

8.20 The proposals maps (Maps 1-4) shown below represent a key outcome of the work of the Steering Group and are the result of many meetings both indoors and on site. Map 4 shows habitat changes before and after proposed vegetation management. The group took the approach of first dividing the site into the three main existing habitat types: woodland (**w**), wooded heath (**wh**) and open heath (**o**). Then, by looking at each compartment against a series of influencing factors (e.g. hydrology, archaeology, ecology, and important trees) potential opportunities to improve habitats and overall site condition were discussed. Factors considered are listed and explained in further detail in Appendix 6, Table B2. These were then examined on site and refined until general agreement was reached.

8.21 Where changes to habitats were proposed, several different categories or habitat codes, emerged (e.g. w-wh: where the proposal was to convert existing woodland to wooded heath) and these could be then be measured and shown on a map to help everyone interpret the proposals. A detailed summary or each code is shown in Table 12 below (*see also Table B3 in Appendix 5*). In many areas the proposal was to continue to manage for the existing habitat (e.g. w-w) but significantly this does not mean that nothing will be done in those areas. All areas will be managed for the habitat shown on the map, although some will be lower priority than others.

8.22 Table B4, (*Appendix 6*) shows calculations target habitats areas (ha/ac) proposed for change, by compartment. Proposed works would mean a change in area for each of the main habitat types, with woodland reducing by approximately 10 hectares (24.7 acres), so that 40% of the total area would in future be managed as woodland. Wood heath and open heath totals are dependent on how far w-wh-o options are taken (*see Table 12 below).* Wood-heath would therefore be increased by between 2.1-5.8 hectares and open heath by 5.1-8.9 hectares. This would mean that up to 46% of the area would be managed as open heathland. Although this still falls short of targets set by Natural England, the more open nature of Area 1, which is included in their calculations, brings the combined total of open heathland in Areas 1-3 much closer to the required amount.

Routine management of woodlands

8.23 The woodland areas where no change is proposed include all of compartments / sub-catchments C4 and C5, over 75% of C6 and C7 and wide buffer strips northwards along the western boundary in C2, C1 and D1. The objective for these woods will be to improve their structure over time so that in many places they are layered with different sizes and ages as well as different species of trees and shrubs, thereby providing improved and variable light levels through the canopy. This will increase biodiversity.

8.24 Most of these woodlands consist of even-aged conifers, the majority of which are Maritime Pine. There are small areas of broad-leaves (e.g. in the west of C3) and other areas, especially in the south in C6 and C7 where there is a mixture of broad-leaves and conifers (*see Appendix 1, Fig. A6*). The broad-leaved woodlands are an interest feature of the SSSI and these will be continued to be managed as such. The mixed woods can be enhanced by removing non-native species such as Maritime Pine and Rhododendron, thus allowing native broad-leaves to regenerate in interlinked gaps and glades that are formed. In other areas on stable soils, individual standards can be gradually removed, creating glades, improving light levels and encouraging the regeneration of pioneer broadleaved species such as birch.

8.25 In some areas (e.g. adjacent to existing broad-leaved woodland) it will be appropriate to allow and encourage the regeneration of native broad-leaved species, to increase biodiversity and help consolidate and expand existing important woodland. Planting of new trees will be considered as part of this enhancement.

Table 12 Explanation of Habitat Codes

Proposal	Description	Guidelines
w-w	Existing woodland that will be managed as woodland	Removal of unsafe* & diseased trees Removal of exotics** Light tree thinning as necessary*** to protect character trees and improve age structure by allowing new growth Move towards mixed native woodland from conifer monoculture where present and expand existing broadleaf and mixed woodland Promotion of denser growth where adjacent to noise source (e.g. A338)
w-wh	Existing woodland that will be thinned to create wooded heath	Removal of unsafe* & diseased trees Removal of exotics** Sufficient phased tree thinning*** to allow the establishment of heathland vegetation under the trees
w-wh-o	Existing woodland that will be thinned initially to create wooded heath. Situation reviewed and then trees thinned further **or** managed as wooded heath as agreed.	Removal of unsafe* & diseased trees Removal of exotics** Sufficient phased tree thinning*** to initially allow the establishment of heathland vegetation under the trees and then further phased thinning to create open heathland
w-wh-o*	Existing woodland that will be thinned initially to create wooded heath/open woodland. Situation reviewed and then thinned further **or** managed as wooded heath as agreed.	As above but this area particularly needs careful review at the wooded heath stage to determine if it can feasibly be thinned further and if the benefits of doing so are sufficient
w-o	Existing woodland that will be thinned heavily to create open heathland with scattered trees	Removal of unsafe* & diseased trees Removal of exotics** Heavy phased thinning of trees***, leaving small groups or individual character trees as agreed. Stripping of needle litter and humus as appropriate
wh-wh	Existing wooded heath that will be managed as wooded heath	Removal of unsafe* & diseased trees Removal of exotics** Removal of occasional mature trees*** to maintain habitat, allowing some smaller trees to grow on
wh-o	Existing wooded heath that will be thinned to create open heathland	Removal of unsafe* & diseased trees Removal of exotics** Phased thinning of trees***, leaving small groups or individual character trees as agreed.
o-o	Existing open heathland that will be managed as open heath	Removal of unsafe* & diseased trees Removal of exotics** Removal of occasional mature trees*** to maintain habitat, allowing some smaller trees to grow on Rotational coppicing of scrub and young broad leaf species (gorse, birch, oak, rowan etc)

* some standing dead trees to remain as habitat where it is safe and appropriate

** e.g. Rhododendron, Strawberry Tree, Piri Piri Burr; except where Rhododendron forms a buffer strip around the edge of the site

*** prioritising the retention of character trees and removal of Maritime Pine over Scot's Pine

8.26 Routine management will require the removal of trees that represent a danger to the public. For example, some of the dense mature Maritime Pines on the plateau and western slopes lean backwards towards the hill. This may be due to shallow root plates and soils. Removal appropriate to the situation will allow light penetration and encourage the development of ground vegetation, although consideration should be given to removal of blocks of such trees given dangers of wind-throw and subsequent effects on hydrology.

Table 13 Actions for routine management of woodlands

Action	Detail	Timescale
A11/F1	Engage an arboricultural expert to identify & advise on dangerous trees where necessary	2011 / ongoing
A12	Manage a small buffer area around felled trees from Action A11 to allow light and warmth to penetrate and ground vegetation to establish	
A13	Manage broadleaved and mixed woodland and the conifer areas that are to remain by actively encouraging a range of new understorey of pioneer broadleaved species ; remove selected exotics	

Routine management of heathland

8.27 Following a cessation in grazing and traditional heathland management, heather is not able readily to rejuvenate itself. On wet heaths, a lack of grazing may result in a dominance of Purple Moor-grass and reduced plant diversity; however, tussocks of this robust grass can provide useful habitat for some species.

8.28 In the absence of livestock, conservation management usually consists of mowing and/or controlled winter burning of heather on a rotation to provide different age stages of growth. But both, and especially burning, can have a sudden and drastic effect on wildlife as everything is removed, although above ground nutrients are reduced which helps to maintain the acid soils. Burning of heather is generally not proposed on this site due to the urban location and presence of rare reptiles.

8.29 Open heathland can include a small number of scattered pioneer[41] and occasional character trees[42] including pine and birch. Here, groups of such trees and areas of scrub, such as gorse, are satisfactory at low cover, but as new seedlings establish all the time, a continuous programme of pulling and cutting scrub is required. This will be subject to a variety of factors and some areas of scrub will be allowed to grow on.

8.30 In order to control scrub and the numbers of young trees, and to provide a good age-structure of heather, both CBC and ARC have HLS agreements with Natural England for management which runs from 2008 to 2018. In addition legal obligations to maintain habitats restored under the Hardy's Egdon Heath Project, exist until 2025. To this end, site managers generally work on a 5-7 year rotation for removal of scrub; a felling licence is not required as this scrub is generally too small to be licensable (<8cm diameter). Site managers will look at management areas and decide where to undertake work based on growth rates in different areas (which will vary from year to year). Much of this work is carried out by supervised volunteers from the local community.

[41] The first trees to colonise open habitats

[42] Usually older trees that have an aesthetically pleasing shape that gives them character

8.31 Additional benefits to ongoing management are that cutting programmes can include fire fighting routes where appropriate and that cut heather brash can be used to mitigate against erosion on slopes, as a seed source for new areas and to block unauthorised footpaths. Ideally cutting of heather and any bracken management should be followed by grazing, which is discussed below.

Table 14 Actions for routine management of heathland

Action	Detail	Timescale
A14	Draw up a five year flexible cutting programme within areas of dry heath; target areas within old stands first and take into consideration location of Silver-studded Blue, Nightjar and any known reptile hibernation sites. Allow natural heather growth cycle in some areas	2012-
A15	Mow and remove heath vegetation and create sand patches in rotation	Annually
A16	Involve volunteers in cutting & pulling young trees; hold annual 'cut your own free Christmas tree' event	Annually

Re-introduction of grazing

8.32 Grazing with livestock is an aspiration for the site during the life of this Management Plan. It is important to understand that reasons for and benefits of grazing would need to be clearly explained to local residents and users of the site, particularly dog walkers. A list of frequently asked questions relating to grazing has therefore been produced from information gathered during the public consultation process (*see Appendix 6, Table B3*). To enable grazing, the site (including Area 1) would first need to be made stock-proof and discussion will need to be held on the detail and location of perimeter fencing and gates, in additional to that along the eastern boundary *(see Fig. A9, Appendix 1).* This discussion would take place following adoption of the plan. Existing important public access routes will be identified and maintained as part of any proposed fencing works.

8.33 Grazing helps to keep the more open areas of the heathland free of regenerating tree seedlings and would be particularly beneficial in the wetter parts of the site dominated by purple moor-grass. This provides an efficient and more natural approach to habitat management. In addition, English Heritage endorse the light grazing of areas which include archaeological features (such as those present at St Catherine's Hill) as an effective method of vegetation control[43]. A breed of cattle would be chosen which would be hardy and would be docile in the company of people, dogs and horses. Individual animals with experience of public sites of known temperament would be preferentially selected.

8.34 Grazing cattle could be in keeping with the restful natural landscape character of the site and it has been demonstrated locally that grazing cattle are often popular additions to sites of amenity and conservation value. Many visitors and residents find that the cattle add interest to the location and enjoy learning about the effects of the cattle.

8.35 Some horse-riders can be nervous about the interaction between their horses and cattle. The same is true for some dog-owners and this will of course be greatest at the start of any grazing project. There is likely to be some 'teething trouble' which will need to be overcome given time. However, encounters on bridleways and footpaths are likely to be negligible due to the low grazing intensity and the fact that grazing will be seasonal. Opportunities to visit similar schemes elsewhere and meet users of those sites, should be made available.

8.36 Lack of suitable grazing in areas most heavily used by dog walkers should also reduce interactions. It would also be intended to site the boundary fence upslope of most of the

[43] Personal communication with EH Inspector of Ancient Monuments

footpath along the western boundary of the site to retain a dog walking route free of livestock. Recommended grazing levels for cattle on heathland are about 1 animal per 8 ha for the grazing season, which would equate to maximum of about 20 animals for Areas 1, 2 and 3 (circa 140 hectares/345 acres). However, stocking rates will be subject to various changing factors (rainfall, breed of cattle, etc) and this number may be lower, particularly at the start of the project.

8.37 Any interior fencing of registered common land (i.e. Areas 1 & 2) is unlikely but will need to address Common Land legislation.

8.38 The site managers consider that there are clear additional benefits to fencing the nature reserve in order to regularise and ease access and, importantly, to reduce incidences of fly-tipping and unauthorised vehicular access.

Conditions for introducing grazing

The following matters would be explored to ensure all parties are content with the arrangements:

- *A grazing group* - involving all relevant representatives alongside the Dorset Urban Heaths Grazing Partnership Manager. This group would ensure there was consensus for any activities associated with grazing, and that actions were communicated, especially with clear notices on the site, at the key access points. The grazing group could arrange for a public briefing and walks, as required, in association with the onset of any grazing. It would need to be made clear that the grazing is primarily for conservation purposes as opposed to agricultural.

- *Local people's involvement* - In many other areas where grazing occurs on open spaces and nature reserves, people who live locally and others who walk their dog regularly, help to monitor where the cattle roam on the site. This monitors the behaviour and provides valuable feedback to the site's managers. This system is called 'Lookers', and many people find it a rewarding activity. A system of Lookers could be arranged in association with grazing at the site (*see also Objective E*).

- *Stock-proofing the area* - checking and where necessary reinforcement of perimeter fencing would need to occur to ensure it is stock-proof. Interior stock fencing would be less likely because of the common land status and the needs of the various users and visitors. However, temporary electric fencing could be considered in selective areas where there are no issues in relation to walkers, riders and dogs, and where there are less restrictions from the commons status. Any fencing, temporary or otherwise, would need to be agreed by the grazing group, and would need tailored accessible entrances and well maintained horse gates, where it crosses visitors' access routes.

- *Animal welfare* - water troughs would be required in a few locations through the site. These could be identified with agreement by the Grazing Group. Risk assessments would also be carried out to ensure the Farm Animal Welfare Council's (FAWC) 'Five Freedoms' of animal welfare – Freedom from Hunger & Thirst, Discomfort, Pain, Fear and Able to behave normally. Stock will need to be checked daily.

- *Monitoring* - there should be a desired outcome for the site to be monitored against. Grazing will need ongoing monitoring to measure the impact of the animals on the site. Stocking rates will need to be experimental initially to ensure that the site is not overgrazed. Ongoing refinement of stock numbers and duration on site will be necessary.

Table 15 Actions for reintroduction of grazing[44]

Action	Detail	Timescale
A17	Agree perimeter fencing and location of infrastructure (e.g. access gates, troughs etc) ensuring the protection of important existing access	2012/13
A18	Agree funding through HLS agreement and check permissions	2012/13
A19	If above in place, install fencing and gates	See A18
A20	Establish lookers programme, introduce livestock, arrange livestock familiarisation programme	
A21	Carry out daily stock checks and monitor impact of grazing	

Key species management

8.39 There is a large range of specialist plants and animals associated with heathland, many of which are of conservation concern because they are restricted to these habitats both in Dorset, nationally and sometimes internationally**.** Much of the general heathland management proposed accommodates these species (*see Section 4.21).*

8.40 Some species need bare sand for egg laying, such as Sand Lizard and the solitary bees and wasps. Others need bare sand next to heather, including some invertebrates such as the Heath Grasshopper. These can be accommodated fairly easily by the creation of small-scale bare patches so long as they are not trampled. Yet other species such as the Silver-studded Blue, require pioneer heather – any cutting will need to be fairly close to their original very small home range. The maintenance of wetlands is also very important for some species such as dragonflies and a dry heathland landscape interspersed with scattered bushes and young trees provides good habitat for Dartford Warbler and Linnet.

8.41 The key to management to accommodate most of these specialists is to maintain a range of heather age-classes, including pioneer heath covering about 5 – 10%, in a landscape of both open heather and scattered trees or clumps of trees of varying ages (but mainly young trees). The presence of small areas of bare sand over about 2% of the site is also important.

Table 16 Actions for key species management

Action	Detail	Timescale
A22	Reptiles. Assess extent of areas of bare ground, and plan and create further scrapes of 1 – 2 m sq on flat sloping or vertical surfaces. Periodically rejuvenate, or allow to vegetate and create new areas	Annually
A23	Silver-studded Blue. Create pioneer heath – this is part of Heathland Restoration Actions making sure not to destroy existing butterfly habitat	As appropriate
A24	Reptiles & Invertebrates. Continue mowing heather and creating sand patches to create further pioneer and edge habitat	Annually
A25	Wetland invertebrates etc. Survey and manage ponds and flushes as required ensuring the removal of dense shade.	
A26	Encourage dog owners to keep dogs on leads / under control on paths in open areas during bird nesting season	Annually

Invasive species

8.42 An invasive species is usually of exotic origin. Invasive species damage natural habitats and reduce diversity by dominating or smothering out the associated native species. Rhododendron, Maritime Pine, Strawberry Tree, the prostrate Piri-piri burr are the main invasive species at St Catherine's Hill and Town Common but native species such as Bracken, Bramble and Birch can also be invasive, particularly following tree clearance.

[44] All timings approximate by necessity and subject to agreement by steering group

8.43 Local opinion on the retention (due to added colour or screening) or removal of Rhododendron is mixed but removal is necessary to fulfil statutory obligations. Rhododendron is also the plant that hosts the recently discovered *Phytophthora* pathogens, which causes death to a variety of native plants including oak, heather and bilberry. Strawberry Tree occurs in Area 2, and Piri-piri Burr is concentrated around the water towers from where it appears to have spread further, probably on trousers of humans and bodies of dogs.

Table 17 Actions regarding invasives

Action	Detail	Timescale
A27	Map locations of invasive species and draw up programme of treatment. Tackle invasives of heathland or wooded heath as a priority. Repeat exercise as necessary	Annually
A28	Aim to eliminate Rhododendron from the understory of pine and broadleaved woodland, except for immediate boundary with properties, where screening can remain if wanted by residents. In such buffer areas, promote replacement with native vegetation and offer as alternative. Cut stumps are usually treated with herbicide. Check for regrowth and follow up as necessary. This links to works being undertaken to restore heather to some areas	2012-2022
A29	Control Strawberry Tree, Piri piri burr, Bracken etc with herbicide as required. Monitor and repeat as necessary	Annually
A30	Include information and advice about invasives in literature about the site (links to Objective D)	TBA

B Safeguard and interpret the features of historic and archaeological interest

Rationale

8.44 The history and archaeology of the site is not fully understood and there is still much to learn about the rich and fascinating past of the area. What is known is that the roots of encroaching trees and scrub on monuments may be causing irreversible damage on the hidden artefacts, the site history must be conveyed to visitors and local people as effectively as possible, and that modern features such as the water towers (which provide the residents of Christchurch with their drinking water) could also be celebrated as part of the site's current use.

8.45 The rich cultural heritage assets found on site, most notably the Bronze Age monuments, are of great historic importance and rightly require proper protection. They have not been subject to any recent sustained survey.

8.46 These issues have been highlighted in discussions with the Steering Group as well as ongoing correspondence between English Heritage, CBC & ARC, following site visits from Ancient Monument Inspectors & Field Surveyors.

Background

8.47 Existing sources of information differ about how many barrows (sites of) there are. Eight barrows or tumuli are scheduled as shown on the English Heritage map (*see Fig. A7, Appendix 1*).

8.48 Significant features such as Old Town Common boundary bank and Hen's Ditch are not scheduled and not shown on maps.

8.49 The area on top of the Hill, sometimes known as St Catherine's Camp, site of the chapel and suggested Roman Signal Station and used as beacon site at other times, is complex and not well understood.

8.50 The roots of trees and scrub undermine monuments, causing damage and disturbance to the hidden archaeology. Furthermore, if trees are left to blow over or collapse, the damage can be much worse as root plates lift from the ground.

8.51 CBC and the Friends of St Catherine's Hill have put on successful events, guided walks and illustrated talks, often drawing upon the knowledge of local experts. This provides a way to engage people and to encourage more appreciation and enjoyment of the Hill for neighbouring residents and visitors, as well as the event providers.

8.52 Most people who use the site are local and come more than once, if not frequently. However, the site is rich in archaeological features and history which are not well known and this should be made available, especially to 'new' visitors. In the past there has been a St Catherine's Hill Trail Guide (1989) offering information about features at numbered points and a coloured site leaflet A Guide to St Catherine's Nature Reserve (2006), neither now available.

8.53 English Heritage note "it should be remembered that as well as visible mounds, the Bronze Age barrows, that form the majority of the monuments, will be surrounded by ditches that have become in-filled over the years and are no longer visible as earthwork features. At a minimum, therefore, tree and scrub clearance should include a suitably large buffer zone to ensure the protection of these features as well. Studies have shown, however, that inter-visibility was often a factor in the sighting of burial mounds and, where possible, tree and scrub clearance should take this into account so as to enable a better appreciation of the monuments." In the case of the prominent barrows on the ridge line of St Catherine's Hill in particular, sufficient surrounding trees and scrub should be removed so that the view is opened up and the public do not need to climb on the barrows as viewpoints.

8.54 It has been suggested that there is no sense in trying to hide the modern features e.g. reservoirs and telecommunication masts. On the contrary, there are proposals that any interpretation should tell how these features provide significant services to the surrounding populace and recognize that this is one of many ways that local people have links with the Hill.

Table 18 Actions to safeguard the site's historic interest

Action	Detail	Timescale
B1	Produce a definitive map of all pre-historic and historic sites and features	2012
B2	Remove tree and scrub growth from all monuments including a buffer area. The buffer area should aim to prevent the formation of 'desire lines', where resulting erosion might harm the site. Undertake in winter when weather and ground conditions are suitable. Link these areas to the heath or wood-heath mosaic where possible. Obtain necessary permissions. Links to work undertaken under Objective A	2012 to 2021
B3	Continue with programme of events: links to Objective C	2011 to 2021
B4	Work with English Heritage to write cultural heritage baseline study. A more complete land use history and detailed archaeological ground survey are required (encourage other research into history of the site)	2012-
B5	Review scheduling of all monuments	

C Maintain and enhance the valued sense of place – its informality and tranquillity, while ensuring informal public access allows people to enjoy and appreciate the site

Rationale

8.55 St Catherine's Hill and Town Common is recognised as a landmark in their own right, as a place which affords views of the surrounding landscape, and as a location with its own distinctive character, as experienced directly at the site.

