

**BARLASTON & ROUGH CLOSE COMMON**  
**BRIEF MANAGEMENT PLAN**

**2000 - 2010**

**Prepared on behalf of**  
**Stafford Borough Council**

**by**  
**ECO TECH**

# **BRIEF MANAGEMENT PLAN**

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(Section numbering largely follows NCC 1987)

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## SUMMARY OF BRIEF MANAGEMENT PLAN 2000-2010

**Site:** Barlaston and Rough Close Common  
**Map:** 1:50,000 sheet 127  
**Grid references:** SJ 923396 & SJ 926399  
**Locality:** Rough Close, Near Barlaston, Staffordshire  
**Status:** Registered Common Land (C.L. 75); non-SSSI  
Grade 1A Site of Biological Importance (SBI)

**Landowner/manager:** Stafford Borough Council

### Area (ha) and tenure:

Freehold	Leasehold	Management Agreement	Total Area
15.45	-	-	
5.16	-	-	20.61

### Brief description:

The site comprises two areas of lowland heathland, known as Barlaston Common to the west and Rough Close Common to the east. These two areas are divided by the A5005 (Lightwood Road) which runs approximately north-south through the site. Small areas of the site to the north are isolated from the main parts of the site by minor roads (Cocknage Road to the west and Common Lane to the east).

The site is situated in the village of Rough Close in close proximity to larger conurbations to the north (Meir Heath, Meir, Lightwood and Normacot). The site is therefore subject to relatively high recreation pressure. In contrast, to the south the landscape is predominantly agricultural with scattered woodland.

The vegetation is relatively diverse, with distinct variations between the separate parts of the site. A range of habitats is represented. Dry heath and dry acid grassland dominate Rough Close Common to the east with acidic marshy grassland and patches of wet heath prominent at Barlaston Common to the west. Areas of woodland, scrub, neutral grassland, bracken and ruderal tall herb are also present throughout. To the north of Barlaston Common is a pool with open water and emergent vegetation.

### Main management objectives:

- To maintain, enhance and expand the heath habitats (both dry and wet heath) through appropriate management, within the context of a mosaic of habitats typical of lowland heathland.
- To maintain the diversity of habitats at the site and enhance notable habitats in addition to heath, particularly dry acidic grassland, acidic marshy grassland, open water and emergent vegetation.
- To maintain and enhance populations of locally rare and uncommon species of flora.
- To maintain and enhance the diverse invertebrate fauna, particularly bees and wasps and populations of nationally notable invertebrates and of other notable fauna.
- To maintain the intrinsic appeal and natural feel of the site, enhancing opportunities for recreation where this will not conflict with other objectives.

## **SUMMARY OF BRIEF MANAGEMENT PLAN 2000-2010 (cont.)**

### **Prescription:**

Management is required to maintain, enhance and expand the heath habitats. Preferred management at Barlaston Common would be the re-establishment of cattle grazing. Prior to re-establishment of grazing, and at Rough Close Common where grazing would be inappropriate, other management options will be required such as control of scrub (including gorse and bramble), maintaining woodland edges at their current extent, bracken and ruderal herbs and experimental cutting and turf stripping with the aim of encouraging ericaceous plants.

Some other habitats on site also require management such as neutral grassland (by cutting), gorse (rotational cutting) and the pool (clearing invasive non-native species) while other habitats can be retained without the need for further management (such as selected areas of woodland and scattered scrub and selected areas of bramble, bracken and ruderal tall herb).

The locally rare plant species are likely to thrive under this habitat management regime.

The diversity of invertebrates species will also be maintained through the prescribed habitat management. Additional management is prescribed to benefit ground nesting bees and wasps in creating new areas of bare sandy ground by scraping off areas of nutrient rich tipped soils and ruderal tall herb from the central quarry area of Rough Close Common. The creation of small shallow scrapes/pools within the marshy grassland of Barlaston Common is also recommended.

Measures to maintain the intrinsic appeal and natural feel of the site and enhancing opportunities for recreation where this will not conflict with other objectives are recommended. Such measures include maintenance of the current amenity value (paths, interpretation, benches), removal of non-native species, retaining "screening" vegetation and checking encroachment and tipping at the site margins.

Other prescribed management includes attempting to reduce fire risks, maximising public awareness and support, monitoring of populations of notable species and the effects of all management and fulfilling legal and other objectives.

**Plan prepared by:** ECO TECH, Shrewsbury

**Agreed/approved by:**

## STAGE 1 DESCRIPTION

### 1.1.1 LOCATION

**Site name:** **Barlaston and Rough Close Common**

**Grid references:** SJ923396 & SJ926399

**Locality:** Rough Close, Near Barlaston

**Status:** Registered Common Land (C.L. 75); no rights registered non-SSSI; grade 1 Site of Biological Importance (SBI)

**County:** Staffordshire

**District:** Stafford

**Local planning authorities:** Stafford Borough Council  
Staffordshire County Council

**Aerial photographic coverage:** 1992: Run 17 no. 215  
1981: Run 36 nos. 240/241  
1971: Run 151 no. 005

<b>Area (ha):</b>	<b>ha</b>	<b>acres</b>
Barlaston Common	15.30	37.81
Rough Close Common	5.16	12.75
Open water	0.15	0.37

<b>OS Maps:</b>	<b>1:50,000</b>	<b>1:25,000</b>	<b>1:10,000</b>	<b>1:2,500</b>
	sheet 127	SJ83/93	SJ 93 NW	SJ9039/9139

### 1.1.3 TENURE

**Landowner/manager:** Stafford Borough Council  
Civic Offices  
Riverside  
Stafford  
ST16 3AQ  
(01785) 619000

**Contact:** Mrs E Perry  
Development Department  
Stafford Borough Council

#### **Area (ha) and tenure:**

	<b>Freehold</b>	<b>Leasehold</b>	<b>Scheme of regulation</b>	<b>Countryside Stewardship Agreement</b>
Area (ha)	20.61	-	20.61	20.61
Date of agreement			20.4.51	1.10.93

**Rights of access:** The site is Common Land and therefore public access is generally unrestricted. Several roads run through the site and along the southern boundaries. Three carparking areas are

present (all towards the north of the site). Many paths cross the site of which 5 are designated public footpaths.

**Scheme of regulation:** See appendix 2.

## STAGE 2 EVALUATION

### 2.1.1 SITE DESCRIPTION

The site comprises two areas of lowland heath on either side of the A5005 (Lightwood Road) in the village of Rough Close. The area to the west of the road is known as Barlaston Common while that to the east is known as Rough Close Common. Minor roads (Cocknage Road to the west and Common Lane to the east) run through the north of the site isolating small fragments on the northern boundary. Minor roads also run along the southern boundaries of the site. Land immediately adjacent to the site is agricultural to the west and north-west and residential to the north-east, east and south.

The vegetation is relatively diverse, with distinct variations between the separate parts of the site.

