West Berkshire Council Countryside Service

An Overview of Gorse Management on Greenham and Crookham Common

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Introduction

Gorse is an important factor of the heathland landscape on Greenham and Crookham Common, contributing to the wildlife diversity. There are two species of gorse to be found on the common, European gorse and dwarf gorse. The larger, more dominant European gorse is the species that is referred to within this overview. The dwarf gorse, as its name suggests, is smaller and generally grows in a complementary manner alongside heather species.

The various structures that gorse creates during its lifecycle of around 15 years provide nesting, shelter and foraging areas for birds like the Dartford warbler and Stonechat along with many invertebrates that live within the protective, dense thickets, feeding on the numerous nectar sources and on the plant itself.

There has been debate among the Greenham and Crookham Common Commission, Natural England and West Berkshire Council's Countryside Service on the amount of gorse on the common. There are many views as to how much should be cut.

This document provides a broad overview into the gorse management that has been undertaken in the last three winters and what is being planned now. There are multiple areas on the common where gorse occurs but this review will be focusing on the 'central lozenges' and areas created by the former runway as this is the greatest concentration and extent of gorse and the focus of discussions.

General Objectives of Managing Gorse

1. To reduce the extent of gorse

The gorse on the common is either:
a) Cut and allowed to re-grow or
b) Cut and then treated or scraped to stop it re-growing

The extent of the gorse is reduced when the gorse is cut, it is then treated or scraped so that it does not grow back. Work to reduce the extent of gorse will be concentrated on areas where gorse is competing with grassland or dominating where heather plants would normally be found.

2. To diversify the gorse structure to maintain a variety of ages.

When gorse is cut and allowed to re-grow this changes the structure. In the first year of a cut it creates an area of bare ground, then 1 year growth, 2 year growth, 3 year growth and so on in different parts of the common. It is important to maintain this variety of suitable structures to benefit a greater number of species.

The constant mowing also maintains more palatable gorse for the cattle and ponies grazing on the common.

3. To break up the continuous gorse cover into smaller, isolated thickets

The aim is to break up the continuous gorse stands into isolated thickets. Each thicket can then be cut on a rotation in the future. It is also important to maintain a wind break against the prevailing westerly winds and a barrier to discourage general access across sensitive areas.

4. To install fire breaks of at least 10m wide

The final aim is to ensure that if a fire occurs then the whole area will not be burnt. This is done by ensuring that sections are mown at least 10m wide. Fire breaks will be orientated at right angles to the prevailing wind to ensure their effectiveness.

An Overview of Gorse Management from 2009 to 2011

The gorse on the common has been managed over the past 3 winters by a variety of methods and personnel. The following outlines the amounts of gorse that have been cut on the main lozenges (compartments 9, 10, 11 and 12) and on areas towards Pyle Hill car park (compartment 15).

The areas cut each year are highlighted below, the colour of the text relates to the colours on the map in **Appendix 1:Gorse Cutting Areas 2009 to 2011.**

- **In winter 2008/9, just over 1Ha of gorse was cut and removed**
- **In winter 2010/11 just under 2Ha of gorse was cut (equalling around 10 tonnes). There was approximately 1Ha of stump treatment also undertaken to help towards the extent reduction.**
- **In winter 2011/12 0.7Ha of gorse was cut**

The total area of gorse cut adds up to around 3.7Ha over 3 years. The three maps included in **Appendix 1: Gorse Cutting Areas 2009 to 2011** shows the areas of gorse cut and the variety of techniques used. These include thin wavy cuts, larger blocks and removal of isolated thickets.

The following series of photographs illustrate some of the results of the cutting and highlight the methods used.

Photo 1: Gorse cut by English Provender Company building.

This aerial photo illustrates a 10m wide cut undertaken to diversify the structure and to create a fire break.

Photo 2: New gorse cut: This illustrates the same area in photo 1 soon after the cut. In the areas where gorse has been growing for a long time, the litter layer is quite thick. It can be left for the gorse to grow back or the litter layer can be removed to create a bare open area for finer grasses, heather and less vigorous plant species to grow.

Photo 3: Gorse cut year one. The areas where it is mown and left untreated grows back thick and dense. Over time, the gorse blocks across the common will all be at a variety of different growth stages, ensuring that good thick cover is maintained for species like nesting Dartford warblers.