8.56 Although people use the site for recreational use in various ways, and may have different priorities, there is a strong consistency of views about the character, feel and atmosphere of the site – it is valued for its relative tranquillity, its restful feel, and its informality. These are qualities which people wish to keep and not see degraded. People also recognise the variety of wildlife and amenity values offered by the site. Many people partly visit for the contact with nature, the views, the sense of openness and the sense of enclosure, the physical exercise, the social contacts, and much more. This variety of experience is part of the site's make up, and a major reason why many people value it so strongly.

8.57 The general principle of retaining and enhancing the site's valued character is enshrined in this Plan. All management activities, as with any changes proposed for the site, will be in keeping with the site's valued qualities. There is a need to recognise the importance of general site access and to ensure that future changes do not impact on people's rights and introduce unreasonable restrictions.

8.58 Due to its location on the doorstep of Christchurch, and nearby Bournemouth, St Catherine's Hill and Town Common are a popular public amenity. Whilst the great majority of visitors visit the site for quiet enjoyment, some activities can create conflicts between users. A delicate balance needs to be achieved between encouraging public enjoyment, but avoiding negative impacts such as anti-social behaviour or disturbance to the wildlife that inhabit the relatively fragile heathlands.

8.59 The following sub-sections promote positive actions concerning the different issues that may cause difficulties with public enjoyment:

Access for All

8.60 Thought should be given to improving access, where feasible, for the less physically able. An assessment of footpath gradients and surfaces and subsequent location and promotion of the route of easiest access, particularly to the higher parts of the site would be beneficial.

Horse riding and use of bridleway

8.61 The site contains a statutory bridleway running along the north-south axis, offering varied terrain and commanding views along the ridgeline. There are few other bridleways in the neighbouring area, and as a result, the horse riding resource offered by the site is highly valued by its users. Anecdotal evidence suggests that there is light daily use by small groups of riders with occasional use by small horse-drawn vehicles.

8.62 Horse riders often interact with other informal recreational users of this multi-use site; these interactions may be both negative and positive.

8.63 Regular horse riders using the site mostly come from a local catchment, mainly the Dudmoor Lane area.

8.64 A previous link to the north of the site (Bridleway 7) has become effectively unusable following the construction of the A338 spur road which cut across the bridleway.

8.65 Vehicles using bridleway routes for essential access tend to go at slow speeds and give way to horses and this established protocol should continue. However, some visitors park on the sides of the bridleway, potentially causing an obstruction to horses and emergency services. There is a need to promote responsible parking in appropriate locations and to restrict unwanted parking through the use of signage and barriers.

8.66 Horse riding perspectives are represented on groups who influence the management and care for the site, such as Friends of St Catherine's Hill. These include (a) horse-riders / horses wary of interaction with snakes; (b) others with concerns over future grazing due to perceived negative interactions with livestock and potential issues with gates.

Table 19 Actions related to horse riding

Action	Detail	Timescale
C1	Ensure the bridleway is physically accessible and usable for horse riders, throughout management changes which may occur in different parts of the site	Ongoing
C2	Use practical but rustic effects to limit car parking along local access roads to the site, where this parking disturbs residents	2012 -
C3	Create new permissive bridleway within compartment A6; request consent from Natural England for SSSI (f*or proposed route see fig. A8, Appendix 1*). Bridleway will be closed at some period (minimum 1 day) during year, signage etc will accompany	Tbc
C4	Ensure horse riding representatives can maintain dialogue with other main groups who use and care for the site, to understand and consider mutual needs and interests	Ongoing

Dog-walking

8.67 St Catherine's Hill and Town Common are very popular and widely used for dog walking. The use of the site by dogs and their owners is discussed further in *Section 6 Access & Use*.

8.68 The dog walking community is an important part of the partnership of people who care for the site, including Christchurch Borough Council, Urban Heaths Partnership, and Amphibian & Reptile Conservation. Dog walkers offer valuable monitoring and feedback to the site managers. Many dog walkers who use the site on a daily basis are an important communication channel: they provide the site's managers with information about issues arising on the site, and they can relay messages back to fellow dog walkers and site users. This dialogue is a constructive way to encourage people to walk their dogs in a responsible way and to alert them to sensitive issues and locations on the site, where dogs need to be under particularly close supervision.

8.69 Events on site, usually guided walks, are arranged where (generally) dog walkers are welcome. In addition, the Urban Heaths Partnership has run 'guided walkies' - guided walks specifically for dog walkers. These have been well received.

Issues

8.70 Pack walking - this is where people are exercising large numbers of dogs, often on a commercial basis. Walkers may find it more difficult to clear up after individual dogs, and (particularly when these dogs are being walked on behalf of several owners) they may find it

more of a challenge to control all dogs and ensure they do not disturb or worry other users of the site.

8.71 Enrichment of soil and effects on wildlife - heathland plants are adapted to infertile soils. Enrichment of the soil by dog faeces allows other more common plants to invade and out-compete plants that form heathland vegetation. As a result, there can be a marked change from the more wildlife-rich vegetation, to rank grassland in locations where dog fouling is concentrated. It has been found by the National Trust and other organisations that this problem is mainly restricted to within 50 to 100 metres of a site entrance. This issue does not apply to livestock faeces, which consist of recycled nutrients from the site, are vegetable in origin, and are not concentrated around entrances.

8.72 Disturbance to wildlife - some of the rarest birds, such as Nightjar, nest on the ground and are easily disturbed by people and dogs. It is important that walkers keep to main paths to ensure that birds sitting on the nest are not disturbed, causing them to fly away leaving eggs or nestlings open to the cold or to predation. In recent years there have also been several incidents of deer being chased and attacked by dogs. On at least one occasion this has led to the death of the deer.

8.73 Disturbance to other users – some site users report feeling intimidated and/or impeded by dogs running off the lead and in particular 'jumping up' uninvited. As with any open space where dogs are exercised the onus is on the owner to act in a responsible way and ensure that their dog does not inconvenience others.

8.74 On open access land and common land, the formal situation is that to prevent disturbance of ground nesting birds, dogs should be on a short lead (except on public rights of way) between 1 March and 31 July (*see Section 6.26*). Notices encouraging responsible behaviour are placed on site during this period. There are no plans to increase existing controls relating to dogs on leads but the existing byelaw is likely to be replaced by a dog control order (*see 8.77 below*).

8.75 Dog bins - the distribution and emptying schedule for dog bins on the site appears to be adequate and current practice is proposed to be maintained. Bins are funded by the Borough Council and generally they are restricted to land under Council ownership. However, following demand, additional bins have been placed at the top of St Catherine's Hill Lane and Hampshire Close. Incorrectly discarded disposal bags, often left hanging in trees, continue to create problems at the site, as they are unsightly litter and dog faeces takes years rather than weeks to decompose in bags. The importance of correctly disposing of bagged dog faeces is addressed in the Doggy Do Code[45] and on site dog bins.

8.76 Impacts of adder bites on dogs – adders are present on all open parts of the site and dogs off-lead and particularly off paths, are more likely to come into contact with adders and are thus more susceptible to adder bites. Most local vets carry anti-venin.

8.77 Byelaws - the boundaries of different tracts of land subject to Christchurch Byelaws, for example, Byelaw 46 which designates the footpaths under the Dogs (Fouling of Land) Act 1996 may not be easy for dog-owners to identify. Legislation relating to dog control and fouling is likely to be superseded by a Dog Control Order, during the life of the plan and site entrances will be signed to that effect. The proposals (currently under consultation) are that on any part of the site (or any open areas within the Borough):

- not picking up and disposing of dog waste will be subject to a fixed penalty

[45] See www.dorsetdogs.org.uk for details

- owners will be asked to place dogs, which are considered to be not under proper control, on a lead and failure to do so will result in a fixed penalty

Taking opportunities forward

8.78 As the highest proportion of the site's users, dog walkers are an important constituency of people. The current range of measures, covering information, advice, events, and dialogue between dog walkers, wardens and site managers, should continue, with all parties continuing to play their part.

8.79 Responsible exercising of dogs on the site ensures that other people can enjoy the site without being disturbed or worried by dogs. It also minimises any effects of dog behaviour on wildlife. A number of measures to improve communication and advice for dog walkers have already been developed including:

8.80 *Direct dialogue* - between the Urban Heaths Partnership and professional dog walkers about use of the site for commercial pack walking of dogs is taking place. This may result in a protocol or code of conduct for professional dog walkers, ensuring they exercise due regard to other people and to wildlife at the site.

8.81 *Advice and partnership* - Dorset Dogs. This is a newly established partnership and information hub, offering news and advice on wildlife and responsible dog management, to dog walkers using open spaces, heathland and countryside in Dorset (*see below*).

8.82 *Advice and information - the Doggy Do Code.* This new code brings together all key messages and issues for dog walkers who enjoy Dorset's open spaces and wildlife. The code is being widely promoted at specific sites, in printed information, and through the web sites of the different Councils and wildlife and recreational bodies.

Table 20 Further actions to help consolidate those already implemented

Action	Detail	Timescale
C5	Develop protocols for pack walking. Direct dialogue between the Urban Heaths Partnership and professional dog walkers about their use of the site for pack walking of dogs. This may result in a protocol or code of conduct for professional dog walkers, ensuring they exercise due regard to other people and to wildlife at the site	Tbc
C6	Continue to promote and implement dog related events on site as provided by the Friends Group and the Urban Heaths partnership. These bodies could commit to one such event per year, basing the event on needs and issues that they identify in collaboration with the dog walking community	Ongoing
C7	Periodic monitoring of use of the site by all users to measure impacts in relation to benefits and potential disturbance to wildlife on site and help encourage responsible use. Provision of clear signage and advice for dog walkers.	Tbc

Management of damaging activities on site

8.83 The site is wardened by a combination of UHP, CBC and ARC employees. Wardens are in constant contact with each other and share information on site activities. There is usually some wardening presence on most days of the year, particularly during the summer months. It is however a large area and all three organisations have many other sites to cover. Therefore, site presence may not always be highly visible. When available, wardens will respond quickly to incidents and emergencies.

8.84 The main direct and damaging impacts on the wildlife and amenity of the site, occur from the following activities:

- Fires
- Motorcycling (including quad bikes)
- Non-bridleway cycling
- Fly tipping
- Occasional poaching and shooting of deer
- Occasional significant den and camp building.

8.85 Wardens have a web-based map recording system called Dorset Explorer for all incidents taking place on site. Information is accessible by Dorset Police and can be used for crime pattern analysis. The data is also collated by Dorset Environmental Records Centre as an ongoing record of incidents across the conurbation to help focus the priorities of wardens. The impacts and control of the main damaging activities are considered as follows:

Fire management

8.86 Fire vehicles carry site keys and a fire map for the site; showing access points, main paths and hydrant locations and pressures. Christchurch Fire Station is within five minutes of the site and off-road MAN vehicles are available to come onto site. Wardens are in ongoing contact with Dorset Fire & Rescue Service (DFRS) who will be informed of any change to access or locking arrangements. Any additional fencing (e.g. to enable grazing) will also need to be in consultation with DFRS.

8.87 Over recent years, between two and three incidents of unauthorised fire per year have occurred at the site, in various locations. In 2011 there has been a marked increase in camp fires. The site is composed of free draining sands and gravels, leading to very dry vegetation with low moisture content. During periods of little rainfall, particularly in the summer months, the site is very vulnerable to fire.

8.88 The controlled burning of arisings from management activities does take place occasionally during the work season (September – March) but fire can also occur accidently (e.g. from unauthorised camp fires) or as deliberate arson. While deliberate arson is unusual, camp fires do occur in summer months. If left unattended these can lead to a more serious incident.

8.89 Effects of fire include (a) potential threats to gardens and properties at the periphery of the site, (b) direct loss of reptiles and amphibians which cannot evade fire easily, especially in drier conditions, and (c) damage to the shallow acidic soils and the vegetation.

8.90 During summer months, which are the more likely time for fires, the impact of a fire on heathland and woodland vegetation can be much more severe, with vegetation and associated wildlife taking much longer to recover.

8.91 Fire management that includes the creation of fire breaks can be used to further the management of reptiles and invertebrates. When creating new fire defence lines, they are best designed blind ended, to avoid connections with main paths thereby discouraging the formation of new routes across the site and disturbance to wildlife.

8.92 Lack of any significant fires for many years inevitably leads to the build up of dead and dry plant material (known as fire loading) making the site more vulnerable to fire. Mowing blocks of heather can promote new growth in some areas to help reduce this risk. In addition large blocks of leggy gorse, particularly alongside tracks need re-coppicing for the same reason. On

a large site such as this, consideration will need to be given to the reduction of fuel loading and establishment of wider areas of low cut heathland to slow fire spread.

8.93 Access to the site for fire-fighters is currently considered satisfactory but will need to be assessed regularly and acted upon. Recent concern over difficulties with fire vehicle access has led to a proposal (supported by residents) to have double yellow lines painted along one side of Sandy Lane. This proposal is currently under consideration by CBC.

Table 21 Actions to reduce the incidence of unauthorised fires

Action	Detail	Timescale
C8	Continue to educate and advise site users through use of signs, ongoing advice of site wardens, and through the work of the Urban Heaths Partnership	Ongoing
C9	Continue to carry out joint walks with the wardens and fire service personnel approximately every two years, to identify any access obstructions or areas of concern	2013. 2015, 2017,2019, 2021
C10	Ensure that there is direct and clear access to the site through St Catherine's Hill Lane and other key access points for fire vehicles	Annual
C11	Continue to monitor incidents & type of fire that occurs on site	Ongoing
C12	Heathland management to remove leggy vegetation and incorporate appropriately located fire access routes as a matter of course (Objective A refers)	Annual

Motorcycling

8.94 Motorcycling is not permitted on the site. There are no legal access routes or rights of way which can accommodate motorcycling, and the byelaws prohibit motorcycling.

8.95 Incidents of motorcycling occur on occasions throughout the site, but especially on the eastern side. Motorcycling can quickly erode fragile heathland vegetation and shallow soils, from which it can take much time to recover.

8.96 Motorcycling creates an intrusive noise and disturbance for other visitors and can be an offence under Section 59 of the Police Reform Act.

8.97 There are insufficient physical barriers to prevent motorcycle access. Most accesses along the western edge of the site are now kissing gates. Fencing relating to the potential introduction of grazing would create suitable barriers.

Table 22 Actions relating to unauthorised vehicles

Action	Detail	Timescale
C13	Site wardens to discourage motorcyclists and advice of suitable alternative and legally permitted locations. Registration details are taken where possible and the public are encourage to record as much detail as possible without putting themselves in any danger.	Ongoing
C14	Continue to involve police where unlawful motor vehicles are used. This use constitutes a 'Section 59' offence, which gives the police the power of seizure in some circumstances. This stage usually follows an initial warning, which has been used on site.	As needed
C15	Investigate the improvement of physical barriers	

Non-bridleway cycling

8.98 The bridleway through the site is a legal public right of way for cyclists.

8.99 Cycling off bridleways does occur in concentrations on the site, especially where mountain bikers use the steep slopes as a challenge (down-hilling) as well as more passive cycling on main paths. This is a byelaw offence on Council land. Even 'passive' cycling sets a precedent for other cyclists.

8.100 As with motorbikes, cycling, and especially mountain biking and down-hilling can create concentrated disturbance and erosion to the site's fragile soils and vegetation as well as a risk for those taking part and other users of the site.

8.101 There have been a number of serious injuries to cyclists in the last 10 years, even requiring Coastguard Agency rescue teams for recovery from slopes.

Table 23 Actions regarding off bridleway cycling

Action	Detail	Timescale
C16	Wardening on the site to discourage cyclists and advise of suitable alternative and legally permitted locations	Ongoing
C17	Improve signage – place way marking discs at key locations where cycling is not permitted	
C18	Investigate the improvement of physical barriers / gates on paths where bicycles not permitted	
C19	Erosion control around paths etc, discourage use of unauthorised paths	Annual

Fly tipping

8.102 Fly tipping is a public nuisance and occasional incidents occur at the site, mainly at the eastern side and close to the southern entrances, particularly along St Catherine's Hill Lane where vehicles can access out of sight at night to dump. Small amounts are removed by CBC and ARC but larger tips require contractors to remove.

8.103 Garden waste is also dumped to the rear of some properties onto the SSSI. This can be particularly damaging to the habitats as it can introduce nutrient enrichment and invasive plant species such as *Montbretia* and Three-cornered Leek. Green waste reduces the extent of natural habitats and may encourage vermin such as rats.

Table 24 Actions regarding fly tipping

Action	Detail	Timescale
C20	Wardening to discourage fly tipping. Vehicle registrations or any documentation carrying names or addresses in the tipped material is recorded. In principal camera traps could be used by the Council's enforcement officers	Ongoing
C21	Continued maintenance of physical barriers such as gates at site entrances to restrict fly tipping to outside the main site boundaries	Ongoing
C22	Prompt removal of fly tipping to ensure the incident does not prompt further occurrences	Ongoing
C23	Education about the negative effects on local environment including habitat loss, encouragement of vermin etc to residents who have houses on the edge of the site. Access licences to include a clause about not dumping garden waste	Ongoing

D Provide opportunities for education, so people can learn about the site's wildlife, history and use

Rationale

8.104 The area of St Catherine's Hill and Town Common is an environment which enriches people's lives in many ways. It provides education opportunities for young people in groups ranging from Wildlife Watch to Brownies. It also offers a learning experience for all its visitors, through contact with nature, appreciation of its history, and consideration of its various current uses and their different management needs.

8.105 The site is close to residential areas and the town of Christchurch, thus many people and organisations have this outdoor environment in walking distance or a very short travel time.

8.106 Learning about the site, its wildlife, its different uses and its history, can also lead to greater understanding and care for the site by people. These opportunities should continue.

Developing opportunities further

8.107 *Activities programme by Friends of St Catherine's Hill* - the FSCH's events programme on the site has quickly become a flourishing initiative, bringing many people into closer contact with the site and helping people to understand it better. The programme is set to continue and will grow in importance. Certain events scheduled as part of the programme can have an additional role to gauge views on progress with some activities resulting from the management plan.

8.108 *Site leaflet* – this is an important introduction to the wildlife, landscape and history of the site. Minor modifications are required to reflect the new management plan, and to make links to the work of Friends of St Catherine's Hill. The leaflet will be fine-tuned and republished in the early life of the Management Plan.

8.109 *Entrance signs* - there are currently no entrance signs, to briefly label, explain and welcome people at key locations where people enter the site along the western boundary (e.g. from Marlow Drive and from Orford Close). It is proposed that such signs be installed at these locations.

8.110 *Interpretation of the site; wildlife and recreation* – it is widely felt that the site should not be cluttered and burdened with signs – this would clash with the informal atmosphere which is appreciated by people. However, the site benefits from a small selection of existing information boards and interpretation panels, so visitors can benefit from a light-touch approach to readily available information. It is proposed that this approach be continued. Opportunities to freshen up information boards and interpretation panels should be taken, to explain progress with management works, and to ensure that some of the viewpoints explain the main features of interest, from wildlife, history and land uses, both on the site and in view.

8.111 *Interpretation of the site; water and communications* - the site accommodates major infrastructure for water and communications, in prominent positions, in the form of two concrete water tanks and two telecommunications masts. These are features of the site, and have an important functional use in the region. They are difficult structures to blend with the prevailing character of the site, but they are features in their own right and have an important functional use in the region. Many people may be interested to learn how these structures operate. The managers of these utilities will be invited to provide sensitively positioned interpretation information close to these structures.

8.112 *Interpretation of the site; history and archaeology* - information relating to the rich and fascinating history of the site is not readily accessible to visitors. Several of the scheduled ancient monuments are in close proximity on site and sensitively placed interpretation would help people better appreciate this less apparent but important dimension to the site. A small carefully worded panel drafted with the aid of English Heritage and local historians should be produced.

8.113 *Opportunities for formal education with the Urban Heaths Partnership* - continued links will be made with the educational resource available via the Urban Heaths partnership. There is scope for more talks in Christchurch schools from the UHP about local heathland sites particularly in relation to camp fires and introduction to activities and wildlife.

8.114 O*pportunities for non-formal education with the Urban Heaths Partnership* - the scope for further non-formal education, being pursued with the help of the Urban Heaths Partnership, includes young peoples' groups, such as the Scouting Association, Duke of Edinburgh's Award, being helped to be involved in different aspects of enhancing and caring for the site.

Table 25 Actions providing opportunities for education and learning

Action	Detail	Timescale
D1	Up date site leaflet and make available in printed form and on Dorsetforyou.com	2012
D2	Secure funding for interpretation board renewal and for a new history and archaeology panel	2013
D3	Give talks and lead walks about wildlife, heathland management and the history of this place	2013
D4	Host up to date news and a list of resources about St Catherine's Hill on the web and maintain this resource	2013

E Continue to engage community support for the site's care and management

Rationale

8.115 Many of the site's regular visitors feel a sense of stewardship towards the area, especially given the role it plays in their lives. For example, many regular dog owners informally monitor the site and liaise with the site managers at CBC and ARC – this is an important contribution in helping to support the site. With the range of uses on the site, there are a great many tasks and functions to be carried out, and all bodies involved have limited resources. Contributions from volunteers can make a real difference to the management efforts and can be highly rewarding for people.