Barlaston Common (to the west) comprises mainly acidic marshy grassland habitat dominated by purple moor-grass with frequent (locally abundant) wavy hair-grass and scattered heather, tormentil, soft-rush, heath rush, sharp-flowered rush, Yorkshire-fog, sweet vernal-grass and common bent. Small areas of wet heath also occur where cross-leaved heath is locally frequent. Dry acidic grassland and dry heath are frequent around the margins. An area dominated by cowberry is present to the south-west. A pool with open water and emergent vegetation is present on the opposite side of Cocknage Road to the north of Barlaston Common.

Rough Close Common (to the east) supports areas of dry acid grassland and dry heath with locally abundant heather, bilberry and bell heather. An isolated area on the opposite side of Common Lane to the north of Rough Close Common is primarily dominated by gorse and bramble.

Areas of woodland, scrub (including areas dominated by gorse), semi-improved neutral grassland, bracken and ruderal tall herb occur throughout the site, particularly at the margins.

A more detailed description of the vegetation is given in the target notes accompanying map 2 (map showing the existing state).

### 2.2.1 EVALUATION

#### **Size:**

The total area of Barlaston and Rough Close Commons is some 20.6ha. It is generally considered that a viable heathland unit should be at least 10ha in extent. Therefore the site represents a viable unit. Since lowland heathland is recognised as a nationally and internationally threatened habitat, all heathland remnants are of value, regardless of size. Indeed, the majority of heathland sites in Staffordshire are smaller than Barlaston and Rough Close Common, therefore this site is considered to be of significant size in the context of heathland sites in Staffordshire.

#### **Diversity:**

Habitats: A wide range of habitat types is present at the site including dry and wet dwarf shrub heaths, dry and marshy acidic grasslands, semi-improved neutral grassland, scrub, woodland, bracken and ruderal tall herbs, emergent vegetation, open water and bare ground. Many of these habitats are typical components of heathland, particularly heath, acidic grassland, scrub, woodland and bracken.

Vascular plants: Species diversity over the whole site is relatively high reflecting the habitat diversity. However, many of the habitats are intrinsically species-poor, particularly the marshy acidic grassland (which extends over the majority of Barlaston Common). In general, the heaths of Staffordshire have a relatively limited diversity of flowering plants, although the presence of both dry and wet heathland at this site increases the diversity of heathland plants represented. Other habitats are not particularly species-rich individually.

## 2.2.1 EVALUATION (cont.)

### Diversity (cont.):

Invertebrates: Heathlands often support an interesting range of invertebrate species. Diversity of invertebrates is generally lower in Staffordshire than in the southern lowland heaths, probably due to the cooler climate of the Midlands. However, over 550 species of invertebrate have been recorded at Barlaston and Rough Close Common including over 50 species of aculeate bees and wasps, most of which are associated with bare sandy ground, 258 species of flies, 121 species of beetles, 57 species of hemipteran bugs and 46 species of spiders. In addition to the open sandy areas, other particularly important habitats for invertebrates include areas of neutral grassland (often rank grassland around the margins of the site), the pool, marshy grassland/wet heath, dry heath/acid grassland and scattered scrub.

Vertebrates: There are no existing records of vertebrates. No species group is likely to be particularly diverse.

### Naturalness:

Lowland heath is a semi-natural (rather than entirely natural) habitat, requiring management to retain its vegetation structure and species composition. In the absence of active management heathland is likely to undergo succession reverting to scrub and woodland. At Barlaston and Rough Close Common active management is required to maintain the heathland element of the vegetation and to control bracken and scrub/woodland encroachment.

There are also many features at the site which have been created and are not of natural origin, reducing the "wilderness" attribute of the Common. These include:

- the roads which surround and dissect the site;
- the car parking areas on the margins of the site;
- the quarry in Rough Close Common.

However, the Common does retain an appearance of naturalness, particularly in comparison with the built up residential developments to the north-east, east and south and the nearby urban areas to the north. The wide open area of marshy acidic grassland on Barlaston Common provides, to some extent, a feeling of wilderness, particularly since the adjacent residential areas and main road are largely screened by trees and tall herb.

### Rarity:

Habitats: Lowland heathland is a priority for nature conservation because it is a rare and threatened habitat. In England, only one sixth of the heathland present in 1800 now remains. The UK has some 58,000ha of lowland heathland of which the largest proportion (55%) is in England. The UK has an important proportion (about 20%) of the international total for this habitat. Therefore areas of lowland heath are considered to be of importance due to the rarity of the habitat.

Lowland heathland is a priority habitat in both the UK and Staffordshire Biodiversity Action Plans with its own Habitat Action Plan (HAP) both nationally and within the county. Wet heath is particularly rare, often occurring in relatively small areas, as at this site.

Lowland acidic grassland is also a priority habitat in both the UK and Staffordshire Biodiversity Action Plans with its own Habitat Action Plan (HAP) both nationally and within the county.

## 2.2.1 EVALUATION (cont.)

### Rarity (cont.):

**Species:** No nationally rare vascular plant species are known to occur at the site. However, several species recorded at the site are considered to be very rare, rare or uncommon in Staffordshire (recorded in only 1-7, 8-34 or 35-99, of the 800 or so, tetrads in the county respectively, Hopkins, 1985). Hybrid bilberry is very rare in a county context and cowberry is a locally rare species. Both are apparently present at single locations at Barlaston Common. Locally uncommon species present at the site include bell heather, cross-leaved heath, a cotton-grass species, climbing corydalis, narrow buckler-fern, bulbous rush and teasel.

13 Nationally Scarce invertebrate species have been recorded at the site. These are:

*Acanthiophilus helianthi* (a picture-winged fly) - Barlaston & Rough Close Common is the most northern British record for this species.

*Adrena humilis* (a mining bee) - a very local species of heathland and coastal locations.

*Aulacigastromyia anisodactyla* (a lauxaniid fly) - a widespread but generally scarce species.

*Cneorhinus plumbeus* (a weevil) - a widespread but local species.

*Hilara albipennis* (an empid fly) - a scarce species

*Nomada lathburiana* (a nomad bee) - once considered very rare (previously a red data book species) but now known from a number of Midlands sites.

*Paroxyna absinthii* (a picture-winged fly) - a rare species of coasts extending its range inland .

*Phaonia atriceps* (a muscid fly) - very scarce in Britain with records widely dispersed.

*Pherbellia brunnipes* (a snail-killing fly) - widespread but scarce over Britain as a whole.

*Pherbellia dorsata* (a snail-killing fly) - widespread but scarce over Britain as a whole.

*Rhaphium lanceolatum* (a dolichopodid fly) - a scarce northern species.

*Scathophaga decipiens* (a dung fly) - a widespread but highly localised species.

*Tetanocera punctiformis* (a snail-killing fly) - widespread but scarce over Britain as a whole.

Ground nesting solitary bees and wasps (of which there are many species at the site) are subject of a Staffordshire Species Action Plan. Barlaston and Rough Close Common are considered to be a key site for these species within Staffordshire.

There is an unconfirmed record for purple hairstreak butterfly at Rough Close Common and a previous record of skylark at Barlaston Common.

Common lizard occurs, which although widespread, are not considered common in the county.