Photo 4: Cut and collect mower: A tractor mounted cut and collect mower was used in two of the winters to cut blocks of gorse on the central lozenges as well as heather around the edges of the runway. The mower has heavy flails suitable for tough vegetation and draws up the cuttings in a box which can be deposited elsewhere.

Photo 5: Cut and collect mower emptying in woodland edge: The arisings from gorse cutting need to be collected up to maintain low nutrient levels on the common. If left to rot down, the nutrient levels would increase and dominant species would flourish at the expense of finer grasses and rarer plants. On this occasion it is emptied onto designated spaces in woodland edges, creating habitat mounds that quickly rot down.

Photo 6: New cut and collect mower: This is a heavy flail cut and collect mower which is small enough to be attached to the back of the Council's compact tractor for use by the Rangers on the common. A trial has already taken place and discussions are currently ongoing for a planned purchase later in 2012.

Photo 7: Marking up ready for cutting: The marking up is firstly planned using aerial photographs then marked on the ground using tape, white spray and maps.

Photo 8: Gorse cutter: A reciprocating cutting head on a 360 digger was used on the larger degenerate gorse areas in 2011/12 winter. This method cleared around 2Ha.

Photo 9: Gorse cutter

Photo 10: Transporting the cut gorse: The gorse cut by the 360 digger is loaded up onto a 'forwarder' and transported to a single fire site.

Photo 11: Burning the cut gorse: The arisings were collected and burned on the central runway on this occasion using the ‘forwarder’ to collect up and transport from the various cutting areas on the common.

Photo 12: Volunteers cutting gorse: A variety of volunteers and volunteer groups have worked on the common, some of their time has been taken to removing gorse using hand tools and chain saws. The groups more recently have included the Berks, Bucks and Oxon Wildlife Trust (BBOWT), the weekly West Berkshire Living Landscape Wednesday group, Greenham and Crookham Common Volunteers and a variety of students, work experience placements and others.

Photo 13: Loading cut gorse into trailer: Some of the gorse cuttings tipped by the cut and collecting machine are moved using our own tractor. On some areas of the common, the distance to the nearest tip site is quite a way so in order to reduce the travelling time of the cut and collect mower the piles are placed nearer the work site and cleared away by the Countryside Service once the contract has finished.

Photo 14: Gorse stump spraying: During one winter, the stumps of the gorse were sprayed to stop it growing back, helping to reduce the extent.

Photo 15: Chipper and grain trailer: During one of the winters, volunteers and rangers cut and stacked gorse on the common until there was enough to bring in a chipper and trailer to remove from the common. The chipped gorse was then stored on the central runway before being shipped off to Slough power station.

Photo 16: Gorse cut of isolated thickets

Photo 17: Gorse cut of 10m fire break

The Plans for Winter 2012/13

The gorse management will continue into the winter of 2012 and through to the end of February 2013, aiming towards the updated objectives to reduce the dominance of gorse by mowing a fifth each year for five years to 2016.

Current amount of Gorse on the common

The table below **(Figure 1)** lists the compartments where large blocks of gorse - dominated areas occur in the main open plateau and former runway areas (management compartments 1A, 1B, 8A, 9, 10, 11, 12, 14, 15 and 16). The map of these compartments can be viewed in **Appendix 2: Management Compartment Map.** A series of maps illustrating the areas that were measured can be seen in **Appendix 3: Gorse Extent and Areas 2012.** The total amount is approximately 33.50Ha.

The table below outlines the main compartments and the areas:

Compartment	Local Name or description	Main Blocks of Gorse Cover (Ha)	Approximate Amount to cut each year to 2016
1A and 1B	Eastern end of former runway	3.4	0.68
3E	Area around fire plane	0.3	0.06
8A	Furthest point east of the former runway next to Old Thornford Road	1.2	0.24
9	North eastern 'lozenge	1.2	0.24
10	South eastern lozenge	0.8	0.16
11	North western lozenge	10	2
12	South western lozenge	11	2.2
16 centre	Former runway	1.5	0.3
14 and 15	Sandleford heath end and area running east from Pyle Hill car park along Burys Bank Road.	3.4	0.68
18	Crookham Pools area of gravel extraction.	0.7	0.14
Total		**33.50 Ha**	**6.70 HA**

Figure 1: A table illustrating gorse dominted areas on the former runway and surrounding areas and the amount to be cut each year over the next five winters. The areas do also include areas of heather and scrub.