8.116 Volunteering can help people gain new skills, new confidence, gain both physical and mental health benefits, and provide new friends and contacts. All of these benefits are apparent from the activities underway at St Catherine's Hill and Town Common.

8.117 Volunteer input to the management of St Catherine's Hill and Town Common currently occurs through:

- Participation in groups and on committees, e.g. Friends of St Catherine's Hill
- Direct on-site volunteering, e.g. by practical management, from path maintenance to heathland management

- Participation in projects and initiatives - a range of additional volunteer input is made through specific events and projects
- Site monitoring by visitors and dog walkers - feedback about management needs, incidents and wildlife seen on the site

Developing opportunities further

8.118 *Friends of St Catherine's Hill* - the group will continue to consolidate its work and activities as resources permit. It will incorporate certain monitoring and advisory work relating to the needs and actions from the management plan within its relevant activities. For example, during certain events and walks, the opportunity can be taken to gauge the use and ongoing need for (a) 'Good neighbour' protocols by contractors, workers and volunteers on the site, (b) on site information and interpretation, (c) seats and resting places, (d) present and potential viewpoints.

8.119 *Grazing animal 'Lookers'* – when and if grazing has commenced, a system of 'lookers' could be established. This is a practice established at other locations where livestock graze countryside sites – it has proved to be a popular and effective way of local people monitoring site use by livestock and relaying information to the site managers. It allows a greater understanding of how the grazing animals use the location. Most people involved as 'lookers' have valued the experience of learning about the animals involved. Volunteer lookers are usually recruited from amongst immediate residential areas and from daily visitors such as dog walkers. Lookers are given advice and guidance before they take up the role.

8.120 *Promoting opportunities for volunteering* - there is plenty of scope for volunteering with different organisations that have an involvement with the site. The Management Plan is a further opportunity to promote the benefits of volunteering to people.

8.121 There are a range of practical, organisational, and administrative tasks for volunteers associated with the site. Both CBC and ARC will ensure a list and explanation of these opportunities is identified and updated on the site's web pages on www.dorsetforyou.com, and reproduced in the local press and through libraries.

Table 26 Engaging community support

Action	Detail	Timescale
E1	Identify a volunteer coordinator	By end 2012
E2	Promote opportunities for volunteering by maintaining up to date list and identifying a volunteer contact point	On going
E3	Publicise volunteering opportunities through site posters, and CBC, ARC and FSCH programmes	Annual

F Have regard to the provisions of statutory obligations and to the rights and safety of people who live nearby and/or use the site

Rationale

8.122 The statutory legislation is in place to protect the natural habitats and species that are of national and international importance. However there is also a need to protect the rights of people who use the site and live nearby and ensure that one is not achieved at the expense of the other. This objective links to actions in Objective A and C.

8.123 The condition of Town Common SSSI from a nature conservation perspective is judged to be unfavourable and the entire site, including Areas 2 and 3, needs to be returned to an 'unfavourable recovering' or a 'favourable' condition, in order to comply with statutory requirements and Higher Level Stewardship funding conditions.

8.124 Local authorities including Christchurch Borough Council and Hurn Parish Council have a duty[46] to take reasonable steps to further the conservation and enhancement of SSSIs, SACs and other nationally designated sites.

Issues and opportunities

8.125 The Habitats Directive (Habitats Regulations 2010) places an obligation for the UK to maintain or where appropriate restore natural habitats and species interest features on SACs and SPAs at a favourable conservation status in their natural range. The Directive also allows economic, social and cultural requirements and regional and local characteristics to be taken into account when meeting this aim.

8.126 The UK government is a signatory to the Bern Convention[47]. A report on UK heathlands (de Molinaar 1998) identified the neglect of heathland management with invasion of scrub, bracken and trees as among the habitat's most serious threats. The UK response was that Dorset was a key area for actions detailed under the national Biodiversity Action Plan.

8.127 Enshrined under the Habitats Directive, is the requirement that every competent authority or public body, such as CBC, have regard to the Regulations in the exercise of their functions. In addition, Schedule 9 of the Countryside & Rights of Way Act (CroW) 2000 imposes a duty for public bodies, including District and Parish Councils, to 'take reasonable steps consistent with the proper exercise of their functions to further the conservation and enhancement of SSSIs'.

8.128 The Natural Environment & Rural Communities (NERC) Act 2006, places a further obligation on public bodies to 'have regard to the purpose of conserving biodiversity' when carrying out their duties.

8.129 Monitoring of the condition of the SSSI / SAC in 2005 showed that all the SSSI site units in Areas 2 and 3 were in unfavourable ('no change') condition. The main reasons cited were the dominance of pine at the expense of heath, and the need to rejuvenate areas of heath (*see Section 2*).

[46] Under the Natural Environment and Rural Communities Act 2006

[47] The Convention on the Conservation of European Wildlife and Natural Habitats was ratified by the UK in 1982. The aims of the Convention are as stated in the title. See http://www.jncc.gov.uk/page-1364

8.130 Natural England's Conservation Objectives[48] allow between 10% and 25% tree and scrub cover (including woodland and pioneer woodland as a shifting mosaic with heathland) in their Site Management Units 9, 10, 11, 12 and 14 within Areas 2 and 3, and SMUs 4 and 18 outside. In the view of Natural England, proposed management works within this plan make a significant contribution to overall targets for the SSSI.

8.131 The register of Commoners rights for Town Common is held by Dorset County Council but is probably long out of date. Statutory rights to the common are still extant and therefore the register must be updated and maintained.

8.132 Some of the CBC land is classified in the Local Plan as 'open access' and together with the general right of access by the public to all parts of Town Common on foot, subject to Byelaws. The existing Byelaws only apply to Area 3. These byelaws have accumulated over decades and most have not been reviewed collectively within living memory.

8.133 Landowners have a public duty to put measures in place to reduce the incidence of fires and to report them to the authorities should a fire occur. Fire is dealt in more detail under Objective C.

8.134 Landowners may be liable to prosecution if a member of the public is injured. Trees that are old or in poor condition on site (e.g. in blocks of even-aged, mature conifers) need arboricultural assessment to ensure that they are safe and not a threat to public safety. It is important to note that trees on the western slopes and plateau, the majority of which are Maritime Pine, are even aged and in poor condition, with a probable lifespan of up to a further 20 years. Trees that are assessed as being dangerous may occur in areas within the agreed felling programme of Objective A, but may need to be taken out prior to work.

8.135 It should be noted that if clumps of trees are removed this may affect the hydrology of the site and a hydrologist may need to be consulted before works take place. Any such location will be assessed and monitored, with remedial measures employed as appropriate. Risk of injury will have to be balanced against any risk of flooding.

8.136 Site managers should ensure that management operations on site are properly risk assessed by contractors, are carried out in a safe manner and do not put at risk the health and safety of site users or local residents. Work areas should be properly signed and temporarily closed to the public as necessary. Attention should also be given to noise generation, obstruction on site, smoke (where fire is a necessary part of management) and damage to (and subsequent repair of) track surfaces, including access routes leading to the site.

8.137 The main route for timber extraction will need to be along the bridleway and St Catherine's Hill Lane. This is not readily accessible to larger vehicles and on site extraction is likely to be restricted to tractors and forwarding units, with timber stacked where it is accessible. However, operational decisions such as this will be discussed and agreed by the management steering group. Phasing management work will help limit the volumes of timber and length of disruption in any one year.

8.138 Site infrastructure such as gates, seats and fire beaters stands also needs to be kept in a functional and safe condition. Access onto the site will also need to be DDA[49] compliant so that gates are fully accessible to those with disabilities.

[48] As outlined earlier in this Plan, these define the desired state of the features for which the site was designated.

[49] Disability Discrimination Act 1995

8.139 There is no authorised parking along St Catherine's Hill Lane or the gravel access track from Sandy Lane. However, parking by site visitors does occur at trackside, creating localised erosion and damage and potentially slowing emergency vehicle access. Where possible parking needs to be prevented through the use of wooden dragon's teeth.

Table 27 Actions relating to the St Catherine's Hill and Town Common legal status and with regard to the safety of the public

Action	Detail	Timescale
F1/A11	Assess health of mature trees to determine risks to public. Remove trees where they pose a risk to the public.	Immediate and then annually
F2	Natural England to work with landowners to achieve favourable condition on SSSIs and internationally designated land through consultation, production and implementation of this Plan	2012 onwards
F3	Public bodies to ensure duties under NERC Act etc are performed e.g. through production & implementation of this Plan	2012
F4	Update and maintain register of Common Rights and notify commoners of their rights	2012
F5	Review Byelaws taking into account the objectives of this management plan, once there has been time enough to put them into practice.	2012 onwards
F6	Produce asset register to record all site infrastructure and monitor condition on a regular basis	2012

9. RESOURCES

9.1 The delivery of the above actions is of course dependent on there being adequate resources, not least finances, for the life of the plan. The land managers have had to manage (and fulfil their statutory duties in regard to) the site for many years. As a result there are existing available resources in terms of site wardens, equipment and budgets (supplemented by grant aid) to continue to carry out some of the work detailed, in place already.

9.2 In the current financial climate however these resources may not be as available, for the lifetime of the plan. Habitat management works therefore need to be prioritised in order of importance and progressed towards targets at a rate determined by available budgets.

9.3 The lease of ARC land from the Malmesbury Estate expires in 2018. While the lease may well be renewed it is important to note that any resource commitment beyond this date may fall upon the landowner and they will need to be aware of this.

Finance

9.4 Currently, CBC site management is funded through a fixed site budget. This money funds safety works on site (e.g. dangerous trees), infrastructure maintenance (e.g. ditches, gates and signs), habitat management, site events (including support to FSCH) and an element of wardening.

9.5 Both CBC and ARC site budgets are supplemented through grant aid. This is mainly through the Higher Level Stewardship (HLS) scheme, administered by Natural England (*see section 2.25*), which runs until 2018. Annual baseline payments of £200 per hectare are made for maintenance of open heathland and additional funds are available for agreed capital projects. Funds would also be available to meet the cost of fencing the site for grazing and other grazing related expenses. This scheme is critical to the funding of much of the larger scale habitat works. This site is seen by Natural England as a regional priority.

9.6 Additional potential funding is available through the Forestry Commission's English Woodland Grant Scheme[50] (EWGS). This funding would be available as a contribution to habitat enhancement works in areas being managed as woodland in the medium to long term.

Wardening

9.7 There is currently warden presence on site most days and this is expected to continue for the life of the plan. Both CBC and ARC warden the site on a regular basis, covering early and late shifts and weekends and this is supplemented by the area UHP warden. All wardens are in close contact and also cover emergency call-outs to the site. The intention is that wardening cover will be maintained at least at the present levels for the life of the plan.

9.8 Introduction of grazing would mean that stock would need daily checks in the grazing season and this would be mainly covered by wardens, supported by Dorset Urban Heaths Grazing Partnership staff and volunteer Lookers.

Community Involvement (see Action E)

9.9 Wardens will continue to rely on site users (particularly regular dog walkers) to act as eyes and ears, to notify them of site related issues and much of the lighter habitat maintenance will continue to be carried out by supervised volunteer work parties.

[50] See www.**forestry**.gov.uk/**ewgs**

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11. APPENDICES

List of Appendices

Appendix 1 Maps and other figures

Figure A1 *Site Location showing Town Common & St Catherine's Hill*

Figure A2 Position of Areas 2 and 3 within Town Common & St Catherine's Hill

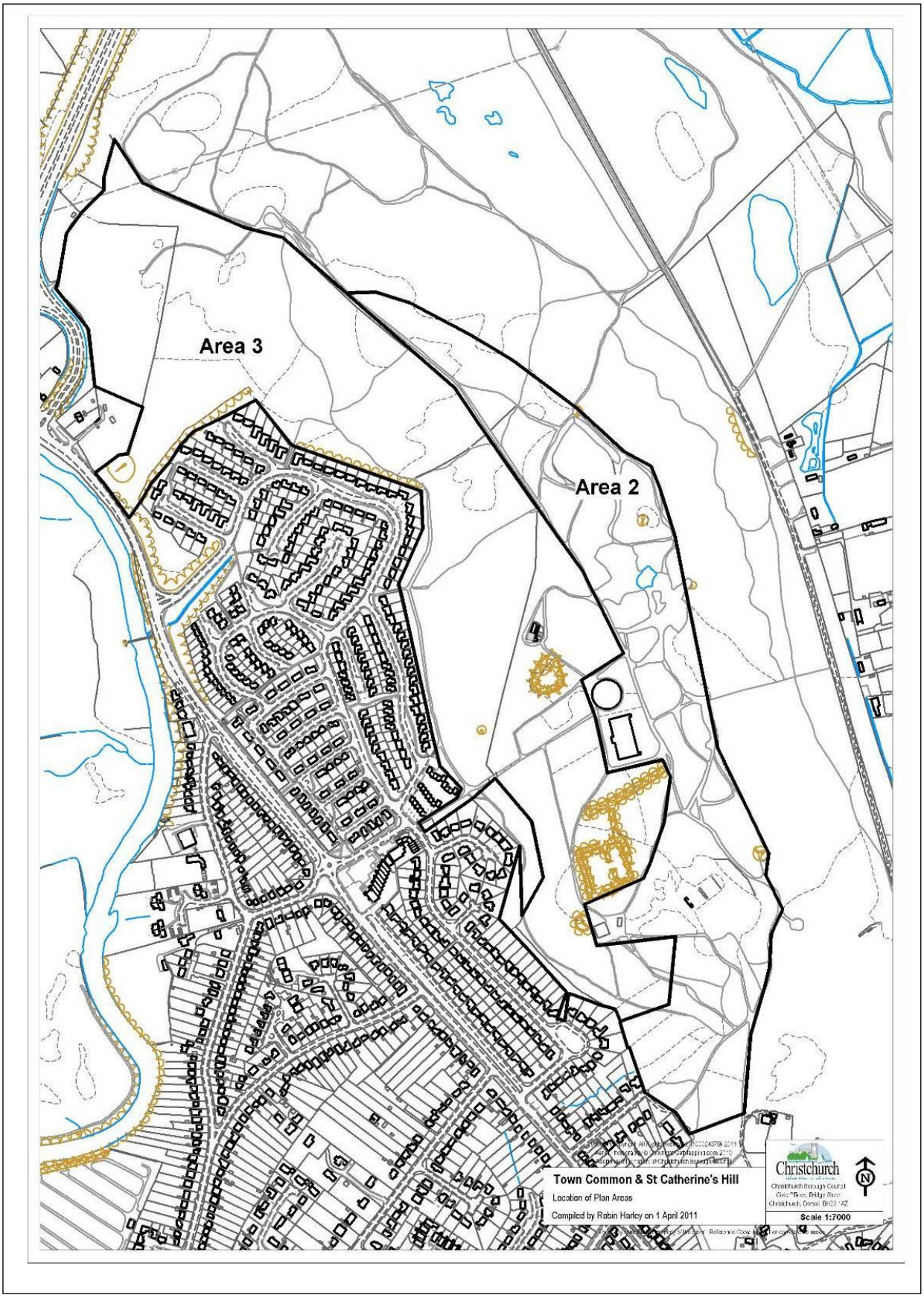


Figure A3 *Town Common and East Ramsdown (western block), registered site CL18 under the Commons Registration Act 1965 (in green) and Open Country under the Countryside and Rights of Way Act 2000 (in blue)*

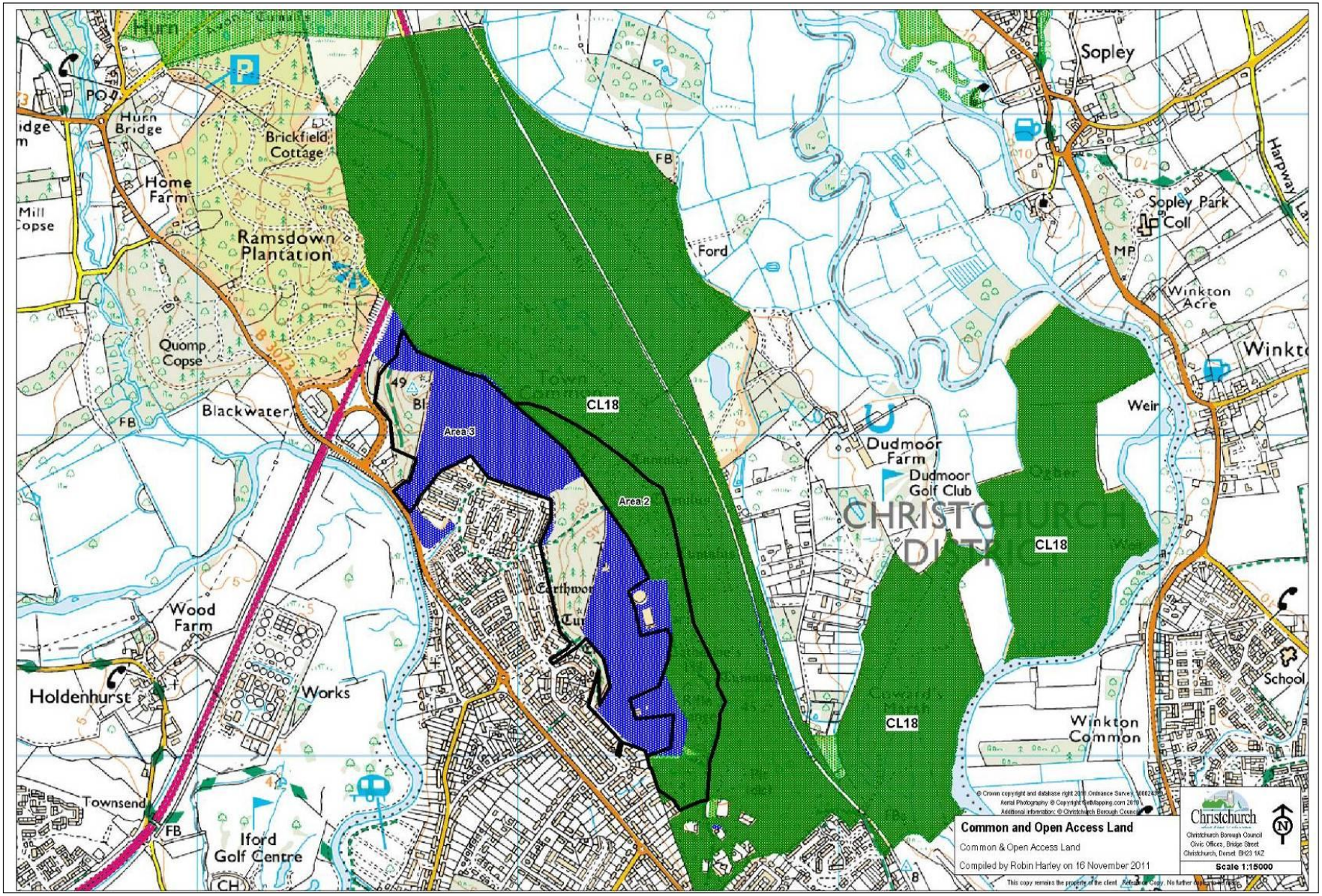


Figure A4 Sub-catchments and associated hydro-geology

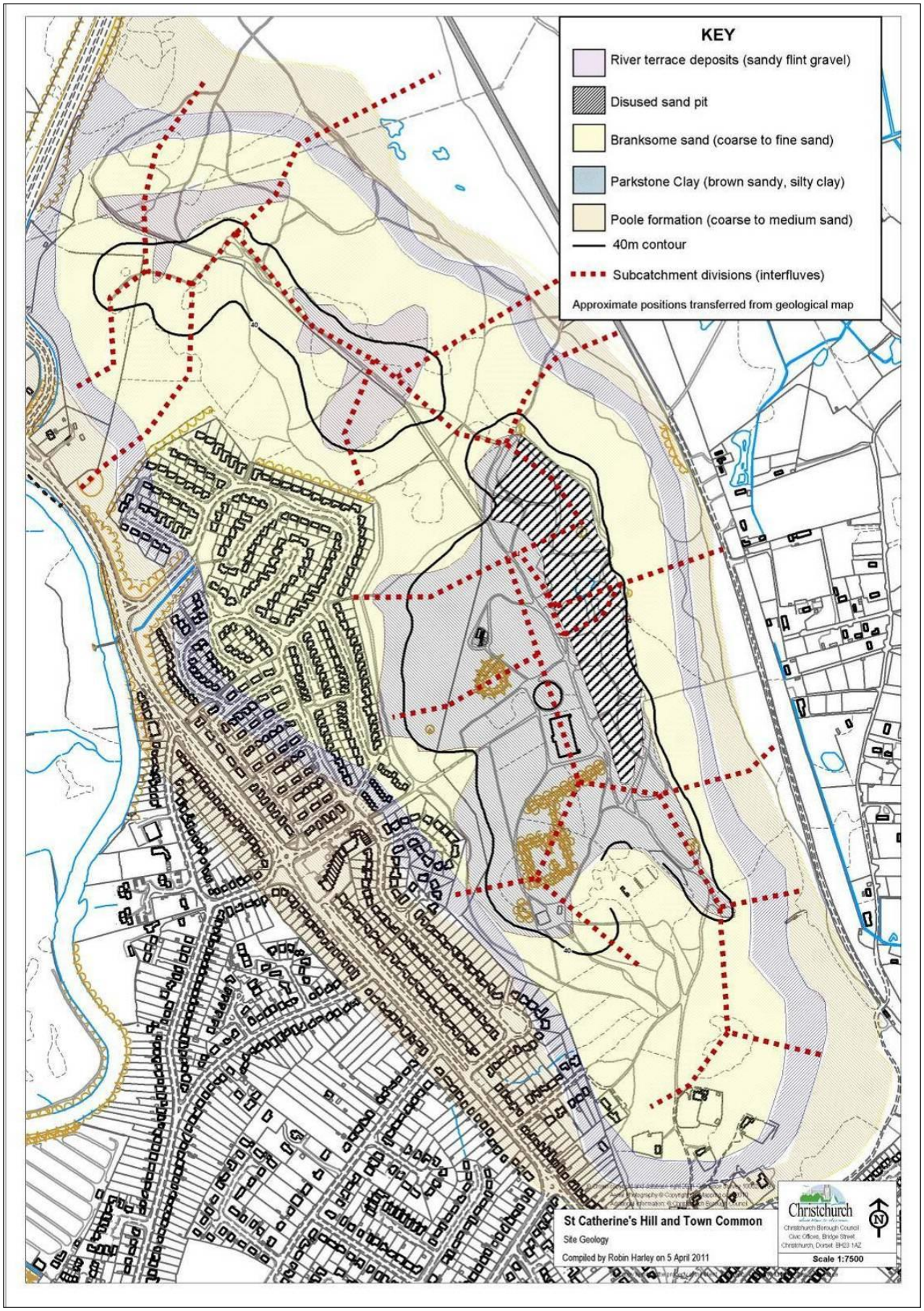


Figure A5 Sub-catchment compartments used in this management plan (squares represent an area of 100m x 100m (1 ha)