### Fragility:

Heath is a relatively fragile habitat in that it requires management to retain its character. In the absence of management lowland heath suffers from invasion of scrub and bracken undergoing natural succession to woodland. Heather and other ericaceous shrub species degenerate in the absence of management, becoming tall and leggy, lacking vigour. Eventually there may be a lack of regeneration of the heath species and grassland, bracken and scrub take over. Heathland is also sensitive to nutrient enrichment and heavy recreational pressure.

Indeed, the main threat to lowland heathland, identified in the UK HAP is encroachment of trees and scrub and simplification of vegetation structure due to a lack of conservation management.

The remaining heath at Barlaston and Rough Close Common is suffering from insufficient management. Large areas are dominated by acidic (marshy on Barlaston Common, dry on Rough Close Common) grassland which might be expected to support a more extensive heath component but are overwhelmingly dominated by one or two grass species in a dense tall sward. There are also relatively extensive areas of secondary woodland, scrub, bracken and ruderal tall herb encroaching on the heath/acid grassland.

The site is particularly threatened by nutrient enrichment around the margins, often as a result of garden waste tipping. There is also a threat of encroachment to the north-east, adjacent to neighbouring

properties and their drives.

Recreation and nutrient enrichment may be a problem on parts of the site, particularly Rough Close Common which is heavily used by dog walkers. The quarry area is particularly subject to erosion. Poaching of some paths by horses may be a local problem on the wetter ground at Barlaston Common during wet weather, though no definitive bridleways cross the site.

## 2.2.1 EVALUATION (cont.)

### Fragility (cont.)

The open water habitat within the pool to the north-west of the site is continually threatened by the presence and rapid growth of the invasive non-native New Zealand pygmyweed (*Crassula helmsii*).

### Typicalness:

Heathlands are a distinctive features of the Staffordshire landscape, formerly covering far more extensive areas. Barlaston and Rough Close Common is described as belonging to the central/northern Bunter sandstone heaths. The main characteristic of this group (which occurs on outcrops of Bunter soft red sandstones and pebble beds) are the well drained, acidic and sandy soils, supporting dry heath and acidic grassland mosaics. Rough Close Common is thus more typical of the group than Barlaston Common. Indeed, Barlaston Common is somewhat atypical of the group since it experiences impeded drainage supporting wet heath and dominant stands of purple moor-grass.

In broader terms, however, the heathland at Barlaston and Rough Close Common is typical of the heaths of the county with several ericaceous species present including heather, bilberry, bell heather, crossleaved heath and cowberry. The site supports a typical mix of habitats characteristic of heathland including heath, acidic grassland, bracken, gorse and scrub.

The site also supports nearly 50 species of invertebrates which are considered typical of heathland (heath-loving species) including specialists of heath, gorse and broom, wet heath and bog and "semi-heath species" (Falk *et al*, 1996).

### Recorded history:

Relatively little information regarding the history of the site is available although much can be learned from study of old maps and aerial photographic coverage. The earliest reliable old maps available (W Yates, 1775) indicate that an extensive block of heathland existed in this area known as Meir Heath, of which Barlaston and Rough Close Commons are the only remaining remnants. The road dividing the site (Lightwood Road) already appears to be in existence at that time.

A later OS map (2<sup>nd</sup> Edition, 1901) shows that already almost all the former Meir Heath had been enclosed for agriculture, planted (for example Blacklake Plantation) or developed, for example Meir Heath village. The boundaries of Barlaston and Rough Close Common have remained largely unchanged since that time.

Past management (up until 1993) is not well recorded. The site has certainly not been regularly grazed within the past 30-40 years, though there is evidence that some grazing occurred prior to this. Recent management (since 1993) is relatively well recorded, with the site owners SBC holding the records.

Invertebrates are the only group to have been well recorded at the site, having been the subject of a relatively detailed survey in 1994/5.

### Ecological position:

The heathland at Barlaston and Rough Close Common is relatively isolated from other heathlands, the nearest being the remnant heathland of Downs Bank (3km away), the damaged heath at Trentham Park (7km away), the recolonising heath at Mobberley Quarry and the more extensive heathland at Wetley moor (9km away), (plus Park Hall!!!! 5-6 km away).

As a comparatively small area of heathland with no other nearby heathland sites, Barlaston and Rough Close Common is ecologically isolated which means they are particularly vulnerable to further loss and deterioration since many heathland species are unlikely to be able to recolonise the site should they be lost for any reason.

## **2.2.1 EVALUATION (cont.)**

### **Intrinsic appeal:**

Barlaston and Rough Close Common is the only remaining area of unenclosed and unimproved habitat in the locality. As such it is of importance as a scenic area with a natural feel. There is a contrast of landscape features including the bare sandstone, steep slopes and rock outcrops of the quarry on Rough Close Common and the expanse of open marshy grassland on Barlaston Common.

The areas of heathland habitat on both parts of the site are especially attractive when the various ericaceous species, particularly heather, bell heather, cross-leaved heath and gorse, are in flower. Additionally bilberry and bramble provide berries in the late summer.

The pool to the north-west of the site is also considered to be very attractive.

However, tipping of garden refuse around the edges of the site, the subsequent development of areas dominated by ruderal tall herbs such as common nettle and ground elder and encroachment at the site edges (primarily by car parking but also where neighbours have altered the site adjacent to their drives/properties) detract from the appeal of the site.

The site is of importance for recreation, probably mainly by local residents. The site is well used by dog walkers and horse riders.

### **Potential:**

Despite its ecological isolation and relatively small area, there is potential to enhance the heathland and acidic grassland habitats at Barlaston and Rough Close Common through appropriate management. Such enhancement could include an increase in the cover of heathland species within the acidic grassland and an improved age structure within the ericaceous shrubs. There is potential to expand the area of wet heath at Barlaston Common. Control of scrub, bracken and ruderal tall herb could also enhance the heathland and acidic grassland habitats.

There is low potential for increasing the recreational use of the site. Rough Close Common is already heavily used, while Barlaston Common is of limited appeal due to the wet nature of the site and dense tussocky marshy grassland sward. An increase in recreational pressure could further damage the habitats at the site. However, there is potential to maintain and improve the current access to the site through maintenance of paths and on-site interpretation. There is also potential to involve the local residents in the maintenance and management of the site. Much local interest has already been expressed in the past.

There is potential to designate the site a Local Nature Reserve (LNR) through consultation with English Nature. Barlaston and Rough Close Common may be a good candidate site for LNR designation, which would raise the profile of the site, giving it a greater perceived status that might enhance its protection from encroachment and fly tipping.

There is potential to improve the intrinsic appeal of the site through a reduction in refuse/garden waste tipping around the margins of the site.