The blocks have been measured using Arcview mapping from aerial photographs taken in 2010 and will also include areas of tree scrub and heather. The figures are meant as an overview of the extent to illustrate the approximate areas and assist in site management of the gorse. There are other, smaller areas of gorse on different parts of the common which are part of the heathland component. These have not been included in the figures and are managed on a smaller scale with volunteers, alongside the Wildlife Trust team using in-house equipment.

The actual areas of all of the lozenges listed in the table above is 210.40 Ha. If the other areas of open plateau are added, the Crookham Pools area (Compartment 18) and nearby Compartment 13 then this would give a total of 248.40 Ha. The gorse dominated blocks form less than 13.5% of the open plateau of the common.

Cutting Plans in Winter 2012/13

In measuring the approximate size of the main gorse dominanted areas in each of the compartments a figure for the amount to be removed can be calculated. In accordance with recent information from Natural England to reduce the total amount by around one fith each year over the next 5 years, the Countryside Service will look to remove around 6.70Ha per year **(See Figure 1).** The cutting plan for this winter can be viewed in **Appendix 4: Gorse Management Maps 2012/13 (6 maps).**

Incorporating Recent Information

Natural England (NE) have re-written the ‘Favourable Conservation Targets’ (FCT’s) to replace the old ‘Conservation Objectives’ for the common. These relate to the Site of Special Scientific Interest (SSSI) features in summer 2012, NE visited the common to assess the condition of Units 1 and Units 2 which cover all the SSSI areas of the common.

In relation to the gorse, the Countryside Service has been in discussions with Natural England and agreed to remove more of the gorse than undertaken in previous years. The gorse in these areas should be reduced by around 6 to 8 Ha per year for the next 5 years. This will move towards a younger structure and clear it from areas where grassland is the main SSSI feature.

The Areas to be Cut and the Considerations

The planned cutting areas for this winter can be seen on **Appendix 4: Gorse Management Maps 2012/13 (6 maps)** and have been influenced by various considerations.

To reduce the impact on wildlife, relatively small sections will be cut. The cutting areas are also spread throughout the compartments listed in the table above **(Figure 1).** The amount cut is also proportional to each compartment.

The smaller sections also provide less of a barrier for the movement of species across the site, particularly reptiles and small mammals. Areas to be cut are positioned so that there is still cover remaining in gorse and scrub nearby. There are some birds that are strongly associated with the gorse on the common, a notable one being Dartford warbler, so consideration of the use by gorse of these was discussed with local bird surveyors and an RSPB representative.

Dartford warbler territories will be affected but by retaining islands of gorse, spreading small cuts across the site and making sure enough 'building' and 'mature' gorse and heather is present throughout and after the 5 years, the territories will hopefully be maintained.

Cutting will be focussed on the older, degerate stands of gorse and those areas of gorse and scrub where grassland is considered a priority habitat. Breaking up continuous gorse blocks also reduces the risk of fire spreading across the site should an accidental fire occur. Concentrating on the older, degerate stands will also help to reduce the fire risk.

The blocks planned for cutting are large enough to enable contractors to undertake work easily with heavy machinery and to ensure accurate measurements can be made of the job undertaken.

The access across and near to the cut areas is also a consideration. Where possible, sensitive areas need to be shielded from main paths by retaining gorse screens and to avoid creating new walk ways through sensitive areas.

"The focus will also be on the older, degerate stands of gorse and those areas of gorse and scrub where grassland is considered a priority habitat."

The Next Steps

To clarify, the following are the general aims from 2012.

1. To diversify the gorse structure to maintain a variety of ages. This will involve reducing the overall age of the gorse structure to a lower, more open, earlier stage growth. Work will be carried out over a 5 year period from 2012 to 2016. Work will be concentrated on where it is in competition with grassland and will focus on the more mature, degenerate and gorse dominated areas.

2. To reduce the overall extent of the gorse by around 10% in favour of grassland and heather.

3. To break up the continuous gorse cover into isolated thickets.

4. To install fire breaks of at least 10m each where continous gorse stands occur.

5. To purchase a cut and collect mower to undertake increased gorse and heather cutting across the common, including the smaller heathland areas away from the former runway areas. This will be used for structured ‘maintenance cuts’ after 2016 to maintain the diversity created by the initial work.

6. To continue supplementing volunteers and Ranger work with the cutting of larger areas of gorse by contractors with heavy equipment.