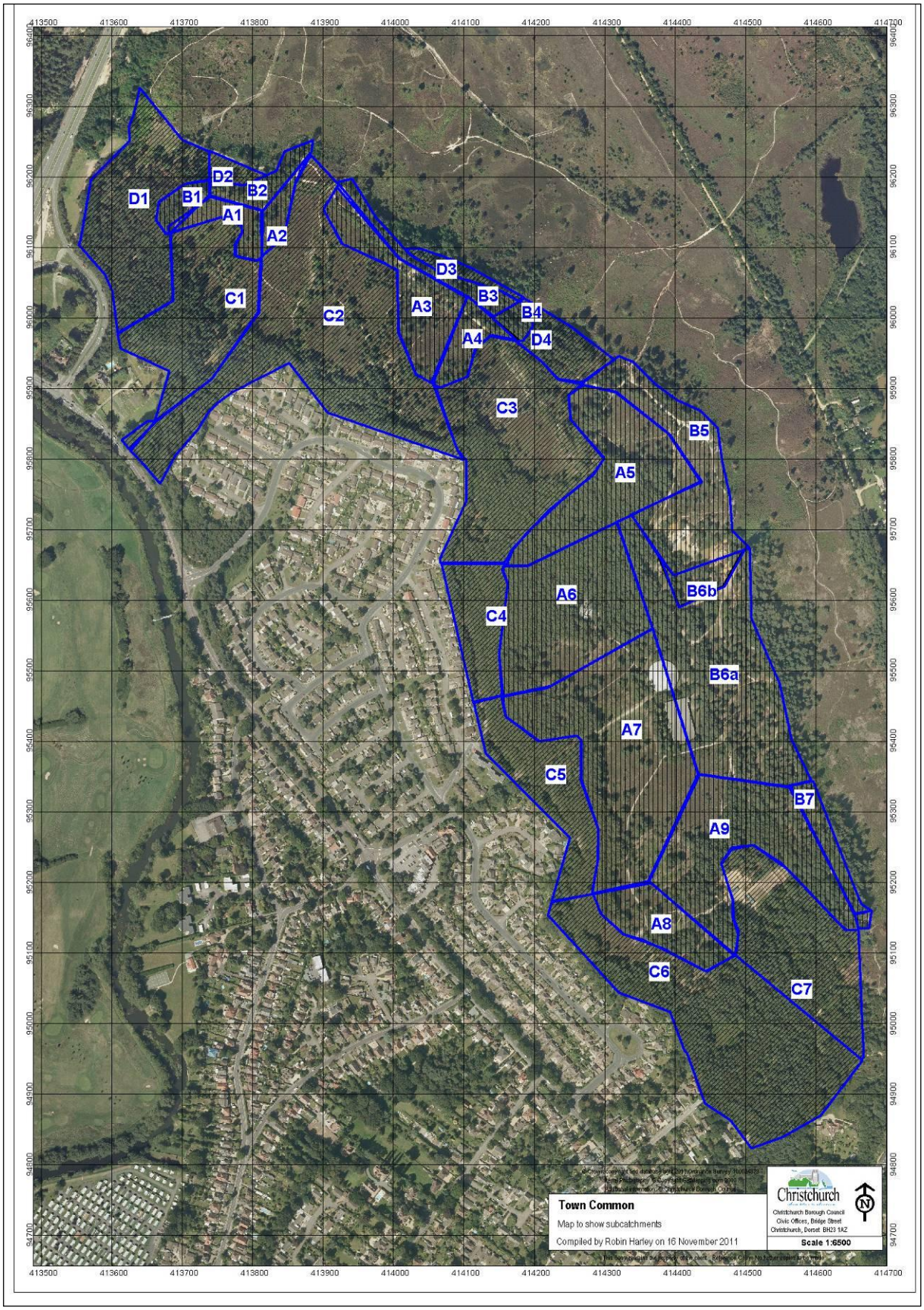


Figure A6 Habitat types and National Vegetation Classification

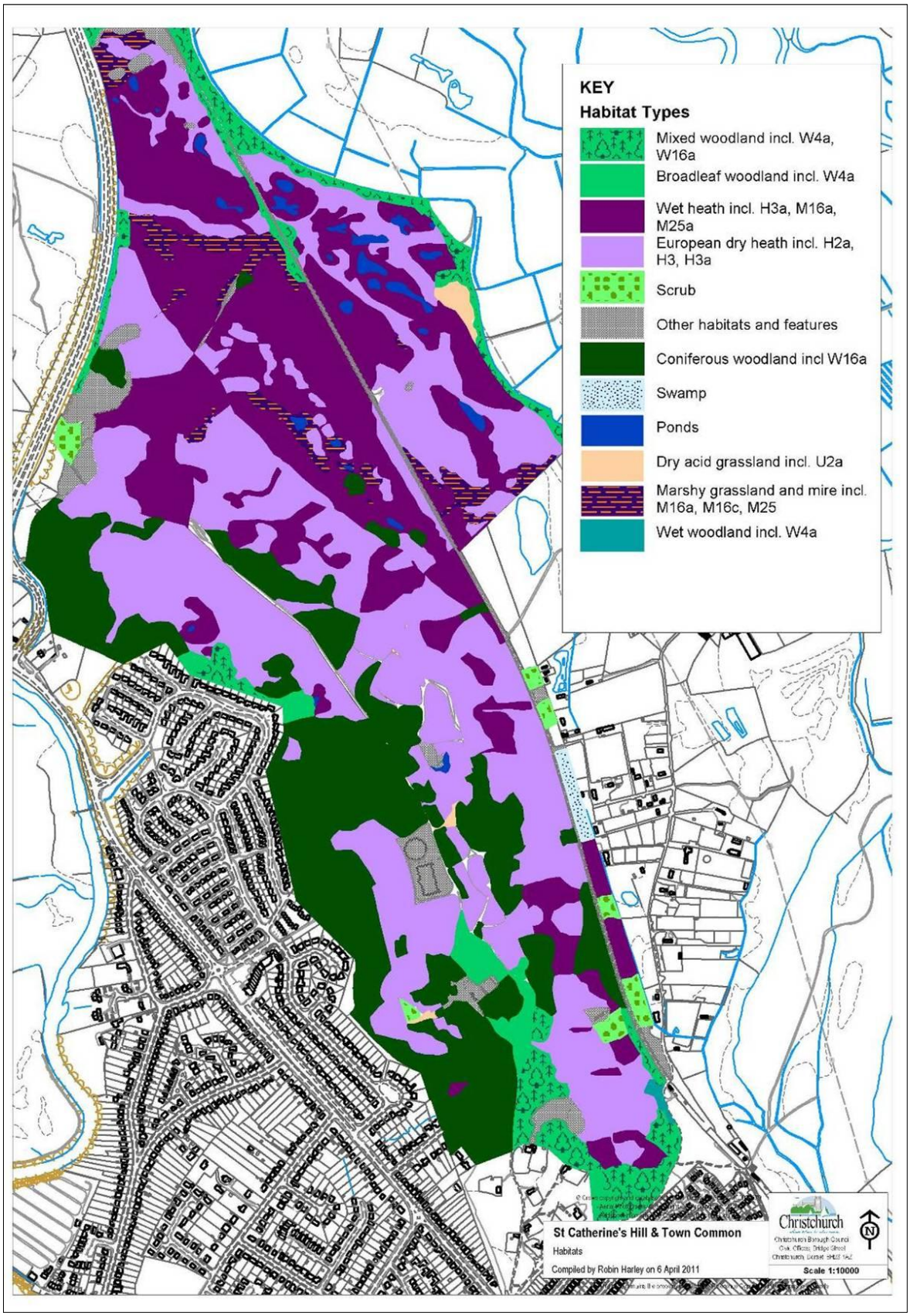


Figure A7 Earthworks and historic monuments

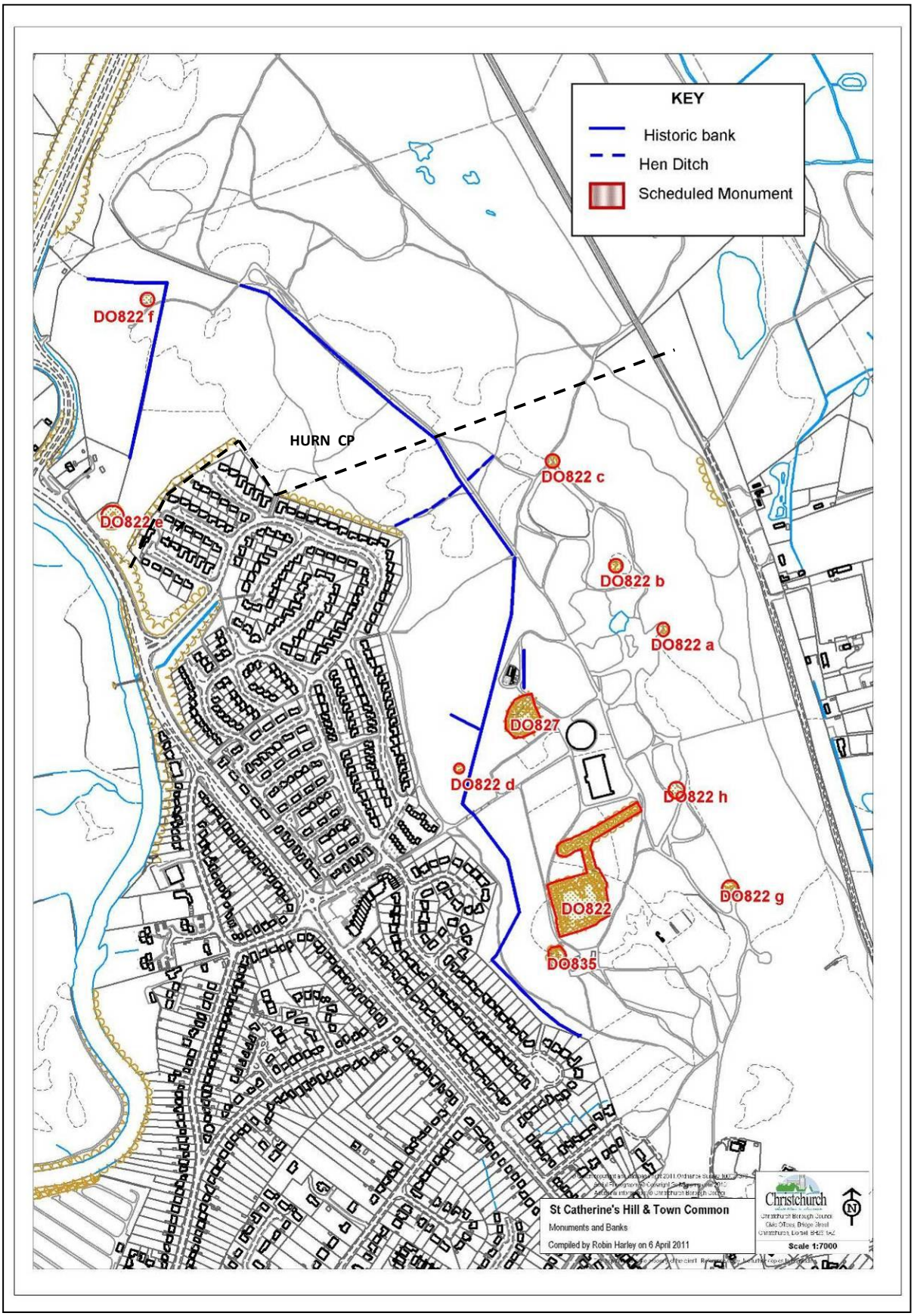


Figure A8 Site infrastructure and access

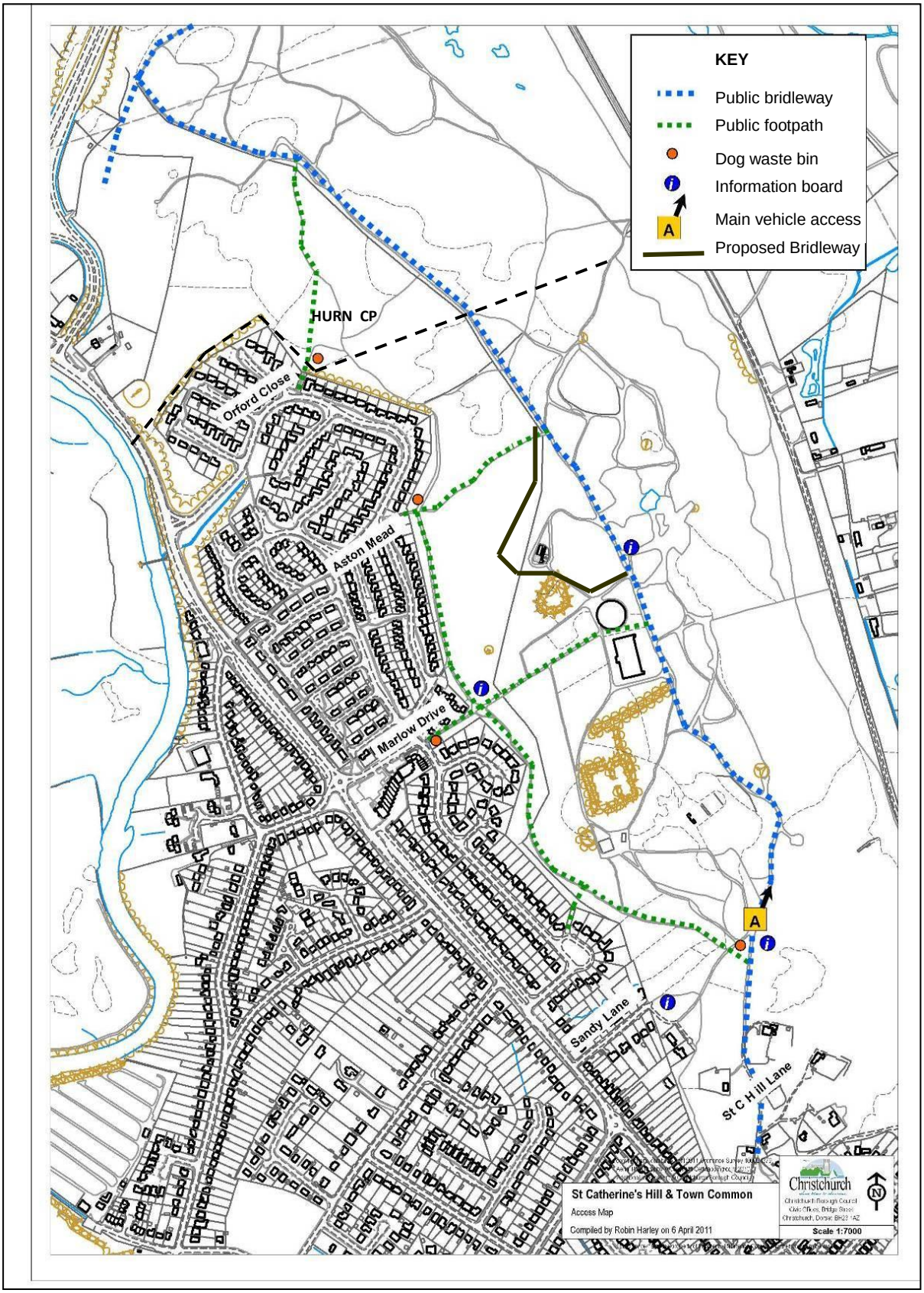
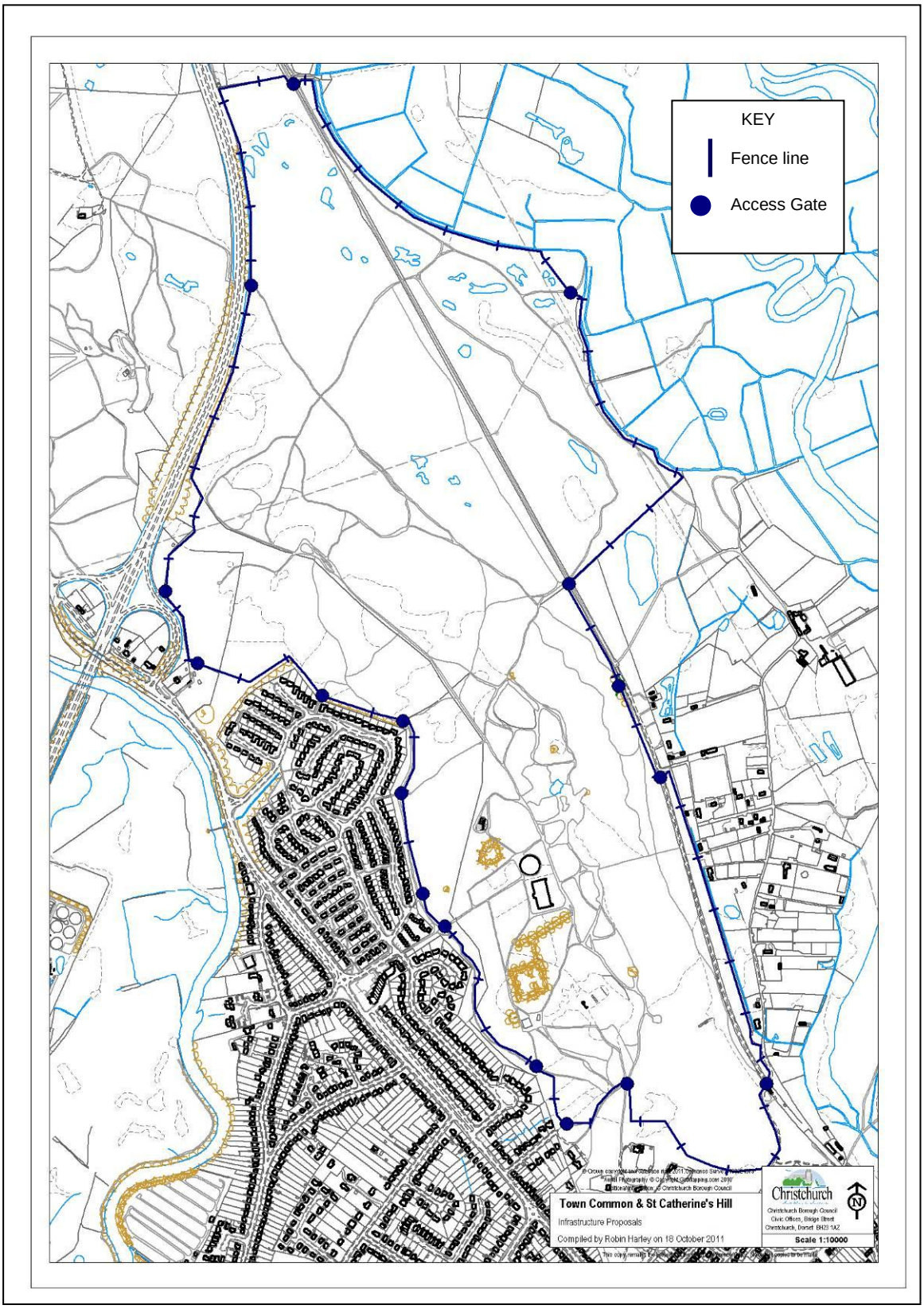