## 2.2.2 IDENTIFICATION/CONFIRMATION OF IMPORTANT FEATURES

Site feature	Importance		
	National <sup>1</sup>	County	Local
• extent of site (as a viable heathland unit)		*	*
• dry heath habitat	*	*	*
• wet heath habitat	*	*	*
• lowland acid grassland	*	*	*
• acidic marshy grassland		*	*
• open water and emergent vegetation habitats			*
• diversity of habitats			*
• presence of locally rare and uncommon vascular plant species		*	*
• diversity of invertebrate species, particularly bees and wasps		*	*
• presence of notable invertebrate species	*	*	*
• presence of common lizard			*
• intrinsic appeal and "natural feel" of the site			*
• use of the site for recreation			*
• potential to enhance and expand heathland habitat		*	*

<sup>1</sup> = priority habitats listed in the UK BAP and species considered nationally scarce

## 2.2.5 IDEAL MANAGEMENT OBJECTIVES

1. To maintain, enhance and expand the heath habitats (both dry and wet heath) through appropriate management, within the context of a mosaic of habitats typical of lowland heathland.
2. To maintain the diversity of habitats at the site and enhance notable habitats in addition to heath, particularly dry acidic grassland, acidic marshy grassland, open water and emergent vegetation.
3. To maintain and enhance populations of locally rare and uncommon species of flora.
4. To maintain and enhance the diverse invertebrate fauna, particularly bees and wasps and populations of nationally notable invertebrates and of other notable fauna.
5. To maintain the intrinsic appeal and natural feel of the site, enhancing opportunities for recreation where this will not conflict with other objectives.

Note that these objectives at Barlaston and Rough Close Common are in keeping with, and will contribute towards, the following objectives/targets in national and local BAPs:

### UK lowland heathland habitat action plan:

- maintain and improve by management all existing lowland heathland.

### UK lowland dry acid grassland habitat action plan:

- arrest the depletion of unimproved lowland acid grassland throughout the UK.
- secure favourable condition over the resource.

### Staffordshire habitat action plan for lowland heathland:

- maintain and improve all existing lowland heathland.
- halt the decline of heathland quality of all remaining sites by re-introducing appropriate management.

### Staffordshire habitat action plan for lowland acid grassland:

- prevent any further net losses of unimproved acidic grassland (except for restoration to heathland and heath/grassland mosaics).

### Staffordshire species action plan for ground nesting solitary bees and wasps:

- ensure important sites for solitary bees and wasps are not adversely affected.
- increase current important populations of solitary bees and wasps by site enhancement.

Note that Rough Close Common is considered to be a "key site" for ground nesting solitary bees and wasps.

## 2.4.1 RATIONALE

### Objective 1:

**To maintain, enhance and expand the heath habitats (both dry and wet heath) through appropriate management, within the context of a mosaic of habitats typical of lowland heathland.**

In the years up to 1993, the heathland at Barlaston and Rough Close Common was largely unmanaged (other than a few small incidental fires) and was in need of a programme of active management in order to retain and enhance its wildlife value. A management plan was prepared in 1992 and in 1993 the site was entered into a Countryside Stewardship agreement. Therefore some management to benefit the heath at the site has taken place since 1993.

Heath management from 1993 to 1999 includes extensive bracken control, scrub control (including bramble and gorse) and limited turf cutting/spread of seeds from heath species.

Heath generally benefits from several different forms of management, all of which prevent succession (to scrub and woodland) and maintain the heather, and other ericaceous shrubs, in a healthy growing stage. In the past lowland heaths were usually subjected to a combination of cutting (for fuel and fodder) and grazing (by both sheep and/or cattle). Heaths can also be managed by burning. Therefore there are several potential management options to fulfil the above objective. Since the two parts of the site (Barlaston Common and Rough Close Common) support different types of heath/acid grassland, it follows that each is likely to require a different management approach. Separate control of bracken, ruderal tall herb and scrub invasion (which has been the approach in recent years) may also be required. Additional measures may be needed in order to attempt to expand the areas of both dry and wet heath habitat. Each of these options is discussed below.

#### Burning:

Rotation burning is a successful tool in managing dry heath. However, there are opposing views as the value of burning as a management tool for wet heath and marshy grassland. It is difficult to predict the outcome of management through burning since it depends on a number of factors including site conditions, vegetation types and burning techniques. It is generally accepted that burning on wet heath may or may not be appropriate and should be undertaken on a trial basis with close monitoring. The areas of dry heath and acid grassland at Rough Close Common are not considered sufficiently extensive to be effectively managed by burning. Burning is not recommended on heaths smaller than about 5ha since there is insufficient area for rotational management.

In any case, burning is not considered likely to be appropriate at Barlaston and Rough Close Common, for other reasons:

- Burning can be problematical from the point of view of public perception of its use and there is a danger that controlled burning may encourage uncontrolled "copycat" fires;
- The proximity of major roads and houses around the site for which burning might pose a danger;
- If burning is to be successful it must be carried out very carefully. It requires a high level of skilled manpower.

For all these reasons, it is probably inadvisable to prescribe burning as the primary option for heath management at Barlaston and Rough Close Common.

#### Cutting:

For cutting to be successful the heather should be in the building or mature growth stage (degenerate heather will not regenerate from root stock following cutting). The cut should be carried out between October and March - a cut in January or February reduces risk of frost damage. However, if the cuttings are to be used in heath restoration projects (see later) the cutting should be carried out between October and December when there is still seed in the florets. The heather should be cut to a height of no less than 10cm - a shorter cut may result in frost damage or desiccation. Cuttings should be removed

following cutting (whether or not they can be used) to prevent nutrient enrichment and mulching. On the lowland heaths of Staffordshire a rotation of about 12-15 years is recommended.

## 2.4.1 RATIONALE (cont.)

### Objective 1 (cont.):

#### Cutting (cont.):

Much of the heather at Barlaston and Rough Close Common may now be too degenerate for cutting to be successful. Therefore any cutting should be undertaken on an experimental basis. If regeneration of heather is successful following cutting this may be the most appropriate management option, particularly on the dry heath and dry heath/acid grassland mosaics on Rough Close Common. If effective, cutting of small areas here is likely to benefit both the heath and acid grassland habitats, invigorating the ericaceous shrubs and reducing the dominance of grasses in areas of heath/grassland mosaic. Cutting of the whole site on rotation is unlikely to be possible due to the topography, particularly on and around the top of the quarry. However, here the thin sandy soils are likely to favour heath species and maintain a healthy heath habitat in the absence of management. The use of small machinery, such as an Allenscythe or similar, will be appropriate to the small scale cutting required and the topography of the site. If initial experimental trials are successful, small areas should be cut on a 12-15 year cycle throughout the site (including areas of dry heath and dry acid grassland to the west of Barlaston Common) with at least one small area at each site left to support degenerate heather. Cut material should be collected and removed from the site or used to seed into areas which have been turf stripped (at this site or at other local sites).

If cutting is found to be unsuccessful in regenerating the old heather at the site, light rotovation or scarification of the soils around degenerate heather bushes should be attempted on an experimental basis with the aim of encouraging regeneration from seed within existing heath.

Cutting is likely to be less appropriate over the wet heath/marshy acidic grassland of Barlaston Common due to the small areas of wet heath present and the extensive and tussocky nature of the purple moor-grass dominated acidic marshy grassland. The wet soils may also prohibit the use of machinery on the site. It is considered unlikely that cutting could be undertaken successfully in this area, though it may be a useful tool on a very small scale to prevent the scattered heather and locally frequent cross-leaved heath from becoming degenerate.