7. To establish regular monitoring of both the heathland and grassland areas to quickly ascertain if the new objectives are being met. This is currently being set up and aims to be in place by summer 2013.

Appendix 1:

Gorse Cutting Areas 2009 to 2011 west, centre and east
(3 maps)

Gorse Cutting Areas 2009 to 2012 west

07/11/2012
1:2937

Gorse Cutting Areas 2009 to 2011 east

07/11/2012
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West Berkshire

Gorse Cutting Areas 2009 to 2012 centre

07/11/2012
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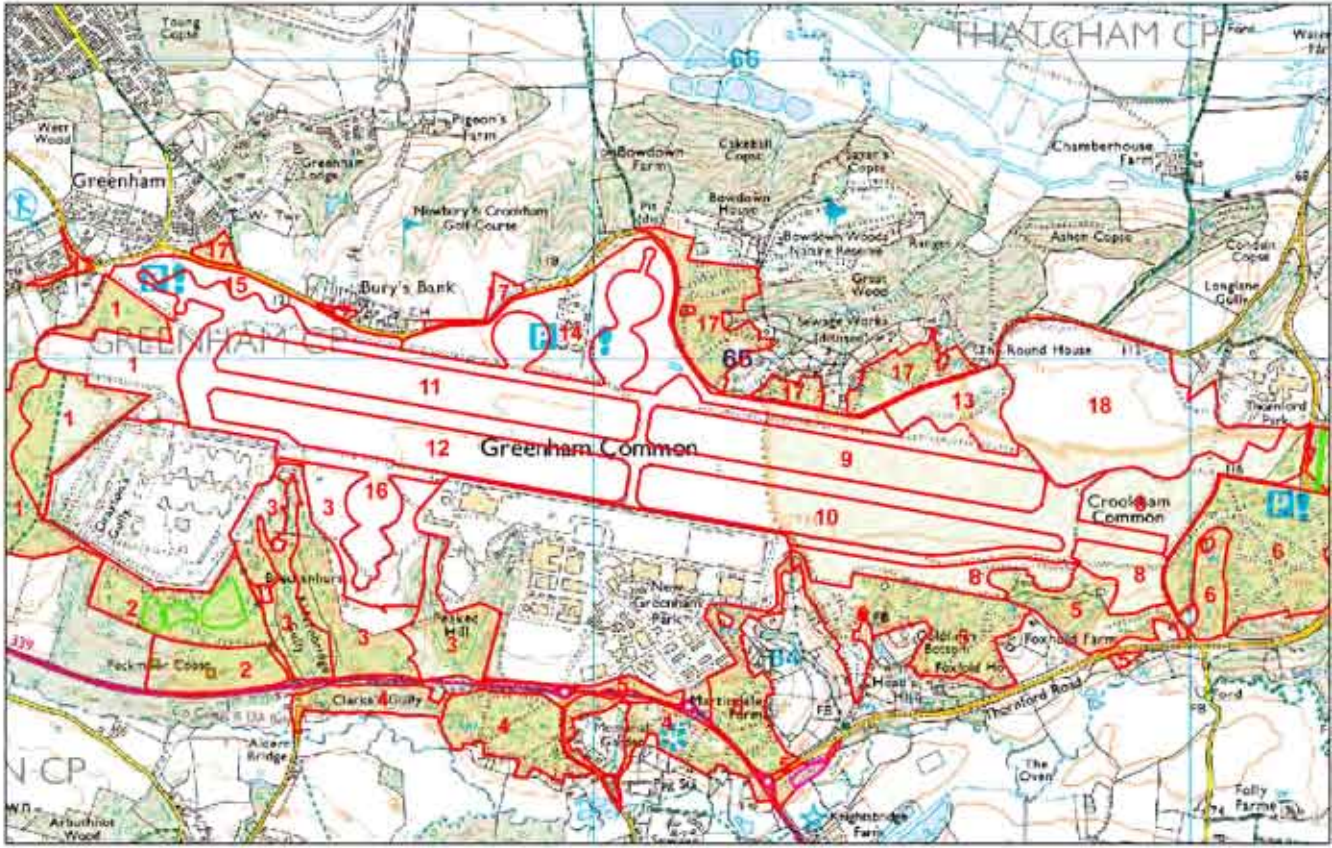
Appendix 2:

Management Compartment Map
(1 map)