Figure A9 Proposed location of fence line



Appendix 2 Tables

Table A1 The story leading to this Management Plan

Date	What	Notes
1960	St Catherine's Hill purchased by CBC as a pleasure ground	
1971	Town Common notified as SSSI	
1984	Report to CBC Amenities Committee, where need to address the loss of important habitats on site through management is recognised	
1990	Dorset Heathland Forum produce Dorset Heathland Strategy	Unanimous support from County Cllrs
1990	CBC start management agreements with English Nature	
1991	HCT (now ARC) start 21 year lease of Town Common (Area 1) from Malmesbury Estate	
1998	Town Common SSSI designated RAMSAR and SPA	Which bring international obligations to prevent deterioration of habitats
2000	Hardy's Egdon heath project	CBC and HCT, partners in this county wide HLF funded 5 year project which includes yearly felling programme
2001	Urban Heaths LIFE project	CBC and HCT partners in 4 year education & wardening programme which now continues as Urban Heath Partnership
2002	Town Common SSSI becomes SAC	
2003	HCT (now ARC) submit felling licence	
Oct '03	Public meeting and 2000 signature public petition against	
Feb '04	Town Common Advisory Committee now includes Ward Cllrs and Hurn Parish Council	
Mar '04	West Christchurch Residents Association & Hurn Parish Council organise protest meeting at Hurn Bridge Sports Club, followed by	
April '04	Protest on site – spot painting of trees	
Jan '05	Forestry Commission SW Regional Advisory Committee meet to hear representations about felling & related issues	
April '05	CBC year 5 felling work as part of Hardy's Egdon Heath project	There has been no significant felling of trees by CBC on Areas 3 since
Sept '05	Forestry Commission recommend and agree to part fund the employment of a facilitator to help resolve management plan, esp felling issues, for Areas 2 & 3	
2007	Felling licence for five years agreed for Area 1 only and subject to a facilitated stakeholder process to agree Areas 2 & 3 management, esp felling	A compromise accepted by most parties with some reservations.
July '07	First meeting of Friends of St Catherine's Hill	
Apr '09	St Catherine's Hill & Town Common Management Plan Steering Group (MPSG) form and meet	
Feb '08	CBC and ARC enter 10 year Higher Level Stewardship agreement with Natural England	ARC lease of site extended until 2018
Nov'09	Facilitators appointed to support Steering Group through management plan process	
Feb '10	MPSG offer public meeting at Hall on the Hill to outline proposals for management plan and gain contribution but strong expressions of feelings about trees prevented any other discussion	Strength of feeling and concerns recognised by Steering Group
Apr'10	Hurn Parish Plan published. A survey shows that 81% of Hurn residents do not want to see trees felled to create more heathland in the Parish	
Dec '10	Hydrology Report Published	

Table A2 Land Ownership

Owners	Tenants	Address	Details
Christchurch Borough Council (CBC)	N/R	Address above.	See Fig A2, Appendix 1
Malmesbury Estate	Amphibian & Reptile Conservation (ARC)	ARC , 655A, Christchurch Road, Boscombe, Bournemouth, Dorset, BH1 4AP http://arc-trust.org/	See Fig A2, Appendix 1. Area 2 continues into Area 1 also owned by the Estate
Sembcorp Bournemouth Water	N/R	George Jessel House, Francis Ave., Bournemouth, Dorset, BH11 8NX http://www.sembcorpbw.co.uk	See Fig A2, Appendix 1: within Area 2. Two concrete reservoirs. Access for maintenance via St Catherine's Hill Lane and then along track on the hill
Christchurch Gun Club	Tenants to Malmesbury Estate	secretary@christchurchgunclub.org http://www.christchurchgunclub.org	Within Area 2. Club has access via Sandy Lane and then along track on the hill. Shooting all days, except Tuesdays. Restricted to between 10am and dusk and summer evenings on Thursday and Fridays. See website for full calendar.
Telecommunications Mast	Tenants to CBC		Base station and tower to 30m for shipping and mobile communications

Table A3 Aerial photographs archive

Document Name	Contact	Location	Date	Format
Aerial Photograph 1947	DCC – Steve Wallis/Claire Pinder	Dorchester	1947	Hard copy
Aerial Photograph 1951 oblique	CBC	Steamer Point	1951	Scanned image
Aerial Photograph 1961	CBC	Steamer Point	1961	Scanned image
Aerial Photograph series	CBC	Civic Offices	1989, 1995	Hard Copy
Aerial Photograph series	CBC	Civic Offices (MapInfo)	2000 2005 2009	GIS layer

Table A4 All NVC communities at St Catherine's Hill and Town Common, all areas (from Walls & Crew 2010)

NVC	Description & occurrence at St Catherine's Hill (ie Areas 2 & 3)	Importance
Woodland 'W' communities		
W4	Downy birch – Purple Moor-grass woodland. Stands of recent woodland in damp patches where Sallow is common	
W16	Oak – Birch – Wavy Hair-grass woodland This woodland is dominated by Maritime Pine or Scots Pine. The designated stand-type indicates the dominant species that would occur should natural colonisation occur	
W23	Common Gorse – Bramble scrub. Largely stands of gorse.	
Heathland 'H' communities		
H2	Common Heather – Dwarf Gorse heath.	Lowland dry heathlands are Biodiversity Priority Habitats and included in Annex 1 of Habitats Directive This dry heathland type is found throughout the site
H3a	Common Heather – Bristle Bent heath. This is a community that is intermediate between wet and dry heath.	Lowland dry heathlands are Biodiversity Priority Habitats and included in Annex 1 of Habitats Directive Unclear from report whether this occurs in small transitional areas in Area 3
Mire 'M' communities		
M1 & M2	Cow-horn Bog-moss and Feathery / Flat-topped Bog-moss bog pool communities. These pools are difficult to assign to a particular community as they have few species	Associated with pools in Area 1 only
M3	Narrow-leaved Cotton-grass bog-pool community.	As above, occurs in Area 3 only
M16a	Cross-leaved Heath wet heath, typical sub-community Some of this vegetation is dry with varying amounts of Purple Moor-grass indicating impoverishment of the community perhaps caused by fires.	Wet heaths such as M16 are Biodiversity Priority Habitats Where this occurs in Areas 2 & 3 also has characteristics of M25
M16c	Cross-leaved Heath wet heath, White-beaked Sedge, Oblong-leaved Sundew sub-community. Small patched of White-beaked sedge, generally species-poor community.	Wet heaths such as M16 are Biodiversity Priority Habitats Occurs in Area 1 only
M21	Bog Asphodel –	Occurs in area 1
M25	Purple Moor-grass – Tormentil mire Dominated by Purple Moor-grass. Hair's tail Cotton-grass found beside a pool in Area 3	Associated with all areas, see also M16a above Hair's tail Cotton-grass is scarce in southern England

Table A5 Scientific names of plants and animals mentioned in text

Common Name	Scientific name
Vascular plants	
Silver Birch	*Betula pendula*
Bog Asphodel	*Narthecium ossifragum*
Bracken	*Pteridium aquilinum*
Bramble	*Rubus fruticosus*
Brown Beaked Sedge	*Rhynchospora fusca*
Common Cotton-grass	*Eriophorum angustifolium*
Common Heather / Ling	*Calluna vulgaris*
Cross-leaved Heath	*Erica tetralix*
Downy birch	*Betula pubescens*
Dwarf Gorse	*Ulex minor*
Hair's tail Cotton-grass	*Eriophorum vaginatum*
Maritime Pine	*Pinus pinaster*
Oak	*Quercus sp/p*
Oblong-leaved Sundew	*Drosera intermedia*
Piri-piri Burr	*Acaena novazelandiae*
Purple Moor-grass	*Molinia caerulea*
Rhododendron	*Rhododendron ponticum*
Scots Pine	*Pinus sylvestris*
Strawberry Tree	*Arbutus unedo*
Tormentil	*Potentilla erecta*
Three- cornered Leek	*Allium triquetrum*
Wavy Hair-grass	*Deschampsia flexuosa*
White-beaked Sedge	*Rhynchospora alba*
Mosses	
Cow-horn Bog-moss	*Sphagnum denticulatum (= S. auriculatum)*
Feathery Bog moss	*Sphagnum cuspidatum*
Fine Bog-moss	*S. angustifolium (old S. recurvum agg)*
Flat-topped Bog moss	*Sphagnum fallax*
Papillose Bogmoss	*Sphagnum papillosum*

Common Name	Scientific name
Reptiles	
Smooth Snake	*Coronella austriaca*
Sand Lizard	*Lacerta agilis*
Birds	
Crossbill	*Loxia curvirostra*
Dartford Warbler	*Sylvia undata*
Great Spotted Woodpecker	*Dendrocopos major*
Green Woodpecker	*Picus viridus*
Hawfinch	*Coccothraustes coccothraustes*
Hobby	*Falco subbuteo*
Nightjar	*Caprimulgus europaeus*
Raven	*Corvus corax*
Song Thrush	*Turdus philomelos*
Woodlark	*Lullula arborea*
Dartford Warbler	*Sylvia undata*
Hobby	*Falco subbuteo*
Nightjar	*Caprimulgus europaeus*
Raven	*Corvus corax*
Cuckoo	*Cuculus canorus*
Invertebrates	
a solitary bee	*Andrena (Leucandrena) argentata*
Downy Emerald dragonfly	*Cordulia aenea*
Hairy Dragonfly	*Brachytron pratense*
Heath Grasshopper	*Chorthippus vagans*
Potter Wasp	*Eumenes coarctatus*
Scarce Chaser dragonfly	*Libellula fulva*
Silver-studded Blue butterfly	*Plebejus argus*
Mammals	
Roe Deer	*Capreolus capreolus*

Table A6 *International to local importance of plant and animal species at St Catherine's Hill & Town Common (Areas 2 & 3) .From data (including allocated status) provided by Christchurch Borough Council (explanation of acronyms below).*

Feature	EPS / WCA	Annex 1	WCA / CroW	BAP / S41	SoCC Red	SoCC Amber	Nationally scarce	RDB	Dorset Notable/D scarce	Total no. of species
Birds		2		6[51]	7	14				21
Amphibians				1						1
Reptiles	2[52]		2	6			2			6
Bats	6		6	6[53]						6
Other mammal	1									1
Flowering plants							1		8	9
Mosses									5	5
Lichen							1			1?
Fungi				1				1		1
Moths							2			2
Bugs							1	1	1	3
Butterflies				3						3
Cockroaches							3			3
Grasshoppers & crickets							1	1[54]	1	2
Dragonflies & damselflies								1	2	3
Spiders							3			3
Flies				1			1[55]		1	2
Ants, bees & wasps							9	5		14
TOTALS	8			25	7	14	26	7	18	

[51] All 6 birds listed here are also listed in SoCC column; the 2 Annex 1 birds – Nightjar is also SoCC red, Dartford Warbler is SoCC amber
[52] Smooth Snake and Sand Lizard also listed as Nationally Scarce and protected under WCA / CRoW Act
[53] All 6 bat species are protected under EPS / WCA and S41; one of which, Soprano Pipistrelle is also BAP species. Further details about bats eg if roosting etc unknown
[54] This species also listed under Dorset Notable
[55] This fly also listed under Dorset Notable.

Table A7 Summary of Wayleaves and easements on Area 3

Date	Who	Purpose
28 October 1961	Earl of Malmesbury	Lease of sporting rights over the northern part of the Council's land, north of the Borough boundary at St Catherine's Hill leased to the Earl of Malmesbury for a term of 999 years from 01 July 1960.
Now expired and being re-negotiated		Leases and Licences for the use of the Masts at St Catherine's Hill with access rights to the Masts up the bridleway from St Catherine's Hill Lane.
28 January 1991	Southern Electric plc	Leas for substation site adjacent to telecommunications masts at St Catherine's Hill with access rights over the hill for a term of 99 years from 28 January 1991.
11 April 1991	Mercury Communications Ltd	Wayleave for access.
10 February 2005	British Telecommunications plc.	Wayleave for access.
3 October 1986	West Hants Water Co	Easement for water main from Marlow Drive to reservoir.
6 November 1989	West Hants Water Co	Easement for water main going north from reservoir under bridleway

Appendix 3 Town Common SSSI citation

Site Name: Town Common
County: Dorset
District: Christchurch
Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981, as amended.
Local Planning Authority: Christchurch Borough Council, Dorset County Council
National Grid Reference: SZ 138966 **Area:** 256.75 (ha) 634.42 (ac)
Ordnance Survey Sheet 1:50,000: 1 9 5 **1:10,000:** SZ 19 NW, SW
Date Notified (Under 1949 Act): 1951 (part), 1971 (part)
Date of Last Revision: 1977
Date Notified (Under 1981 Act): 1985 (part), 1986 (part), 1994

Other Information:
This site contains St Catherine's Hill Geological Conservation Review site. Most of the site is proposed as part of the Dorset Heathlands Special Protection Area (SPA) under the EEC Directive on the Conservation of Wild Birds (Directive 79/409/EEC). Large parts, including Town Common and Sopley Common, are managed as nature reserves by the Dorset Trust for Nature Conservation and the Herpetological Conservation Trust. There are several boundary extensions at this notification and adjacent parts of the Hurn Common SSSI (1986 notification) are also included. The site adjoins the Moors River SSSI and the Avon Valley SSSI which is also proposed as a SPA and as a Wetland of International Importance under the Ramsar Convention.

Description and Reasons for Notification:
Town Common SSSI covers an extensive tract of lowland heathland centred on a hilly ridge separating the floodplain of the Avon Valley from the Moors River. Exposures of the deposits forming this ridge are of special geological interest. The topography is diverse, and with variations in the underlying geology and drainage conditions, there is a varied mosaic of heathland plant communities. Areas of succession from open heath to conifer and mixed woodland add further interest. The heathland is especially valued for a wide assemblage of bird, reptile, dragonfly and other invertebrate species distinctive to this habitat, including several that are nationally rare or scarce. Further heathland, wet grassland and other wetland covered by the adjoining Avon Valley, Moors River and Hurn Common SSSIs place Town Common within an exceptionally large tract of such habitats for lowland Britain. This entire area has a national and international importance for its wildlife interest.

St Catherine's Hill at the southern end of the ridge provides key evidence for reconstructing the geography of the area during late Eocene times, some 35 to 40 million years ago. Two disused pits expose a sequence of fine sands and silty clays containing plant debris, and the sediments show evidence of having been laid down in fluvial (river-lain) or estuarine conditions. The strata are the lateral equivalents of marine rocks ("Lower Barton Beds") seen at Hengistbury Head and Friar's Cliff on the coast to the south. They are the only known strata of this age in southern England to have been laid down in a fluvial or estuarine environment, all others having been deposited under marine conditions. If the determination of the age of the rocks seen at St. Catherine's Hill is correct, then the site is of critical importance in showing that the late Eocene shoreline lay in the area between Christchurch and Hengistbury Head.

Lowland heathland has become much reduced in extent both in Britain and continental Europe. The loss in south-east Dorset has been about 86% since the mid 18th century but this remains one of the few locations in Britain where heathland has an extensive presence. The tract at Town Common is relatively little fragmented and includes one of the largest unbroken blocks. The heathland has developed on infertile and mostly sandy soils, which along the ridge are derived from the Branksome Sand and Poole Formation, with occasional clay layers causing impeded drainage on the slopes. A broad, low-lying plain extends along the eastern flank of the ridge on Head and River Terrace deposits, widely giving rise to poorly drained clayey sands. In places these deposits have a rather hummocky surface due to areas of blown sand. Gravely sands from an older river terrace cap parts of the ridge adding yet further diversity to the physical nature of the site.

The freely drained soils on the higher ground support dry heath. This is dominated by heather *Calluna vulgaris*, a dwarf-shrub which widely forms deep, mature stands. Bell Heather *Erica cinerea* and Dwarf Gorse *Ulex minor* also occur, while bare areas of firm, sandy ground are important for the diminutive and nationally scarce Mossy Stonecrop *Crassula tillaea*. Cross-leaved Heath *E. tetralix* becomes significant where conditions are less dry, forming a humid heath. In places this vegetation supports an abundance of *Cladonia* lichens such as *C. impexa*. On large parts of the ridge, particularly at St Catherine's Hill, the heathland has been replaced by pine woodland. Other areas are at a transitional wooded-heath stage with invading Scot's Pine *Pinus sylvestris*, Maritime Pine *P. pinaster* and birch *Betula* species. This succession to woodland provides temporary niches for heathland edge animals, mostly notably some bird species, but causes a decline and eventual loss of the heathland interest.

Flushes on the slopes of the ridge give rise to a sequence of communities from the dry and humid heath to wet heath and valley mire. The wet heath occurs on seasonally waterlogged soils, with differences in soil moisture conditions leading to varying proportions of heather, Cross-leaved Heath, Purple Moor-grass *Molinia caerulea* and certain bog-moss Sphagnum species such as *S. compactum*. Where the soils are permanently waterlogged small valley mires have developed on peat. These areas are more floristically rich. Among the characteristic plants are Bog Asphodel *Narthecium ossifragum* and cotton-grass *Eriophorum* species, including Hare's-tail Cotton-grass *E. vaginatum* which is very local in Dorset and further species of bog-moss such as the nationally scarce *S. pulchrum*. The insectivorous plants Oblong-leaved Sundew *Drosera intermedia*, Round-leaved Sundew *D. rotundifolia* and Pale Butterwort *Pinguicula lusitanica* are particularly associated with this community and also open patches of peat within the wet heath.

The broad plain on the eastern flank of the ridge extends from near the Moors River in the north to the floodplain of the Avon Valley. Wet and humid heath widely dominates the rather flat and poorly drained land, while occasional hummocks provide transitions to dry heath. Numerous pools are scattered across this plain. These support carpets of the aquatic bog-moss *S. cuspidatum*, and margins that include Purple Moor-grass, Many-stalked Spike-rush *Eleocharis multicaulis*, Common Cotton-grass *Eriophorum angustifolium*, White Beak-sedge *Rhynchospora alba* and the nationally scarce Brown Beak-sedge *R. fusca*.

The heathland is used by a diverse assemblage of dragonflies and damselflies (Odonata), with some 24 species recorded in recent years. Some of these species occur as a consequence of the close position of the heathland with breeding locations along the Moors River and the wetlands of the Avon Valley. The Scarce Chaser *Libellula fulva*, a nationally rare damselfly, is an example. The many heathland pools support breeding populations of other species such as Hairy Dragonfly *Brachytron pratense* and Downy Emerald *Cordulia aenea*, both nationally scarce, and Black-tailed Skimmer *Orthetrum cancellatum*, another local species.

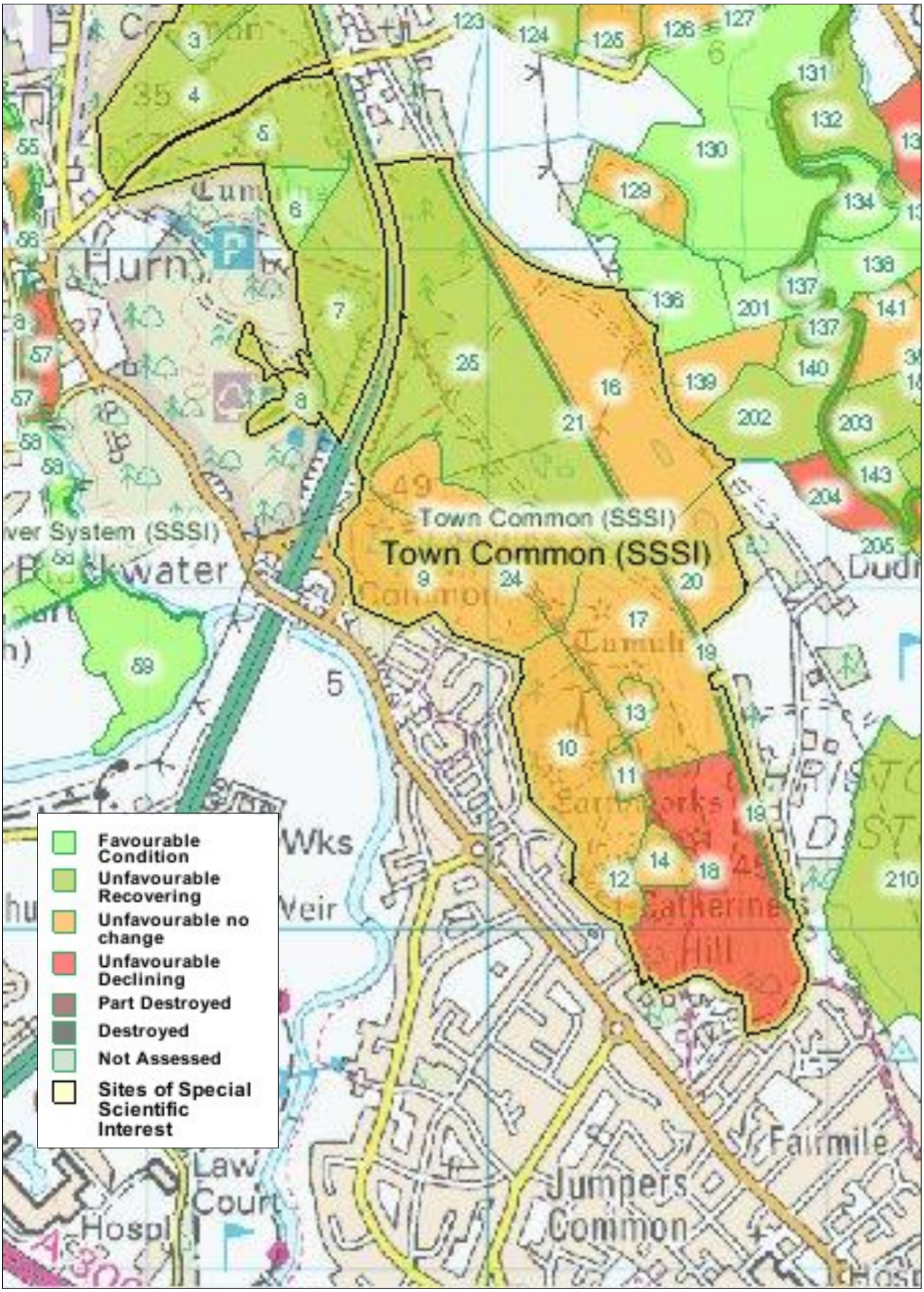
Other insect groups strongly associated with lowland heathland have been little studied at this site, but the available records indicate a significant interest. The assemblage of grasshoppers and crickets (Orthoptera) includes the nationally rare Heath Grasshopper *Chorthippus vagans* and the nationally scarce Bog Bush-cricket *Metrioptera brachyptera*. Suitable short heathland supports Silver-studded Blue butterfly *Plebejus argus*, also nationally scarce. The spiders (Arachnida) include many rare, scarce and local species such as the Pirate Spider *Ero aphana* presently recorded from only a few east Dorset heathlands, a jumping spider *Evarcha arcuata* and a crab spider *Thomisus onustus*. The site has breeding populations of all six reptile species native to Britain. These include the rare Sand Lizard *Lacerta agilis** and Smooth Snake *Coronella austriaca** which are typically associated with the mature dry heath. This is an especially important stronghold for the Sand Lizard in Britain, with the many favourable heathland slopes supporting widespread populations.