#### Control of scrub (including gorse and bramble), bracken and ruderal tall herb:

Locally, scrub and bracken are encroaching on the heath and acid grassland habitats. If left unchecked these areas will succeed to woodland and the heath/acid grassland habitats may be reduced or even lost from the site. Scrub control can include pulling, weed wipe and spot gun treatment with an approved herbicide such as glyphosate (for smaller scrub) or cutting and treatment of the stumps, again with an approved herbicide such as glyphosate or triclopyr. Cut material should be removed from areas of heath even if it has been chipped. All species of invading scrub should be removed from areas of heath including oak.

Gorse is a natural component of lowland heath which provides valuable food and shelter for birds and invertebrates and is attractive when flowering. However gorse can become dominant at the expense of other heath species and mature gorse can become a fire hazard since it is particularly combustible. At Barlaston and Rough Close Common gorse control may be required if gorse extends further into areas of heath. Management is also required to remove dense patches of old gorse which might prove a fire hazard and to encourage vigorous young growth. Where control is considered desirable gorse should be cut (with small patches cut every few years on a 15 year cycle) with approximately 75% of stumps treated with an appropriate herbicide to reduce regrowth (whilst retaining some gorse). Cut material should be removed from site

Bracken is also a natural component of the vegetation at the site, but in the absence of control it can spread over heathland sites, shading out the more interesting heath species. In the past, bracken invasion has been a problem at Barlaston and Rough Close Common, though regular management in recent years has been successful keeping bracken in check. However, it is likely that on-going bracken control will be required to maintain the current relatively low cover of this species. Bracken control can be by spraying with Asulam, pulling, cutting, bruising or a combination of these. Spraying should normally be carried out just as fronds have completely unfurled and almost formed a canopy (usually in

late July) and during a dry period. Pulling, cutting or bruising are best carried out once in mid-June and again in late July. In either case, follow up management will often be required in subsequent years.

Due to the presence of ruderal species, particularly rosebay willowherb which is quick to spread into nutrient enriched disturbed soils pulling should only be undertaken where it is unlikely to result in soil disturbance. Therefore it may be more appropriate to adopt chemical or cutting/bruising approaches to bracken control at this site.

## 2.4.1 RATIONALE (cont.)

### Objective 1 (cont.):

#### Control of scrub (including gorse and bramble), bracken and ruderal tall herb (cont.):

Other invasive non-heathland species, particularly ruderal tall herb and bramble, are encroaching around the margins of the site. Some ruderal tall herb and bramble is desirable at the edges of the site since they add to the habitat diversity and are important nectar sources for invertebrates. However, rosebay willowherb, common nettle, dock species and bramble may require control at the site to prevent spreading extensively into heath habitat. Control by cutting before the weeds set seed is likely to be the most acceptable and appropriate method. Bramble is best controlled by cutting and removing runners. Cut material should be removed from the site. Spot treatment with an appropriate herbicide may also be useful where cutting is not possible or is not successful in reducing the spread.

#### Grazing:

Grazing is generally the most successful and appropriate management for heathland sites, particularly where this is likely to have been the traditional management at the site.

There are a number of reasons why grazing is widely viewed as the most appropriate form of management for heath, particularly wet heath and marshy acid grassland:

- Grazing with appropriate livestock maintains ericaceous shrubs in a youthful phase which more readily regenerates than older degenerate plants.
- Grazing at appropriate levels can favour ericaceous shrubs at the expense of acid grassland, thus increasing the proportion of heath in a heath/grassland mosaic.
- Grazing can be adjusted to suit each habitat using different types of animal, mixed grazing regimes and through monitoring and manipulation of stocking levels, to achieve the desired balance of vegetation types and species within the site.
- Grazing, at appropriate stocking densities, can significantly reduce the need for scrub control once an area has been cleared of taller well established scrub since animals will graze young scrub and coppice regrowth.
- Grazing can indirectly reduce bracken cover through the trampling action of animals put out to graze in spring/early summer (when bracken fronds first emerge and are at their most vulnerable) crushes the new growth. Repeated trampling of emerging fronds severely weakens the plant, so that in time only a low cover persists.
- Grazing is, to date, the only effective method of managing wet heath and acidic marshy grassland. Alternative methods including cutting and burning have not been shown to replicate the full range of conditions created by grazing, including the reduction of purple moor-grass tussocks, the creation of open wet pockets for mire species and an uneven age structure of ericaceous species.

However, there would be several problems associated with reintroduction of grazing at Barlaston and Rough Close Common due to the open nature of the common land, with several roads crossing and adjacent to the site and the high level of recreational activities. These features are particularly prominent at Rough Close Common - the small area of this part of the site and higher level of recreation, coupled with the possibilities for successful management of the dry heath by other methods (for example small scale rotational cutting) means that grazing is unlikely to be either the preferred option for management of this part of the site, or a feasible option.

However, Barlaston Common is a larger area, with lower recreational pressure, and the habitat is unlikely to be successfully maintained or enhanced in the long-term by methods other than grazing. Therefore grazing is considered to be the best management option for this part of the site. A feasibility study was carried out in 1994 specifically to look at the advantages of grazing at Barlaston Common and the possibilities for reintroduction of grazing at the site. A summary of this feasibility study is included in Appendix 3. The study concluded that grazing would be the most desirable and effective management option for Barlaston common which could achieve the following benefits:

- control of invading scrub and bracken;
- reduction in the vigour and dominance of purple moor-grass tussocks which should benefit both the heath vegetation and public amenity/recreation value of the site;

- encouragement of an expansion of heather and the wet heath habitats present.

The feasibility study looks at the implications of, and recommends methodology for attempting to implement, re-introduction of grazing at Barlaston Common.

## 2.4.1 RATIONALE (cont.)

### Objective 1 (cont.):

#### Expansion of heath into areas of acid grassland:

It is likely that management described above, particularly cutting at Rough Close Common and grazing at Barlaston Common, would favour heath species over grasses and may encourage the spread of heath within the acid grassland.

However, it may also be desirable or, if grazing is not re-introduced at Barlaston Common, necessary, to undertake specific measures to encourage the development of heath within the areas of acidic grassland. Such restoration of heath generally involves removal of the existing dense sward of acid grassland down to the mineral soil (but not disturbing the soil beneath 1-2cm deep). Resulting turf and litter needs to be removed from the site. The exposed soil may then require rolling to give some compaction. Spreading of cuttings/litter/seed from appropriate ericaceous species (heather and bilberry in the drier areas of Rough Close Common and the eastern edge of Barlaston Common or cross-leaved heath and heather in the wetter areas of Barlaston Common) may also be required. The cuttings/litter/seed must generally be rolled to press the seeds into the soil.

Birch regeneration (or ruderal tall herbs) may require control to allow heath vegetation to establish.