Management Compartments

07/11/2012
1:15347

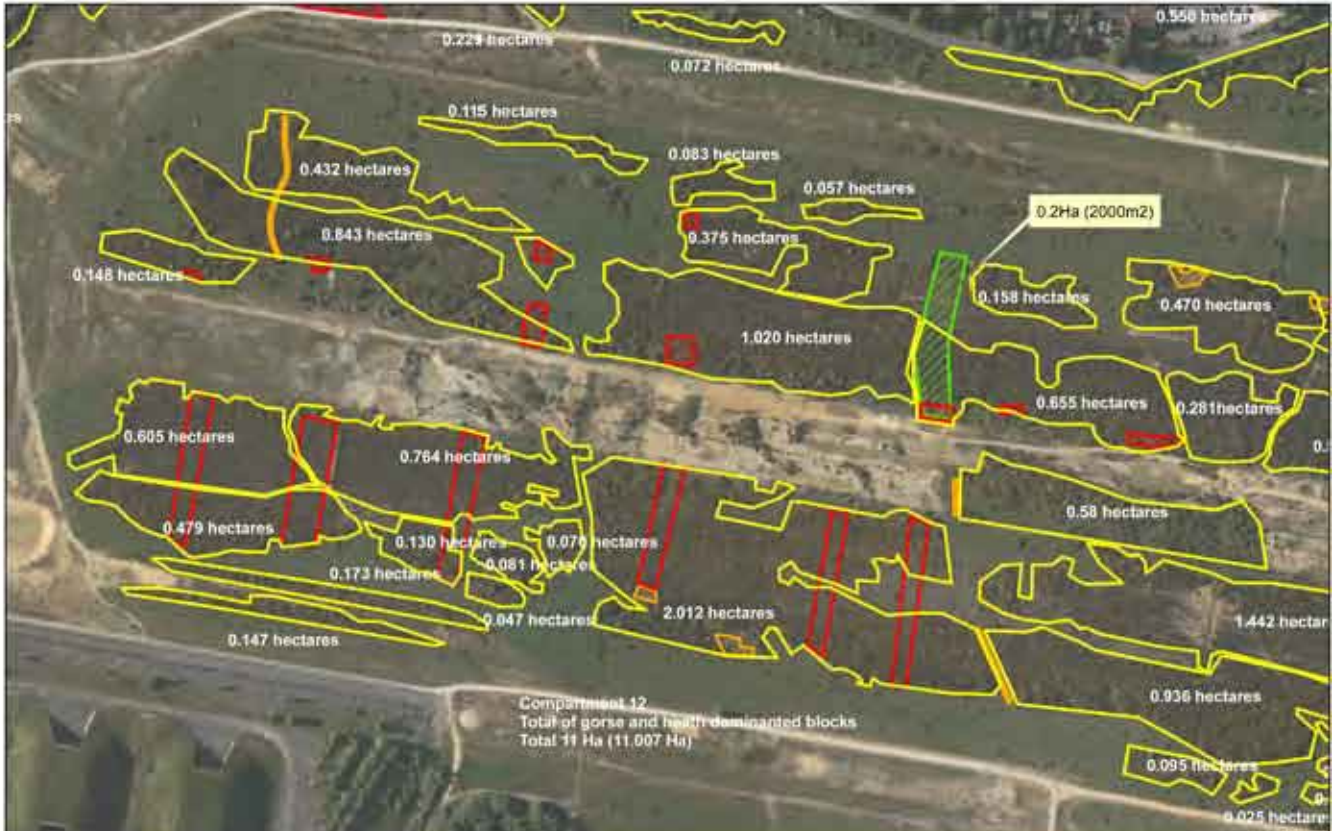


Appendix 3:

Gorse Extent and Areas 2012
Areas of gorse measured shown with yellow borders
(8 maps)

Gorse Extent and Areas Comp 11, 12 and 16 (West)

03/11/2012
1:2731



Gorse Extent and Areas Comp 11, 12 and 16 (centre)

03/11/2012
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Gorse Extent and Areas Comp 9, 10 and 16 (east)