The bird interest is substantial. The dry heath supports a large population of the rare Dartford warbler *Sylvia undata*§, with the number of breeding pairs reaching about 2% of the British total. Among the other breeding birds of the open heath are Stonechat *Saxicola torquata* and the rare Woodlark *Lullula arborea*§, while species of the heathland edge such as Nightjar *Caprimulgus europaeus*§ and Tree Pipit *Anthus trivialis* also use the wooded-heath. The woodlands attract a further range of breeding birds including Woodcock *Scolopax rusticola*, Green and Great Spotted Woodpecker *Picus viridis* and *Dendrocopos major* and Siskin *Carduelio spinus*. There is also a mix of heathland and woodland raptors with the site being used during the breeding season by species such as Hobby *Falco subbuteo*†, Sparrowhawk *Accipiter nisus* and Long-Eared Owl *Asio otus*.

The proximity of the ornithologically important wetlands of the Avon Valley and the extensive presence of wet heath and pools serves to attract a variety of wildfowl and waders. Small numbers of Snipe *Gallinago gallinago* are often present, together in winter with Teal and other wildfowl. The site has supported several of these wetland birds as breeding species including Snipe, Redshank *Tringa totanus* and Shelduck *Tadorna tadorna*.

**Species listed in Schedule 5 of the Wildlife and Countryside Act 1981.*
†Species listed in Schedule 1 of the Wildlife and Countryside Act 1981.
§Species listed in Annex 1 of the EC Birds Directive.

Map of Town Common SSSI showing Site Management Units



Appendix 4 Byelaws, as quoted, for St Catherine's Hill (Area 3)

Byelaw 36 dated Nov 1975
A person shall not fly any power-driven model aircraft in the pleasure ground ie. on St Catherine's Hill

Byelaw 37 dated March 1976
A person shall not in the pleasure ground, i.e. on St Catherine's Hill:
(i) wilfully, carelessly, or negligently soil or defile any wall or fence in or enclosing the pleasure ground, or any building, barrier, railing, post, or seat, or any erection or ornament; (ii) climb any wall or fence in or enclosing the pleasure ground, or any tree, or any barrier, railing, post, or other erection; (iii) wilfully, carelessly, or negligently remove or displace any barrier, railing, post, or seat, or any part of any erection or ornament, or any implement provided for use in the laying out or maintenance of the pleasure ground; (iv) drive, pitch or chip a solid golf ball.

A person shall not, except in pursuance of a lawful agreement with the Council, or otherwise in the exercise of any lawful right or privilege, bring or cause to be brought into the pleasure ground any cattle, sheep, goats or pigs or any beast of draught or burden.

A person shall not except in the exercise of any lawful right or privilege, bring or cause to be brought into the pleasure ground any barrow, truck, machine or vehicle other than— (a) a wheeled bicycle, tricycle or other similar machine not mechanically-propelled; (b) a wheel-chair or perambulator drawn or propelled by hand and used solely for the conveyance of a child or children or an invalid. (ii) A person shall not except in the exercise of any lawful right or privilege ride any bicycle, tricycle or other similar machine in any part of the pleasure ground.

A person shall not affix any bill, placard, or notice, to or upon any wall or fence in or enclosing the pleasure ground, or to or upon any tree, or plant, or to or upon any part of any building, barrier, or railing, or of any seat, or of any other erection or ornament in the pleasure ground.

A person shall not cause or suffer any dog belonging to him or in his charge to enter or remain in the pleasure ground, unless such dog be and continue to be under proper control, and be effectually restrained from causing annoyance to any person, and from worrying or disturbing any animal or waterfowl, and from entering any ornamental water.

A person shall not in the pleasure ground—
(i) except as hereinafter provided, erect any post, rail, fence, pole, tent, booth, stand, building, or other structure;
Provided that this prohibition shall not apply where upon an application to the Council they grant permission to erect any post, rail, fence, pole, tent, booth, stand, building, or other structure, upon such occasion and for such purpose as are specified in the application; (ii) hang, spread, or deposit any linen or other fabric for drying or bleaching; (iii) sell, or offer or expose for sale, or let to hire, or offer or expose for letting to hire, any commodity or article, unless, in pursuance of an agreement with the Council. Or otherwise in the exercise of any lawful right or privilege, he is authorised to sell or let to hire in the pleasure ground such commodity or article.

A person shall not in the pleasure ground wilfully obstruct, disturb, interrupt, or annoy any other person in the proper use of the pleasure ground, or wilfully obstruct, disturb, or interrupt any officer of the Council in the proper execution of his duty, or any person or servant of any person employed by the Council in the proper execution of any work in connection with the laying out or maintenance of the pleasure ground.

Every person who shall offend against any of these byelaws shall be liable on summary conviction to a fine not exceeding twenty pounds.

Byelaw 46 dated Aug 1997
The land described in the Schedule (footpaths on St Catherine's Hill. is land to which the Dogs (Fouling of Land) Act 1996 applies, is hereby designated for the purposes of that Act.

Appendix 5 Background to formation of steering group

As part of a programme of works to meet statutory obligations for the site, in 2003 a felling licence application was submitted. This led to some stakeholders with an interest in the management of the site and local residents in particular, raising significant objections and concerns over the scale and extent of the proposals to fell trees here.

This created conflict locally and led to serious difficulties in managing the site to fulfil the above obligations, whilst taking into account the concerns of local residents. The inability to resolve the differences of opinion, created problems obtaining the Felling Licence from the Forestry Commission and ultimately led to the application being passed to an independent panel known as a Regional Advisory Committee (RAC) for review.

After reaching a compromise agreement with the main parties involved, the RAC made some key recommendations: including that an amended felling licence application should be made for the least contentious part of the site under ARC management (known as area 1) and that future management should be considered collectively for the remaining adjacent areas of land under ARC (area 2) and CBC (area 3) ownership.

To achieve this it also recommended that ARC and CBC work together in a wider partnership on a management plan for areas 2 and 3, going through a process of public consultation, aided by an independent facilitator.

Following those recommendations:

- An amended felling licence application was submitted and granted for area 1 in 2005 for a five year programme now completed. However, this consented felling is insufficient to achieve favourable condition for the site as a whole.
- The Friends of St Catherine's Hill was formally established in 2008 in order to promote greater understanding and involvement of the local community,
- In 2009, a Management Plan Steering Group with representatives of main stakeholders was established and terms of reference for the group have been agreed

Within the steering group there is already consensus on the need for a management plan and parties are willing to work together to find common ground. The need to appoint an independent body or person to facilitate and mediate within the local community has been recognised as an essential part of the management planning process and funding was secured for the financial year April 2009 - March 2010 from a range of stakeholders.

This project aims to bring stakeholders, including the wider public, together: to air their views on the management of the site and to take responsibility for the process of producing a management plan. This management plan will address the issues of practical management that will not only fulfil the statutory obligations of the land owners but will also take into account, amongst others, important local issues and concerns such as landscape implications, public access for enjoyment and recreational use, avoidance of flooding and landslip and the implications on groundwater and drainage.

Appendix 6 Background to Objectives

Table B1 Mitigation best practice – technical

- Mitigation to be applied as appropriate to sensitivity of the area, with highest levels applied to slopes.
- Coupes on slopes to follow contours along slopes in rectangular to linear fashion.
- Slope stability. All cut stumps left a few centimetres above ground level.
- Slope stability. Where appropriate and practical lay brash, stems parallel to contours, in staggered rows.
- Coir matting used only in critical areas of bare sand or gravel.
- For heathland restoration, consider use of heather brash to provide seed source especially if cleared area not adjacent to existing heathland or on bare soils.
- Slopes. Work will be undertaken by hand, with no heavy vehicles or plant.
- Plateau. Vehicles & plant permissible as agreed with NE (may impose maximum weight load or tracking specified) but work days / times may need to be agreed to ameliorate impact of noise on the tranquil setting.
- Consider increasing areas of wet heath or mire in appropriate locations to provide flow attenuation / or attenuation pond creation subject the NE approval and local agreement.
- Reinstatement or restoration of old ditches subject to hydrological requirement.
- Build in programme of maintenance of existing operating ditches and any restored ditches.

Table B2 Factors governing site selection of coupes for restoration of coniferous woodland to heathland (ecological, hydrological and historical)

All compartments

- Emphasise coupes that are able (a) link two or more heathland patches (b) on edges of heathland – this is because the gain will be greater, recovery quicker and impact is likely to be less noticeable.
- Use scalloping or shaping the edges of fellings and thinnings to improve and soften the effect of tree removal in the landscape.

Plateau (compartments A & B)

- Felling areas to avoid head of gullies
- Initial (Phase 1) potential felling to be restricted to a maximum of 0.75 ha in each of the sub-catchments associated with A and level areas associated with B; east and north sloping sub-catchments (away from housing) in B can be increased to 1.5ha
- Shape of felling areas can be more flexible on the flat and can more readily take in landscape considerations. Ecological considerations for early restoration to heath or wood-heath mosaic include (a) following the woodland / heath edge but scalloping the line taken, (b) linking existing patches of heathland
- Consideration should be given to tree removal along historic banks, creation of clearings (and footpaths) along edge of historic banks (prevents actual banks being used as footpaths) and widening of ride areas. This will serve multi-purpose functions.
- Thinning of mature plantation on plateau may be desirable for landscape reasons.
- Manage and remove trees encroaching on archaeological site/s, where possible, taking into account screening of on site structures (e.g. radio masts).

Slopes (Compartment C)

- Long-term aim on the slopes is to create a wood-heath, primarily by felling in small coupes
- Initial (Phase 1) felling coupes of 0.075ha, ie only 5 or 6 of these coupes in C.
- Avoid (a) Parkstone clays (north & south ends), junction of Branksome sands / Parkstone clays (b) steepest slopes especially on terrace gravels (c) gullies and heads of gullies (also avoid large areas of bare sand / gravel soils on slopes)
- Coupes of 0.075 ha will be rectangular and linear in shape (with wavy edges) and follow contours ie coupes 10-25m X 30-50m along contours of slopes.
- Initial felling to target areas at top of slopes as first phase (subsequent phases may move downslope as appropriate)
- Coupes to link up existing patches of heath where possible.
- Buffer strip, woodland managed as screen on western margin of site, width of strip to be decided

Table B3 Frequently asked questions relating to grazing on site

- **How will fencing be funded, what are the estimated costs and how can this be justified when the benefits seem relatively small?**
  Most fencing costs will be met by Higher Level Stewardship (HLS) Government funding. HLS is targeted at protecting and improving SSSI habitats, and is available to all SSSI owners/managers, including farmers, private organisations and public bodies.
  Fence materials chosen (English-grown chestnut posts) will ensure long life, so cost will be modest when annualised over lifetime of fence. Fencing and gates have other incidental site benefits e.g. preventing entry of illegal vehicles, motorcycles etc.

- **What type of fencing will be used as I am concerned about the potential risk of using barbed wire to children and animals and the use of stiles which are hard to access for the less able?**
  Boundary fencing with low risk of public contact (e.g. bordering A338) will comprise 2 upper strands barbed wire, bottom strand plain wire to allow safe passage of dogs etc underneath. Fencing in "busier" areas will avoid use of barbed wire, being either 4 strands plain wire or else wire stock (sheep) netting with top rail. Self-closing pedestrian gates will generally be used rather than stiles

- **How many animals will be used and will this initially be lower to allow a period of familiarisation?**
  Exact number of cattle will depend on monitoring of results achieved and duration of grazing period. The first year would begin with perhaps half a dozen adults, building to perhaps twice that number in subsequent years if grazing impact warrants it.

- **Will grazing take place all year?**
  It's envisaged that grazing would commence in June or July, and end in late October or November, depending on weather and habitat considerations. Whilst animals are on site, notices will be placed at main access points.

- **Who will check the welfare of the animals and how often will this take place? If they are feeding in the boggy ground won't foot-rot be an issue?**
  The cattle will be checked by trained staff daily, and it is hoped to recruit additional volunteer "lookers" from regular site users to provide extra vigilance. Foot-rot is not prevalent in cattle grazing such sites.

- **How will you stop wildlife, such as deer, being restricted by the new fences?**
  The normal fence height for domestic animals will not pose a barrier to movement of deer. Other mammals will be able to pass underneath.

- **What is the likely impact on dogs and what happens if there is an incident involving dogs and cattle – will there then be more restrictions on dog walking?**
  Experience on similar sites (e.g. Canford & Upton Heaths) has not seen problems with dogs. The individual cattle selected to graze the site will have been tried and tested with dogs elsewhere, and so will choose to ignore them. Dogs that have not encountered cattle before will typically be curious on first meeting, and supervised first encounters can be arranged with staff to reassure owners. Dogs should be under close control while on site. See the Dorset Dogs website for dog friendly advice.

  Any incidents occurring between dogs and cattle will have to be dealt with on a case by case basis depending on the circumstances. There is no intention to further restrict the entire dog walking community because of individual incidents.

- **My dog does not get on well with livestock. Will there be areas provided where I can walk so that I can avoid any contact?**
  The proposal in the plan is that grazing will be excluded from a corridor along most of the western edge of the site, where dog walking is particularly popular. However, with a small number of livestock on site which will keep to themselves, you should be readily able to avoid the animals.

- **While I can understand and support the idea of grazing, surely there is no need to fence the wooded areas, where there is no food. Why can't you restrict grazing to the eastern side of the site, away from the more public areas?**
  Grazing would benefit all heath and woody heath areas. Cattle will help to encourage heather regeneration as well as disturbing the thick mat of needles to allow establishment of broadleaved tree seedlings.

- **Dog walkers are made to dispose of dog waste. Will the same be applied to the cattle and if not, why not?**
  Dog faeces result from food derived from elsewhere, so constitute a significant daily source of extra nutrients being brought on to the site. In addition dog food is usually meat based making the odour unpleasant and dog faeces can carry diseases (e.g. toxicaria) that are harmful to humans. The cattle will merely recycle nutrients already present on site; and in fact, any growth made by the cattle will actually result in a net loss of nutrients from the ecosystem. Moreover, herbivore dung supports a range of invertebrate and fungi species, some nationally rare.

- **What is the likely impact of the sudden loud gun shots from the firing range?**
  Cattle are adaptable animals, will quickly habituate to such sounds and avoid the area close to the range..

- **My horse gets spooked by cattle and I come here because I cannot ride in the New Forest. How will you address this problem?**
  It is usually possible, with patience, to "desensitise" horses to unfamiliar stimuli such as cattle. Our Grazing Partnership Manager can provide assistance with this, if needed.

- **As it seems that there is very little that the animals would eat by choice, would they therefore be forced to eat things that are not palatable to survive?**
  The range of plants available will in fact provide a near-natural diet for cattle, the wild ancestor of which was once native to Britain. They will thrive on the choice of grasses and shrubs. Native breeds of cattle well able to cope with this type of habitat will be used.

- **What would happen if the animals escaped, especially onto the A338 spur road – who would be responsible and how would this risk be assessed?**
  Secure new fencing would prevent escapes unless damaged. Fence lines would be frequently checked, and incidence of escapes should be no more than from other sites neighbouring busy roads across the county. When the fences are installed the highways authority will be also consulted to minimise the chance of this occurrence.

- **How will you prevent the fence line from being vandalised or damaged?**
  Vigilance (from staff and volunteers) should identify any breaches before cattle discover them by "accident". The cattle will graze the site only during the season of plenty, and so will not have hunger as a motivation to wander and test fences

- **There have been previous examples of people being injured by free roaming livestock – how can you reassure people that the introduction of grazing will be safe?**
  Almost all incidents of injury by cattle have involved cows protecting their calves against dogs being walked, with the owners being hurt in the process. We would avoid cows with young calves, bulls and any other risky classes of cattle. In addition, all individual cattle will have been tried and tested on other sites before being introduced

  The large size of the site, relative small number of cattle and period spent on site will mean that encounters between dogs and cattle should be not that frequent and generally avoidable.

- **How will you mitigate against damage to the historic features and ancient monuments found on site?**
  Trees and woody vegetation can damage historic features through root penetration. The most beneficial state for such features is low vegetation, as would be expected from light grazing. English Heritage support the use of low numbers of grazing stock as appropriate vegetation management on sites such this. Grazing impacts on site will be monitored however. Other site activities such as mountain biking and camp fires are potentially much more damaging.

Table B4 Calculations of target habitat areas and change by compartment, from proposals map, in hectares /acres