### Objective 2:

#### **To maintain the diversity of habitats at the site and enhance notable habitats in addition to heath, particularly dry acidic grassland, acidic marshy grassland, open water and emergent vegetation.**

Barlaston and Rough Close Common was presumably once dominated by heath (both wet and dry) probably with areas of acid grassland (both dry and marshy) and open water/emergent vegetation (assuming that at least one pool has been present on site for a very long time). This might therefore be seen as an ideal habitat composition for the site. However, other habitats such as areas of neutral grassland, scrub (including gorse), woodland, ruderal tall herb, bracken and bare ground are now well established at the site. Many of these other habitats are of value to wildlife in their own right. For example, the bare ground of the quarry will provide habitat for burrowing invertebrates and basking areas for common lizard; neutral grassland, scrub and tall herb provide nectar sources for invertebrates; and the woodland may be of value to birds. The diversity of habitats present also adds to the intrinsic appeal of the site. Therefore restoration of heath to the whole site is neither practical or desirable and areas of each habitat should be retained (though a balance may be required where habitats are in conflict, for example where scrub and bracken are invading heath or acidic grassland is becoming dominant over heath).

Most of the habitats at the site (other than dry or wet heath) are likely to thrive in the absence of management. Indeed, much management discussed under objective 1 involves control of other habitats, which are expanding on the site, in order to maintain, enhance and expand the heath.

The only habitat likely to require specific management is the open water/emergent vegetation. The pool to the north of Cocknage Road is probably mesotrophic though not highly nutrient rich and provides habitat for a number of aquatic plant species and invertebrates. In the absence of management, emergent vegetation is likely to take over the pool particularly since New Zealand pygmyweed (*Crassula helmsii*, also known as Australian marsh stonecrop) is present. This is an introduced invasive species which grows rapidly resulting in an almost total suppression of native plants within a few years (Leach & Dawson, 1999). The species is extremely difficult, if not impossible, to eliminate or control. Chemical control is not always successful and in any case will also affect or eliminate other aquatic species in the pool. Physical removal both by hand and machine has mainly proven unsuccessful because of the large number of fragments produced and their ability to regenerate rapidly. Use of liquid nitrogen has been trialed but is not guaranteed to succeed and is expensive. Shading of areas of emergent growth is possible and reasonably effective with small areas of the weed. Control by hand pulling and shading are likely to be the most effective and appropriate methods to use at Barlaston and Rough Close Common. Whenever pygmyweed is cleared from the pool all fragments of the plant should be carefully removed

from the site in black plastic bags. Care should be taken to remove fragments from clothing and footwear/waders to prevent spread to other pools. Bulrush (*Typha*) and other emergent species such as broad-leaved pond-weed could also extend over the open water in the absence of management and periodic partial mechanical clearance of these species may also be beneficial in maintaining areas of open water and a diverse aquatic flora and fauna.

## **2.4.1 RATIONALE (cont.)**

### **Objective 2 (cont.):**

The northern part of the pond has become invaded by willow carr. This area of woodland is of value as an undisturbed wetland area and should be retained. However, the spread of willow carr further into the open water should be monitored and limited if necessary.

Management of the pool banks through cutting every 2-3 years, with cuttings removed from site, will contribute towards the maintenance of a low nutrient status in and around the pool and encourage a species-rich sward.

The pool which is believed to have once occurred in the south-western corner of Barlaston Common has now dried up and infilled. Access here is very difficult due to the dense woodland/scrub, bramble and tall herb. The management which would be required (including woodland clearance and excavation) to re-establish a pool here is not considered to be justified.

Some limited woodland management may be beneficial in the future, though is unlikely to be a high priority at the site. The area of wood to the north of Rough Close Common has been thinned recently resulting in an open canopy with a limited shrub layer which may be beneficial to heath species (particularly bilberry) and invertebrates in this area. Therefore it may be desirable to maintain this woodland in an open condition in the future.

### **Objective 3:**

#### **To maintain and enhance populations of locally rare and uncommon species of flora.**

Hybrid bilberry, bell heather, cowberry, cross-leaved heath and cotton-grass should all benefit from heath management described under objective 1 above. No specific management is required to maintain populations of bulbous rush, narrow buckler-fern, climbing corydalis and teasel other than ensuring that the locations for these species are maintained and are not adversely affected by management proposals such as turf cutting. Bulbous rush is common along the paths to the south of Barlaston Common, narrow buckler-fern is restricted to the west and north-west of Barlaston Common while climbing corydalis is found at several locations around the woodland and scrub to the south of Barlaston Common. Teasel occurs within the disturbed areas to the east of the car parks of Rough Close Common.

Should further notable species be recorded in the future, specific management prescriptions to meet their ecological requirements should be drafted. If these are not already being carried out as part of the prescribed management, they should be incorporated into the management plan, provided they do not conflict with other objectives on the site.

### **Objective 4:**

#### **To maintain and enhance the diverse invertebrate fauna, particularly bees and wasps and populations of nationally notable invertebrates and of other notable fauna.**

The diversity of the invertebrate fauna is likely to be maintained and enhanced through habitat management, as discussed under objectives 1 and 2. Although most specialist species are associated with areas of bare sand, dry and wet heaths and the pools, the value of all habitats present to the invertebrate fauna should be recognised particularly scattered scrub (including gorse and bramble), neutral rank grassland and ruderal tall herb which are not often viewed as desirable habitats at heathland sites. Over 350 invertebrate species have been recorded from the "verge" habitat on the site.

The majority of the bee and wasp species present at Barlaston and Rough Close Common are ground nesting solitary bees and wasps which require bare sandy ground which is fully exposed to the sun in which to nest and nectar sources such as common knapweed, dandelion-like composite flowers and umbellifers for foraging.

Much of the bare sandy ground at Rough Close Common is ideal for these species, particularly as it generally south-facing and exposed. The main foraging areas are likely to be the semi-natural rank grassland around the site margins.

## 2.4.1 RATIONALE (cont.)

### Objective 4 (cont.):

Specific habitat requirements of the notable invertebrates known to occur at the site are as follows:

*Acanthiophilus helianthi* (a picture-winged fly): The main foodplant is common knapweed (the larvae develop in the head) which is found in several places at margins of the site in relatively species rich rank grassland.

*Adrena humilis* (a mining bee): This species requires flat (occasionally steeper), bare, sandy areas which are fully exposed to the sun for nesting. Such conditions occur around the paths and within the quarry of Rough Close Common. Foraging is exclusively on dandelion-type composite flowers such as hawkweeds, dandelions, ox-tongue and hawk's-beard during May/June. Such composite flowers are to be found within the area of semi-improved grassland on Barlaston Common and within the quarry/areas of rank grassland around the margins of Rough Close Common.

*Aulacigastromyia anisodactyla* (a lauxaniid fly): This species relies on scrubby areas with associated tall herb, usually on mild acidic soils. Few details are known concerning the ecology of the species but the larvae are likely to develop within leaf litter.

*Cneorhinus plumbeus* (a weevil): This species occurs in a number of habitats including grassland, hedgebanks, wet meadows and short turf where it feeds on plant roots. Adults are recorded between April and August. At this site the species appears to be restricted to the sandpit and grassland areas to the east of the quarry on Rough Close Common.

*Hilara albipennis* (an empid fly): The ecological requirements of this species are poorly known. Larvae are believed to develop as predators in damp soils. However, the species was recorded at Rough Close Common, some distance from the marshy grassland and pool habitats.

*Nomada lathburiana* (a nomad bee): This bee is a cleptoparasite (ie: lays its eggs in the nest) of a host mining bee (*Andrena cineraria*) which nests in sandy ground and very short turf in areas fully exposed to the sun. The host mining bee requires spring blossoming shrubs such as hawthorn, blackthorn, broom, gorse and rowan.