03/11/2012
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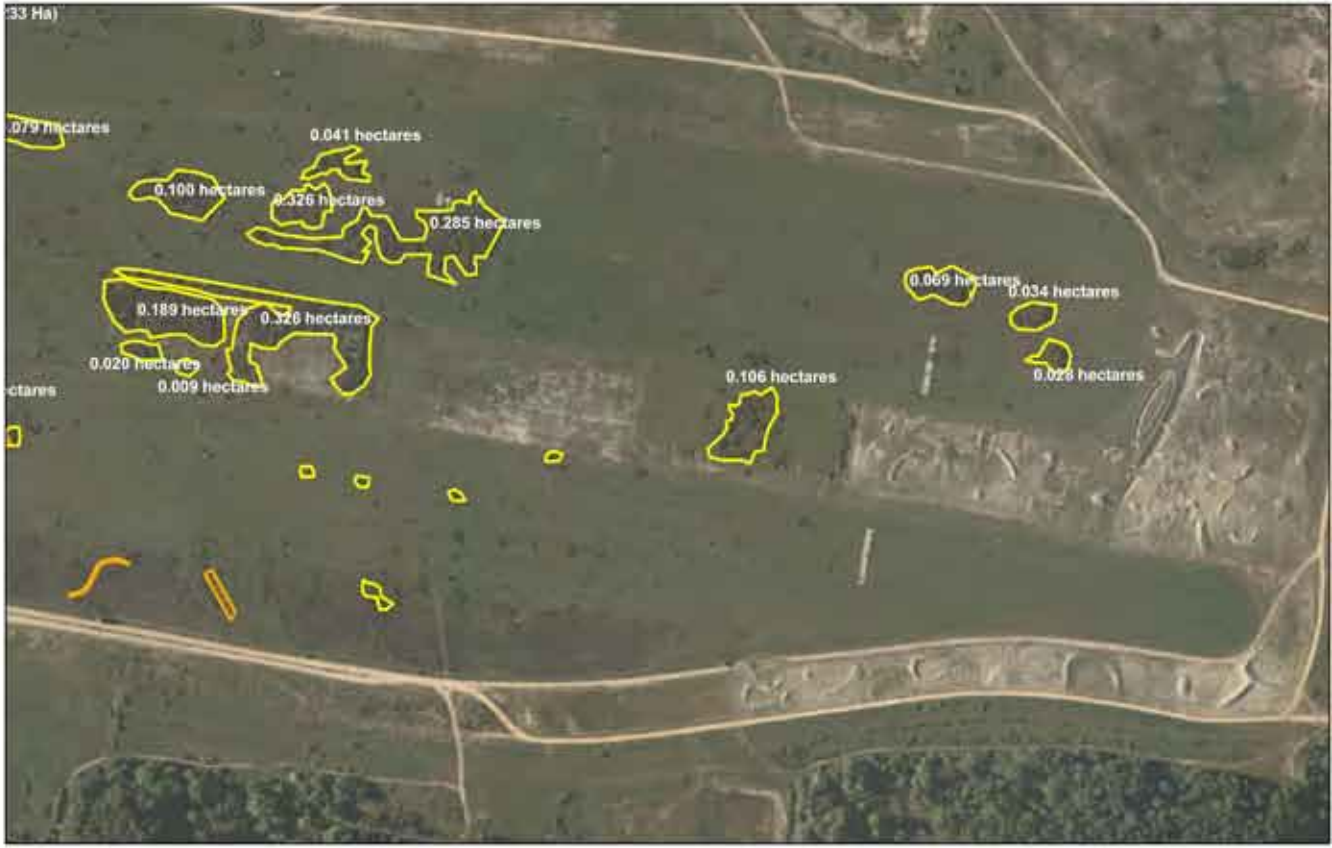

Gorse Extent and Areas Comp 9, 10 and 16 (centre)

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West Berkshire

Gorse Extent and Areas Comp 8 and 18

03/11/2012
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Gorse Extent and Areas Comp 3E

03/11/2012
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Gorse Extent and Areas Comp 1A, 1B and 15

03/11/2012
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West Berkshire

Gorse Extent and Areas Comp 14 and 15

03/11/2012
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Appendix 4:

Gorse Management Maps 2012/13
Areas to be cut are shown with dotted green borders
(6 maps)

Gorse Cutting 2012 Comp 11, 12 west

06/11/2012
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West Berkshire

Gorse Cutting 2012 Comp 9 and 10 East

06/11/2012
1:2609

West Berkshire

Gorse Cutting 2012 Comp 9 and 10 East

06/11/2012
1:2609

Gorse Cutting 2012 Comp 8A

06/11/2012
1:1527

Gorse Cutting 2012 Comp 1A and 1B

06/11/2012
1:1935

West Berkshire

Gorse Cutting 2012 Comp 14 and 15

06/11/2012
1:2580