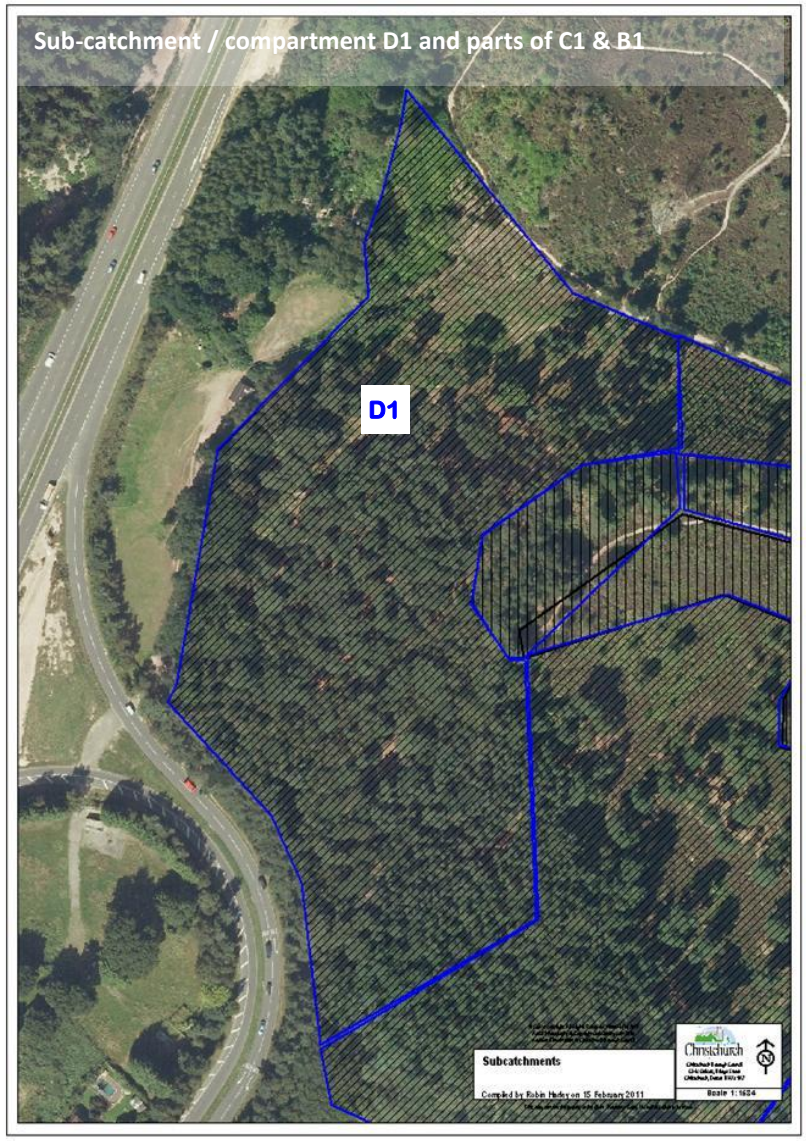
	No change	no change	no change	Total	Change	change	change	change	Total	Combined
Cpt	w-w	o-o	wh-wh		w-o	w-wh-o	wh-o	w-wh		(Cpt size)
A1	0.04 /0.09	0.36/ 0.90	0.08/ 0.20	0.48/ 1.18	0.00	0.00	0.00	0.00	0.00	0.48/ 1.18
A2	0.04 /0.09	0.26/ 0.64	0.00	0.30/ 0.73	0.00	0.00	0.00	0.00	0.00	0.30/ 0.73
A3	0.24 /0.59	1.20/ 2.96	0.05/ 0.11	1.48/ 3.67	0.00	0.00	0.00	0.00	0.00	1.48/ 3.67
A4	0.00	0.38/ 0.94	0.00	0.38/ 0.94	0.00	0.00	0.18/ 0.44	0.00	0.18/ 0.44	0.56/ 1.38
A5	0.31/ 0.77	0.78/ 1.93	0.13/ 0.32	1.22/ 3.01	0.73/ 1.80	0.34/ 0.84	0.00	0.44/ 1.09	**1.51/ 3.73**	2.73/ 6.74
A6	1.47/ 3.63	0.40/ 0.99	0.00	1.87/ 4.62	1.12/ 2.77	0.17/ 0.42	0.00	0.21/ 0.52	**1.50/ 3.71**	3.37/ 8.32
A7	1.55/ 3.83	2.91/ 7.19	0.00	4.46/ 11.02	0.04/ 0.11	0.48/ 1.19	0.00	0.01/ 0.02	0.53/ 1.30	4.99/ 12.32
A8	0.43 /1.06	0.58/ 1.43	0.00	1.01/ 2.49	0.12/ 0.30	0.00	0.00	0.00	0.12/ 0.30	1.13/ 2.79
A9	1.43/ 3.52	0.69/ 1.70	0.65/ 1.59	2.76/ 6.82	0.34/ 0.84	0.23/ 0.57	0.00	0.00	0.57/ 1.41	3.33/ 8.23
B1	0.00	0.06/ 0.16	0.00	0.06/ 0.16	0.20/ 0.50	0.05/ 0.11	0.00	0.00	0.25/ 0.62	0.31/ 0.77
B2	0.06/ 0.14	0.07/ 0.18	0.00	0.13/ 0.32	0.14/ 0.35	0.00	0.19/ 0.46	0.00	0.33/ 0.81	0.46/ 1.12
B3	0.36/ 0.90	0.00	0.00	0.36/ 0.90	0.00	0.16/ 0.40	0.00	0.00	0.16/ 0.40	0.52/ 1.29
B4	0.00	0.00	0.00	0.00	0.00	0.19/ 0.46	0.00	0.00	0.19/ 0.46	0.19/ 0.46
B5	0.10/ 0.25	1.87/ 4.62	0.22/ 0.54	2.19/ 5.41	0.12/ 0.30	0.00	0.00	0.15/0.37	0.27/ 0.67	2.46/ 6.08
B6a	1.44/ 3.56	0.18/ 0.44	2.56/ 6.32	4.18/ 10.32	0.04/ 0.10	0.00	0.33/ 0.82	0.00	0.37/ 0.91	4.55/ 11.24
B6b	0.10/ 0.26	0.00	0.09/ 0.22	0.19/ 0.48	0.00	0.00	0.00	0.20/ 0.49	0.20/ 0.49	0.39/ 0.97
B7	0.00	0.00	0.43/ 1.05	0.43/ 1.05	0.00	0.00	0.04/ 0.11	0.00	0.04/ 0.11	0.47/ 1.16
C1	1.33/ 3.29	1.07/ 2.64	0.05/ 0.12	2.45/ 6.05	0.05/ 0.12	0.34/ 0.84	0.00	0.13/ 0.32	0.52/ 1.28	2.97/ 7.34
C2	1.95/ 4.82	4.19/ 10.35	0.19/ 0.47	6.33/ 15.63	0.15/ 0.36	0.25/ 0.62	0.00	0.00	0.40/ 0.98	6.73/ 16.61
C3	1.53/ 3.78	1.60/ 3.95	0.25/ 0.62	3.38/ 8.35	0.54/ 1.33	0.05/ 0.12	0.00	0.64/ 1.58	**1.23/ 3.04**	4.61/ 11.39
C4	1.24/ 3.06	0.00	0.00	1.24/ 3.06	0.00	0.00	0.00	0.00	0.00	1.24/ 3.06
C5	2.04/ 5.04	0.00	0.00	2.04/ 5.04	0.00	0.00	0.00	0.00	0.00	2.04/ 5.04
C6	3.76/ 9.29	0.62/ 1.53	0.15/ 0.37	4.53/ 11.19	0.34/ 0.83	0.50/ 1.24	0.08/ 0.20	0.38/ 0.95	**1.31/ 3.22**	5.84/ 14.41
C7	2.00/ 4.94	0.06/ 0.15	0.00	2.06/ 5.09	0.21/ 0.51	0.84/ 2.06	0.00	0.06/ 0.16	**1.11/ 2.73**	3.17/ 7.82
D1	1.59/ 3.93	0.50/ 1.24	0.00	2.86/ 7.06	0.06/ 0.14	0.19/ 0.47	0.00	0.77/ 1.90	0.25/ 0.62	3.11/ 7.68
D2	0.00	0.22/ 0.54	0.00	0.22/ 0.54	0.00	0.00	0.00	0.00	0.00	0.22/ 0.54
D3	0.26/ 0.64	0.00	0.00	0.26/ 0.64	0.00	0.00	0.00	0.00	0.00	0.26/ 0.64
D4	0.11/ 0.27	0.00	0.00	0.11/ 0.27	0.09/ 0.22	0.00	0.00	0.00	0.09/ 0.22	0.20/ 0.49
Totals	**23.38/ 57.74**	**18.00/ 44.47**	**4.84/ 11.95**	**46.22/ 114**	**4.29/ 10.60**	**3.78/ 9.34**	**0.82/ 2.02**	**2.99/ 7.39**	**11.11/ 27.45**	**58.87/ 145.30**

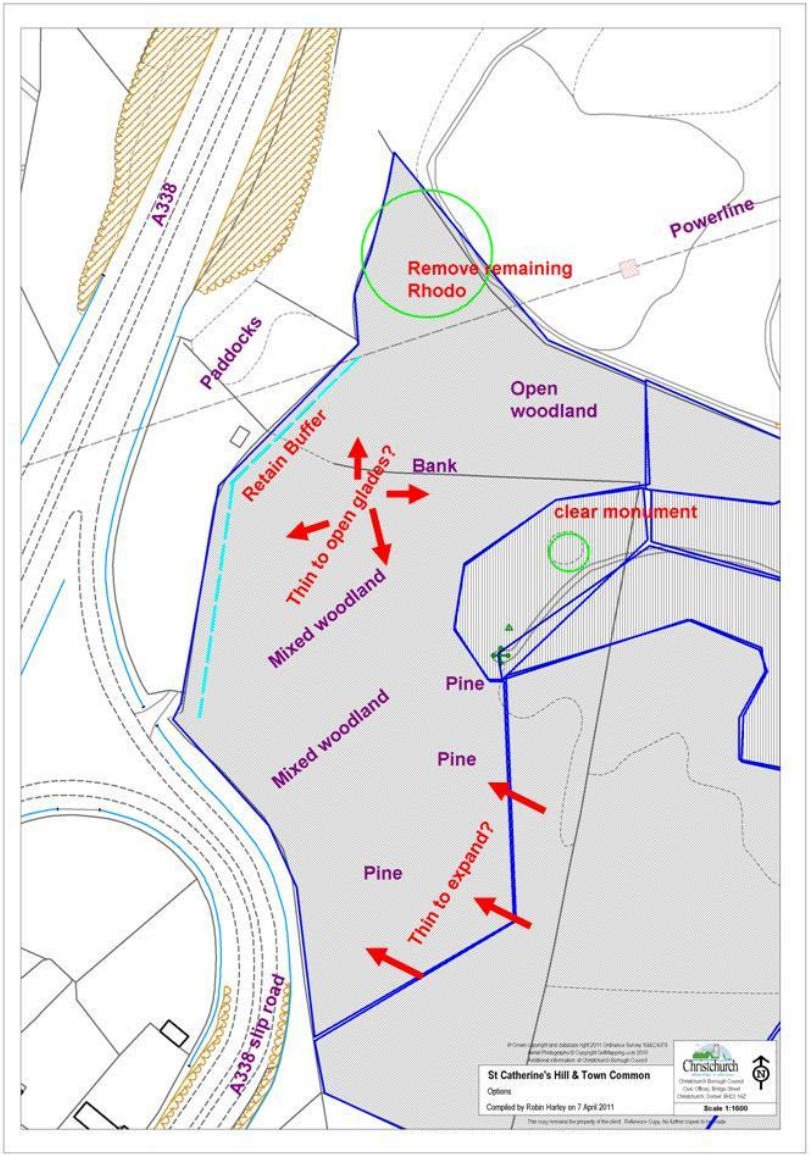
The above represents a 10 hectare/24.7 acre reduction in woodland, an increase of 2 – 5.5 hectares wooded heath and an increase of 5-8.9 hectares open heathland.

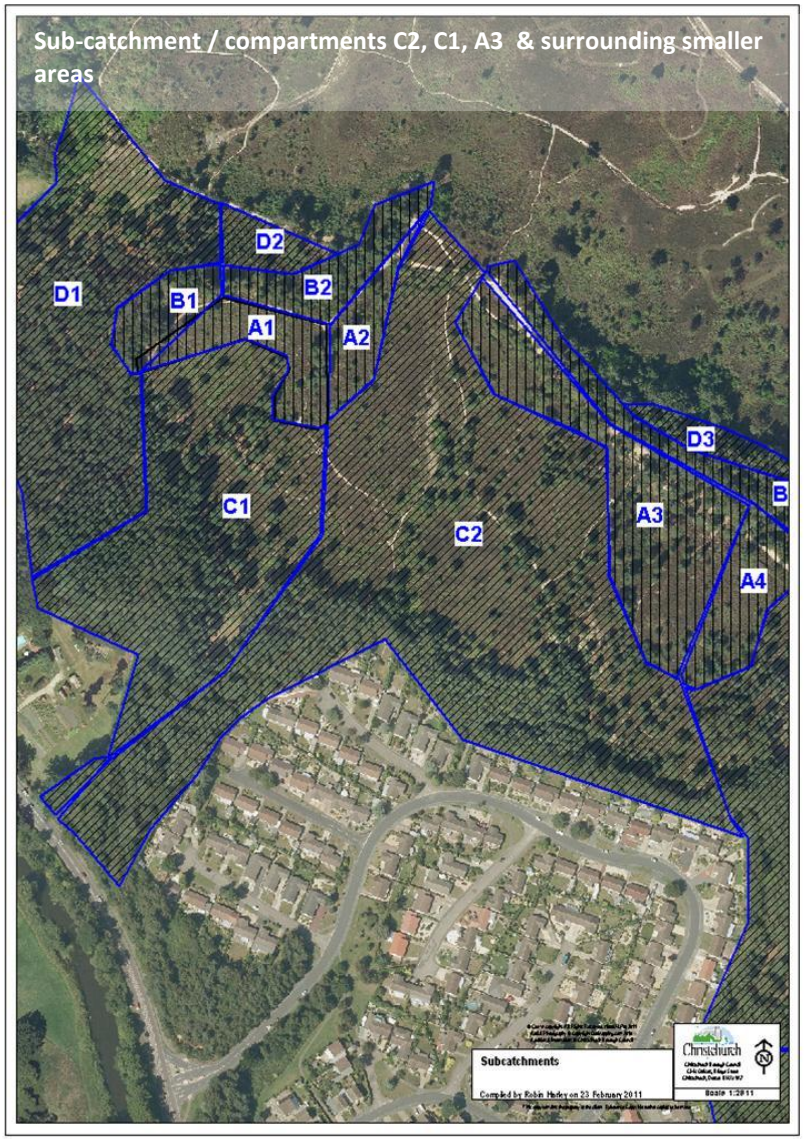
Appendix 7 Annotated maps with outline management actions agreed by the Steering Group used in the preparation of the proposals maps

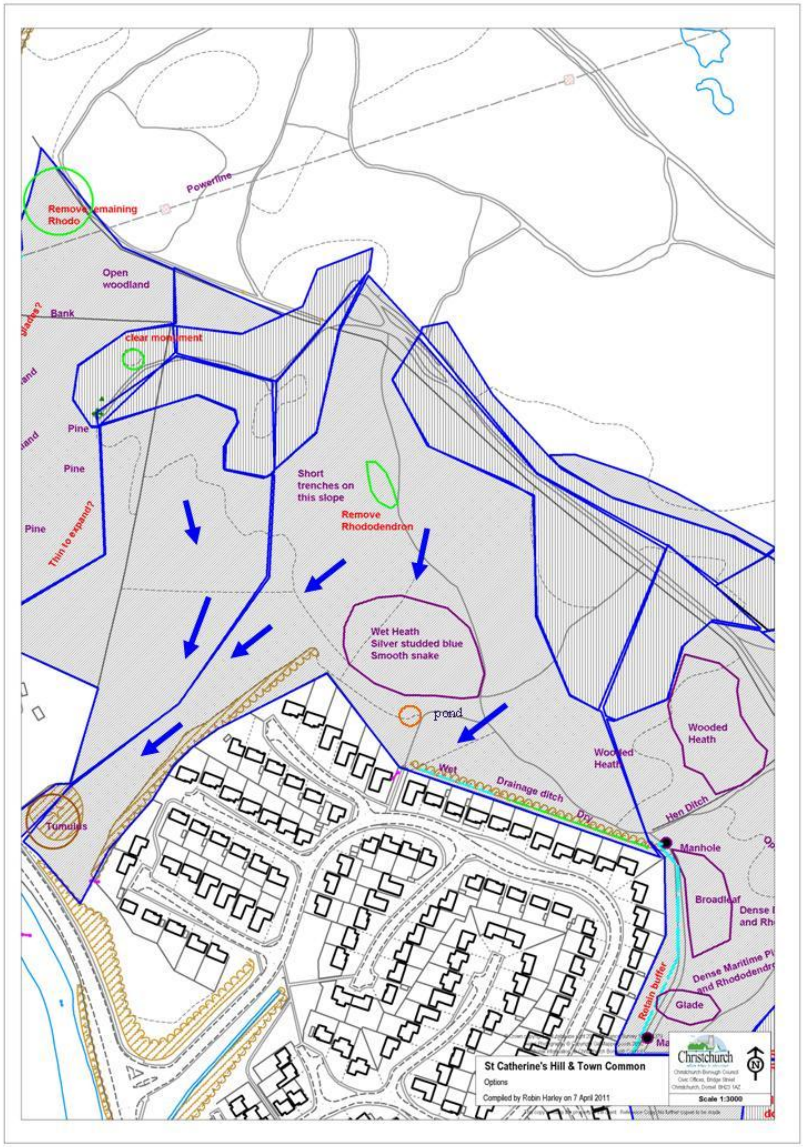
Key to maps:

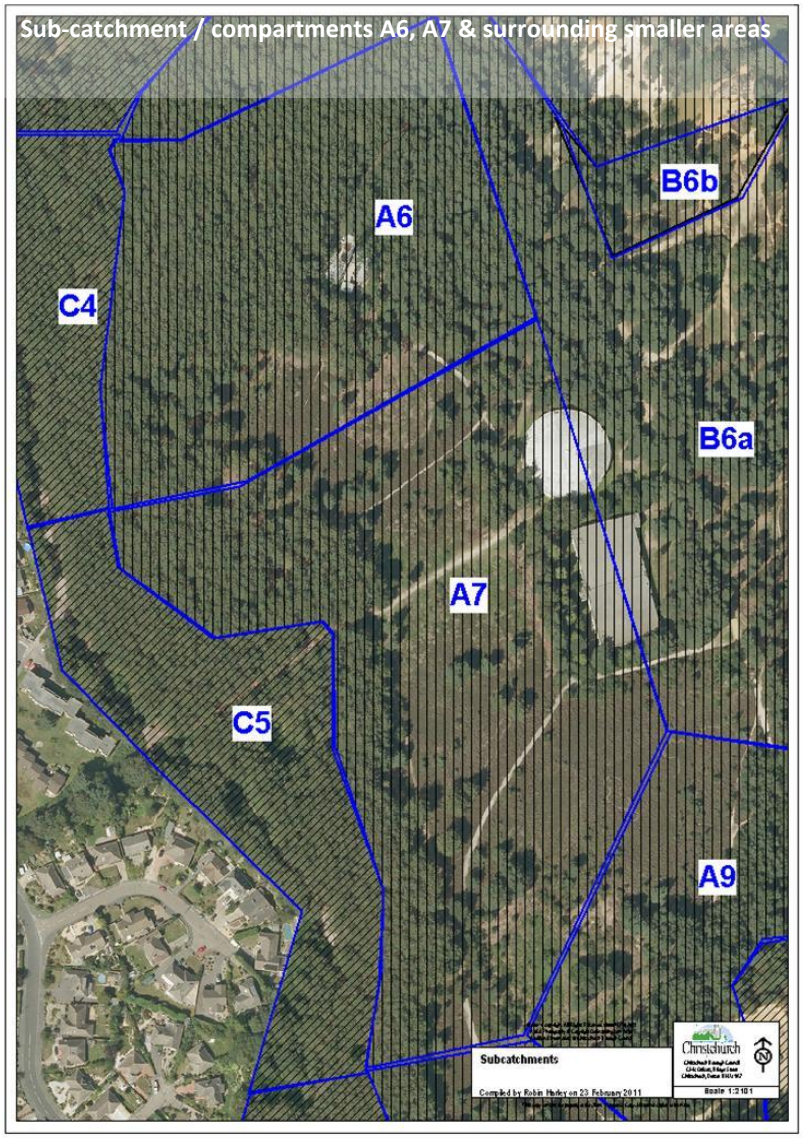
Red labels	Proposed management
Purple labels	Existing features
Blue lines	Sub-catchment / compartment boundaries
Green lines, polygons & circles	Approximate areas for proposed management
Light blue lines, circles	Ditches and ponds
Orange arrows	Potential habitat links or areas onto which management can be pushed out to over time
Blue arrows	Surface water drainage direction

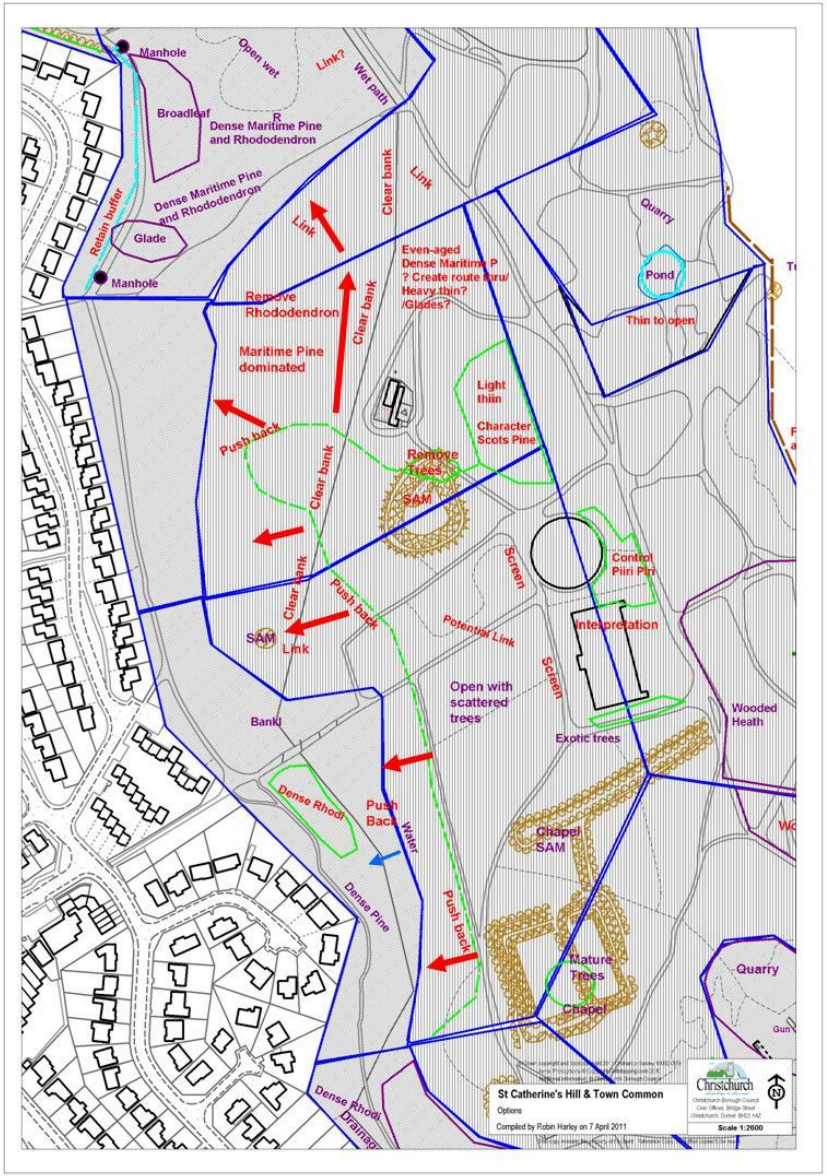

Sub-catchment / compartment D1 and parts of C1 & B1
D1
Subcatchments
Compiled by Robin Harley on 15 February 2011
Christchurch
Scale 1:1624