*Paroxyna absinthii* (a picture-winged fly): The larvae of this species develop in the flower/seed heads of mugwort. Adults are found between June and August. Mugwort is present around the carpark at the north-western corner of Rough Close Common.

*Phaonia atriceps* (a muscid fly): This is a species of marshland and water margins where it is associated primarily with bulrush (*Typha*) - the larvae developing as predators beneath the leaf sheaths. Adults are present in summer and autumn. At the site, this species is restricted to the pool.

*Pherbellia brunnipes* and *Pherbellia dorsata* (snail-killing flies): These are semi-aquatic flies with larvae that are parasites of water snails. Adults live around pond margins and marshy areas and are present between May and September/April and October respectively. At the site, these species are restricted to the pool.

*Rhaphium lanceolatum* (a dolichopodid fly): This fly is associated with boggy areas. Related species favour seasonally flooded shaded areas and marshland. At the site it has been recorded around the pool but it may also inhabit the marshy acidic grassland and wet heath of Barlaston Common.

*Scathophaga decipiens* (a dung fly): This fly is associated with wetland and water margins. Adults are likely to utilise the whole site (particularly marsh areas) in search of insect prey. Despite the species being a member of the dung fly family there is no known association with dung.

*Tetanocera punctiformis* (a snail-killing fly): This is a species associated with lush vegetated marshy areas. Larvae are presumed parasites of snails, though it is not clear whether terrestrial or aquatic snail species are the preferred host. Adults live around pond margins and marshy areas and are present

between June and August. At the site, this species is restricted to the pool.

## 2.4.1 RATIONALE (cont.)

### Objective 4 (cont.):

In summary, important habitat features for the notable invertebrate population are:

- bare sandy ground exposed fully to the sun

The extent of bare sandy ground should be maintained. The continued use of paths at Rough Close Common and limited disturbance of the quarry area through recreation are likely to maintain suitable bare sandy ground and short turf with sandy patches, many areas of which will also be south facing. Some erosion of these footpaths and the quarry may be beneficial. However, some of the areas of the paths and quarry may be too greatly disturbed by recreation which could be detrimental to the bees' and wasps' nests.

Areas of heath at the site are not appropriate sites for the creation of new permanent bare areas (other than where turf stripping suggested under objective 1 above creates temporary bare ground).

- areas of semi-improved and rank neutral grassland, especially where these support species such as common knapweed, mugwort, dandelion like composite flowers and other nectar sources.

These areas of grassland would benefit from periodic (though not frequent) cutting late in the summer (not before September), on rotation of around 3 years, ensuring that only a proportion of areas are cut in any one year. Such management should control scrub and bracken invasion and favour broadleaved flowering plants (nectar sources) over grasses. Cuttings should be removed from site to prevent further build up of nutrients. Appropriate maintenance of the road verges all around the site margins could also encourage further areas of nectar source species such as common knapweed. The use of herbicides and over-vigorous cutting should be avoided here if possible.

- spring flowering shrubs such as gorse, broom, rowan, hawthorn and blackthorn, particularly in association with tall herb

Areas of scrub and tall herb are common around the margins of the site and are likely to remain so without specific management. Indeed, it is important to recognise the value of these habitats during other management of the site so that scattered shrubs and some areas of tall herb are retained during control of scrub and tall herb within heath/acidic grassland areas, particularly around the site margins where most of the spring flowering shrub species are currently to be found.

- the pool with its emergent vegetation (particularly bulrush) and marshy vegetated margins

The maintenance of unpolluted unenriched open water habitat and areas of marginal/emergent vegetation (particularly a moderate cover of bulrush) within the pool, and marshy conditions around the pool, is of importance. Any pond clearance should be rotational, affecting only a portion of the pool in any one year.

- shallow pools within the marshy grassland/wet heath habitat at Barlaston Common

Maintenance of any flooded pools and wet depressions within the marshy grassland will be of benefit to invertebrate species. It may be desirable to create, one or two small permanent flooded pools/wet depressions within the marshy grassland on Barlaston Common, in addition to any experimental turf stripping undertaken under objective 1 above.

Common lizard will benefit from the maintenance of areas of bare sandy soil, particularly in the quarry area of Rough Close Common.

If present, skylark would benefit from maintenance and management of the marshy grassland/wet heath at Barlaston Common and purple hairstreak butterflies would benefit from the retention of areas of oak dominated woodland.

Should further notable species be recorded in the future, specific management prescriptions to meet their ecological requirements should be drafted. If these are not already being carried out as part of the prescribed management, they should be incorporated into the management plan, provided they do not conflict with other objectives on the site.

## 2.4.1 RATIONALE (cont.)

### Objective 5:

**To maintain the intrinsic appeal and natural feel of the site, enhancing opportunities for recreation where this will not conflict with other objectives.**

Barlaston and Rough Close Common comprises semi-natural habitats giving a "natural" feel to the site of high intrinsic appeal. It is desirable to maintain this natural feeling at the site. This can be achieved through management discussed under objectives 1-4 above and by preventing future introduction of species not native to the site. Retention of areas of scrub and woodland around the site margins will contribute to the "wilderness" experience, particularly at Barlaston Common since these habitats screen the surrounding housing and roads. Retention of scattered trees throughout the site will contribute to the landscape value of the site and can act as valuable song perches for birds.

Small scale encroachment onto the site by neighbouring properties (primarily to the north-east) and tipping of garden refuse and parking along the site boundaries all detract from the intrinsic appeal of the site. Wherever possible measures should be undertaken to halt and reverse any damage caused by these activities. This is likely to involve liaison with neighbouring owners over re-instatement of areas of Common within Council ownership and erection of bollards to delineate boundaries where encroachment due to car parking is common.

Although the site is not legally open access land (being registered under the jurisdiction of the former Stone District Council (as opposed to an urban district council), it is accepted that the site has *de facto* open access and is, and will continue to be, an important recreation site for the local community. The Scheme of Regulation of Commons, approved in 1951 (see appendix 2) also states that "The inhabitants of the district and neighbourhood shall have a right of free access to every part of the commons and a privilege of playing games and enjoying other species of recreation thereon, subject to any bye-laws made by the Council under this Scheme".

However, there is no designated right of access for bikes or horses; all definitive rights of way crossing the site are public footpaths.

The recreation value of the site should be maintained whilst minimising conflict with other objectives, particularly the maintenance and enhancement of heath which is vulnerable to recreation pressure.

This could be achieved through provision of the current level and type of facilities such as informal paths and limited car parking. Should grazing be re-introduced at Barlaston Common it will be essential to ensure easy access at a number of points, not only on definitive public footpaths) and including access for horses on paths used by horse riders (even though there is no current legal requirement to do so).

Conflict with other objectives can be minimised by path maintenance (to encourage use of existing paths rather than proliferation of a number of new paths). Some footpath erosion can be beneficial providing bare sandy sites favoured by invertebrates and reptiles. Therefore on the drier Rough Close Common some erosion is unlikely to be a problem (though maintenance of safe paths through the quarry will be desirable from the public safety point of view). However, excessive poaching of paths on the wetter Barlaston Common may be a problem, though during wet periods it is likely that people/horse riders may avoid this area. If damage appears to be occurring as a result of public use of the site, notices and liaison with local residents may be appropriate methods to encourage a reduction in damaging activities.

A limit to further expansion of facilities such as car parking and interpretation is desirable. Parking along roadsides is a particular problem where this is "eating" into the site and proliferation of unofficial carparks not only erodes the site margins but may encourage littering and tipping of refuse. There are currently three small parking areas, all to the north of the site. These are adequate to accommodate visitors to the site at their current levels.

Recreation facilities are currently limited to a few benches. These should be maintained.

The use of motorbikes and/or mountain bikes on Rough Close Common could cause unacceptable erosion of paths in the dry heath and acid grassland habitat. There is no legal access for bikes at Barlaston and Rough Close Common (with only public footpaths crossing the site). Therefore any bike activity should be discouraged.

## 2.4.1 RATIONALE (cont.)

### Other factors:

Relatively expansive areas of open combustible vegetation such as heaths are generally at risk from fire. Small isolated sites such as Barlaston and Rough Close Common are particularly vulnerable since a fire could completely destroy habitats at the site leaving no scope for re-vegetation with heath species. However, the small size of Rough Close Common precludes the construction of effective firebreaks and fire is unlikely to be a great problem at Barlaston Common since it is by nature wet and marshy so less liable to combustion. However, during a dry summer fire could constitute a significant risk to the habitats and therefore a fire plan should be produced and implemented even if this is primarily a plan of action to control a fire on site rather than the cutting of fire breaks. Liaison with the local fire service is recommended in setting up any plan of action.

Since the site is adjacent to residential roads and properties all management carried out on the site is likely to be subject to public scrutiny. Some of the management prescribed (for example, scrub cutting, bracken/ruderal tall herb control and turf cutting) may appear destructive and the re-introduction of grazing at Barlaston Common could prove controversial. Therefore it is vital that management is explained fully to as wide an audience as possible before any work is commenced on site. Interpretation and explanation of management should be carried out both off and on site. With regard to the re-introduction of grazing public consultation is recommended since the support of the local residents will be invaluable in finding a grazier and gaining permission to fence the site.

The potential designation of the site as a Local Nature Reserve (LNR) should be investigated since this could raise the local profile of the site and encourage positive local involvement. It might also raise new funding opportunities in the future.

Much of the management prescribed, particularly cutting of heath/acid grassland at Rough Close Common, grazing at Barlaston Common and the cutting of turves have not been undertaken at the site in recent times. Therefore it will be of paramount importance that all management undertaken is monitored carefully. This should include noting all management undertaken and the success/failure in achieving the objective. Subsequent management should be modified depending on the success/failure of previous management to ensure that objectives are being attained.

There may be a safety issue around the quarry, particularly where paths occur very near the top of the quarry. However, past attempts to place barriers here have proved unsuccessful. The erection of signs warning of the danger is an alternative option which might prove more efficient.

Finally, there are legal and other obligations covering the site which must be fulfilled in the course of management of the site, particularly in relation to encroachment by neighbouring properties and the Countryside Stewardship agreement which runs until 2003. Copies of relevant sections of the Countryside Stewardship agreement are included in appendix

## **2.4.2 IDENTIFICATION OF OPERATIONAL OBJECTIVES, SELECTION OF MANAGEMENT OPTIONS AND OUTLINE PRESCRIPTIONS**

Operational objectives for Barlaston and Rough Close Common:

1. To maintain and enhance the heath/acid grassland habitats (both dry and wet) through appropriate management, within the context of a mosaic of habitats typical of lowland heathland.
2. To maintain the diversity of habitats at the site and enhance notable habitats in addition to heath/acid grassland
3. To maintain and enhance populations of locally rare and uncommon species of flora.
4. To maintain and enhance the diverse invertebrate fauna, particularly ground nesting bees and wasps and populations of nationally notable invertebrates and of other notable fauna.
5. To maintain the intrinsic appeal and natural feel of the site, enhancing opportunities for recreation where this will not conflict with other objectives
6. To minimize risk of a serious fire
7. To maximize public understanding of, and support for, all proposed management activities
8. To monitor management projects undertaken and their effects on the flora and fauna of the site
9. To fulfil all legal and other obligations
10. To manage the site effectively and efficiently with regard to administration and funding

The following table sets out the management options and outline prescriptions to enable the achievement of these operational objectives.

## **STAGE 3 PRESCRIPTION**

### **3.1 TEN YEAR MANAGEMENT SUMMARY**

The following working plan details the major management tasks to be carried out over 10 years, the appropriate agent(s) and compartment numbers.

The plan is intended to identify and provide guidelines for management work. It must be regarded as essentially a working document with scope for flexibility and subject to annual review and modification, taking into account management undertaken in the previous year(s) and the results of this management.

Further details concerning the prescribed management are included in appendix 4.

A management calendar (indicating the optimum timing for management tasks) is included in appendix 5.

A number of factors may influence the actual annual work programme including budgets, availability of labour/volunteers, weather conditions and results of previous management.

Work undertaken requires recording. A simple record sheet is included in appendix 6. Additional monitoring should be undertaken on an annual basis to record the results of management. Such monitoring could be combined with an assessment of progress against the plan, review of management approaches in the light of the results of previous management and the drawing up of a detailed work programme for the next year.

Key to 10 year prescriptive table:

\* = project to be carried out in this year

(\*) = project to be carried out in this year if considered necessary.

## **APPENDICES**

### **APPENDIX 1 MAPS**

MAP 1a LOCATION

MAP 1b SITE BOUNDARIES AND PUBLIC ACCESS

MAP 2 HABITAT - EXISTING STATE

MAP 3 HABITAT - DESIRED STATE

MAP 4 MANAGEMENT REQUIRED

**APPENDIX 2 SCHEME OF REGULATION FOR BARLASTON COMMON**

**APPENDIX 3 SUMMARY OF FEASIBILITY STUDY FOR GRAZING MANAGEMENT**

**APPENDIX 4 FURTHER DETAIL CONCERNING PRESCRIPTIONS**

**APPENDIX 5 MANAGEMENT TASK CALENDER**

**APPENDIX 6 EXAMPLE OF A MANGEMENT RECORDING FORM**

**APPENDIX 7 RELEVANT SECTIONS OF THE COUNTRYSIDE STEWARDSHIP AGREEMENT**

**APPENDIX 8 VASCULAR PLANT SPECIES LIST**

## **APPENDIX 1 MAPS**

MAP 1a LOCATION

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**APPENDIX 2 SCHEME OF REGULATION FOR BARLASTON COMMON**

**APPENDIX 3 SUMMARY OF FEASIBILITY STUDY FOR GRAZING MANAGEMENT**

**APPENDIX 5 MANAGEMENT TASK CALENDER**

**APPENDIX 6 EXAMPLE OF A MANGEMENT RECORDING FORM**

**APPENDIX 7 RELEVANT SECTIONS OF THE COUNTRYSIDE STEWARDSHIP AGREEMENT**