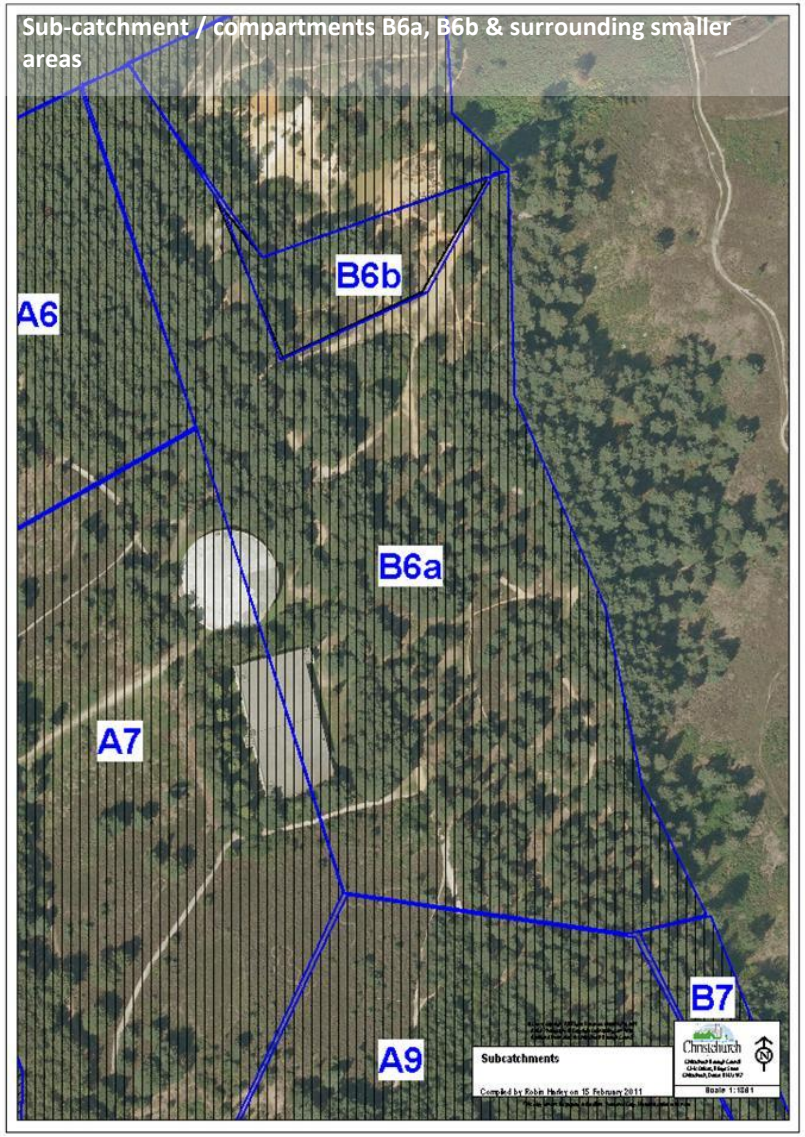

A338
Powerline
Remove remaining Rhodo
Paddocks
Open woodland
Retain Buffer
Bank
Thin to open glades?
clear monument
Mixed woodland
Pine
Mixed woodland
Pine
Pine
Thin to expand?
A338 slip road
St Catherine's Hill & Town Common
Options
Compiled by Robin Harley on 7 April 2011
Christchurch
Scale 1:1600

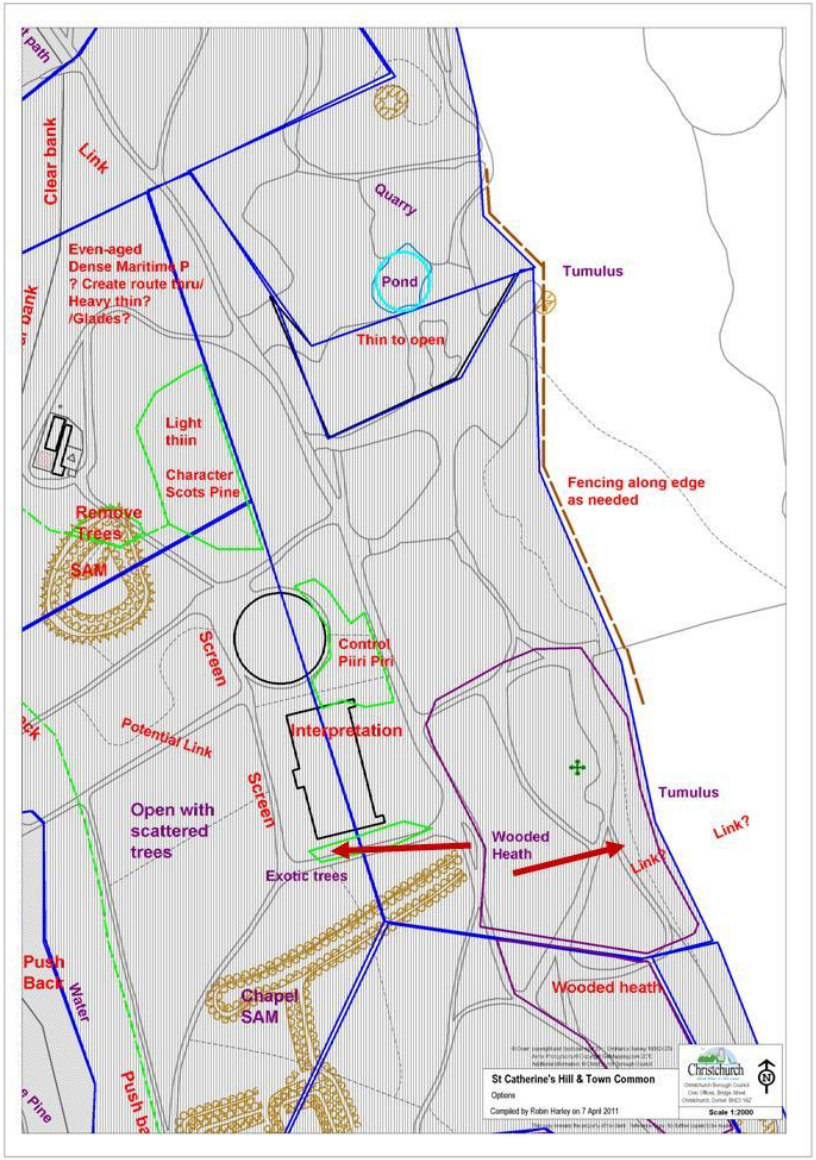

Sub-catchment / compartments C2, C1, A3 & surrounding smaller areas
D1
D2
B1
B2
A1
A2
C1
C2
D3
B
A3
A4
Subcatchments
Compiled by Robin Harley on 23 February 2011
Christchurch
Scale 1:2911

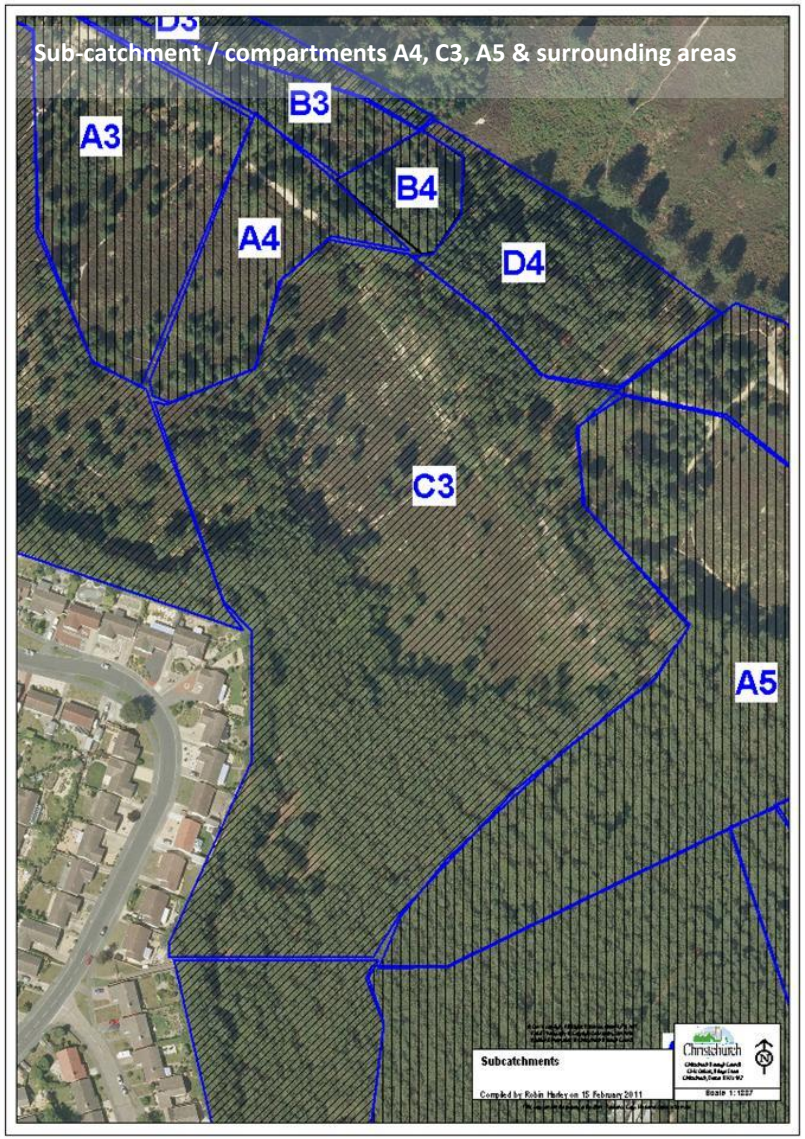

Powerline
Remove remaining Rhodo
Open woodland
Bank
clear monument
Pine
Pine
Pine
Thin to expand?
Short trenches on this slope
Remove Rhododendron
Wet Heath
Silver studded blue
Smooth snake
pond
Wooded Heath
Wooded Heath
Wet
Drainage ditch
Dry
Hen Ditch
Tumulus
Manhole
Broadleaf
Dense Maritime Pine and Rhododendron
Retain buffer
Glade
St Catherine's Hill & Town Common
Options
Compiled by Robin Harley on 7 April 2011
Christchurch
Scale 1:3000

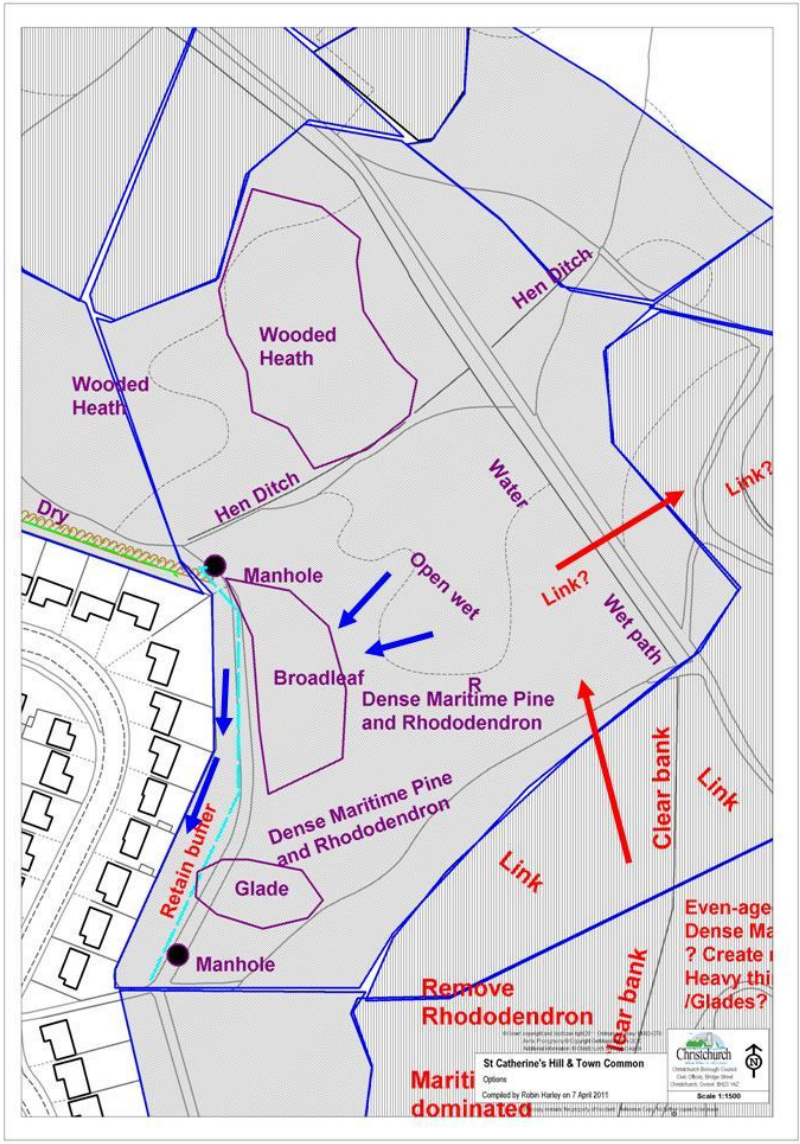

Sub-catchment / compartments A6, A7 & surrounding smaller areas
A6
B6b
C4
B6a
A7
C5
A9
Subcatchments
Compiled by Robin Harley on 23 February 2011
Christchurch
Scale 1:2101

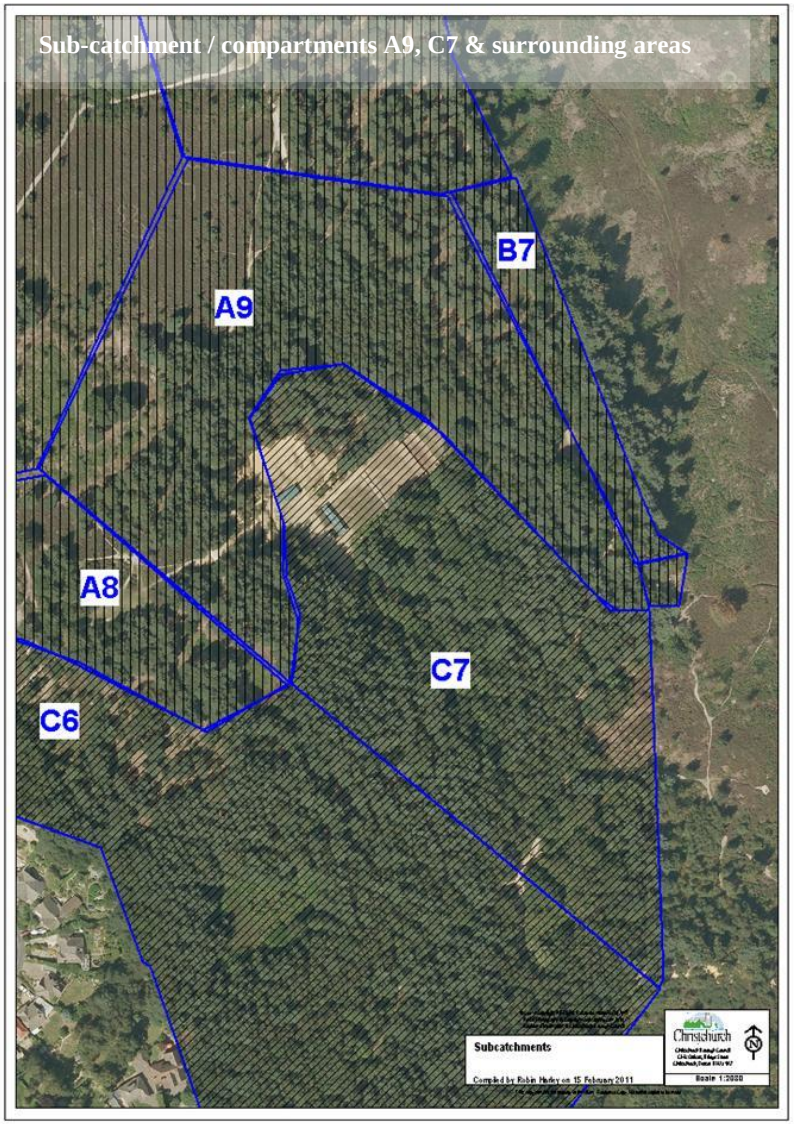

Manhole
Open wet
Link?
Wet path
Broadleaf
Dense Maritime Pine and Rhododendron
Retain buffer
Dense Maritime Pine and Rhododendron
Glade
Manhole
Link
Clear bank
Link
Quarry
Even-aged Dense Maritime P ? Create route thru/ Heavy thin? /Glades?
Pond
Remove Rhododendron
Clear bank
Thin to open
Maritime Pine dominated
Light thin
Character Scots Pine
Push back
Clear bank
Remove Trees
SAM
Clear bank
Screen
Control Piiri Pini
Push back
Potential Link
Interpretation
SAM
Link
Screen
Open with scattered trees
Wooded Heath
Bank
Exotic trees
Dense Rhodi
Push Back
Water
Chapel SAM
Dense Pine
Push back
Mature Trees
Quarry
Chapel
Dense Rhodi
Drainage
St Catherine's Hill & Town Common
Options
Compiled by Robin Harley on 7 April 2011
Christchurch
Scale 1:2600

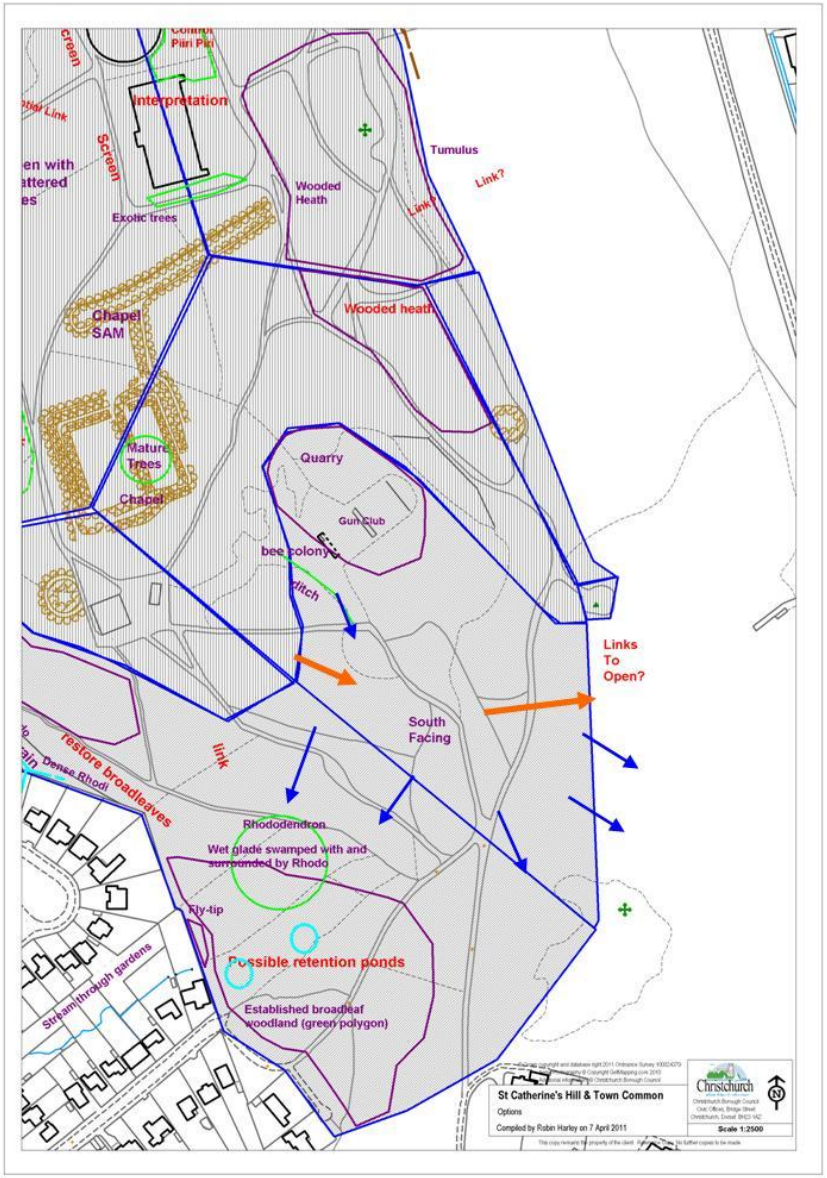

Sub-catchment / compartments B6a, B6b & surrounding smaller areas
A6
B6b
B6a
A7
A9
B7
Subcatchments
Compiled by Robin Harley on 15 February 2011
Christchurch


Clear bank
Link
Quarry
Even-aged
Dense Maritime P
? Create route thru/
Heavy thin?
/Glades?
Pond
Tumulus
Thin to open
Light
thiin
Character
Scots Pine
Fencing along edge
as needed
Remove
Trees
SAM
Screen
Control
Piiri Piri
Potential Link
Interpretation
Screen
Open with
scattered
trees
Tumulus
Link?
Wooded
Heath
Link?
Exotic trees
Push
Back
Water
Chapel
SAM
Wooded heath
St Catherine's Hill & Town Common
Options
Compiled by Robin Harley on 7 April 2011
Christchurch
Scale 1:2000


Sub-catchment / compartments A4, C3, A5 & surrounding areas
B3
A3
B4
A4
D4
C3
A5
Subcatchments
Compiled by Robin Harley on 15 February 2011
Christchurch


Wooded Heath
Wooded Heath
Hen Ditch
Hen Ditch
Water
Link?
Dry
Manhole
Open wet
Link?
Wet path
Broadleaf
Dense Maritime Pine and Rhododendron
Dense Maritime Pine and Rhododendron
Retain buffer
Clear bank
Link
Link
Glade
Manhole
Even-age
Dense Ma
? Create
Heavy thi
/Glades?
Remove Rhododendron
Clear bank
Mariti
dominated
St Catherine's Hill & Town Common
Options
Compiled by Robin Harley on 7 April 2011
Christchurch
Scale 1:1500


Sub-catchment / compartments A9, C7 & surrounding areas
A9
B7
A8
C7
C6
Subcatchments
Compiled by Robin Harley on 15 February 2011
Christchurch
Scale 1:2000


Interpretation
Screen
Tumulus
Link?
Wooded Heath
Exotic trees
Wooded heath
Chapel SAM
Mature Trees
Chapel
Quarry
Gun Club
bee colony
Links To Open?
South Facing
restore broadleaves
link
Rhododendron
Wet glade swamped with and surrounded by Rhodd
Fly-tip
Possible retention ponds
Stream through gardens
Established broadleaf woodland (green polygon)
St Catherine's Hill & Town Common
Options
Compiled by Robin Harley on 7 April 2011
Christchurch
Scale 1:2500