



Cannock Chase Visitor Impact Mitigation Strategy



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Summary

This strategy sets out recommendations for measures to enable the delivery of dwellings in the vicinity of Cannock Chase Special Area of Conservation (SAC), without causing a likely significant effect on the SAC. The strategy relates to Cannock Chase District, Lichfield District, South Staffordshire District and Stafford Borough, and a zone of influence of 12 miles from the SAC boundary. It is estimated that new development within these Districts, as set out in their relevant core strategies, will result in an increase of around nine percent in the number of visits to Cannock Chase. In order to ensure no adverse effect on integrity, mitigation measures should aim to ensure no net increase in recreation pressure to the SAC, and ideally a reduction in pressure and enhancement to the SAC.

We present a package of measures that will promote responsible access within the SAC and ensure no net increase in the number of visitors by both attracting people to areas outside the SAC and potentially directing people away from the more sensitive areas of the SAC. These measures are set out in four broad areas where mitigation and avoidance measures are required:

- Habitat management
- Access Management and Visitor Infrastructure
- Publicity, Education and Awareness Raising
- Alternative Sites

Monitoring and further research are necessary to guide the implementation of measures and ensure their effectiveness.

In order to function effectively the strategy must be adopted by a range of different organisations, including those responsible for land management in the wider area beyond the SAC, encompassing the AONB and further afield. The different organisations will have different roles, but will need to work in partnership and adopt common standards. The four local authorities will need to work with developers and levy developer contributions whilst the County Council (managers of the SAC), and the Forestry Commission (managers of most of the surrounding land) will be core to delivering the strategy. Natural England will have a statutory role and Natural England, alongside other nature conservation bodies (RSPB, Wildlife Trusts), and key services such as Fire Service, will need to provide expertise, advice and support. The strategy should function alongside and in conjunction with the work of the AONB Committee. The strategy should now form the basis for an implementation plan, which takes the proposed measures forward as costed actions with phasing and ownership assigned.

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The measures set out in this strategy have been identified through discussion with relevant bodies and site visits to Cannock Chase. The content is however entirely our own. There are a number of different landowners, existing plans and on-going projects within the Cannock Chase area and in no way does any recommendation within this report represent any commitment or endorsement by the relevant parties.

1. Introduction

1.1 Overview

- 1.1.1 This strategy sets out recommendations for measures to enable the delivery of dwellings in the vicinity of Cannock Chase Special Area of Conservation (SAC), whilst avoiding a significant effect on the SAC. The strategy relates to mitigation set out in the evidence base report prepared by Footprint Ecology to inform the Habitats Regulations Assessment of relevant Core Strategies. The requirement to assess land use plans for their implications for European wildlife sites is embedded within European legislation, and this in turn is transposed into UK domestic legislation. The evidence base report estimates that development within Cannock Chase District Council, Lichfield District Council, South Staffordshire District Council and Stafford Borough Council will result in an increase of c.9% in the number of visits to the AONB.
- 1.1.2 The Habitats Regulations state that a plan should only be given effect where it has been ascertained that the plan will not adversely affect a European site, unless further strict and exceptional tests apply. This requirement takes a precautionary approach. It is for the plan-making body to demonstrate that the plan will not have an adverse effect, in order to pass this test in the Regulations. If there is evidence to indicate that the plan will result in an adverse effect, or indeed where the effects are unknown or uncertain, the test cannot be met and the plan therefore cannot be given effect.
- 1.1.3 A key element of the HRA process is determining what measures can be applied in order for a plan to proceed without having an adverse effect. Measures are a means of making potentially damaging impacts no longer likely to significantly affect a European site. Measures are developed specifically for this purpose. In the case of visitor impact, it is the increased volume of new housing in the vicinity of Cannock Chase SAC that creates the potential impact upon the SAC, as a result of the increased recreational pressure. The development of measures to manage those visitors in a way that enables them to still enjoy outdoor recreation in and around the Cannock Chase area, but which prevent further harm to the SAC interest features, is necessary to enable the plans to be given effect. The measures within this visitor impact management strategy are proposed in order to achieve this aim. Without management of visitors, it cannot be ascertained that the SAC will not be adversely affected, and the plans promoting additional housing within the vicinity of Cannock Chase SAC cannot therefore proceed in accordance with the requirements of the Habitats Regulations.
- 1.1.4 The development of this visitor impact mitigation strategy is therefore undertaken in direct response to HRA findings to date, and in order to meet the legislative requirement to ensure the protection of SAC features. If it does not meet this aim, it does not function as a means of mitigating the potential harm arising from the Core Strategies in question. Clearly, whilst this is the sole requirement and purpose of the strategy, its successful implementation within and around Cannock Chase SAC critically depends upon the support and partnership of a wide number of stakeholders, some of which are not the local planning authorities but rather have a specific function themselves in the Cannock Chase area. This strategy focuses on avoiding the impact of recreation and urbanisation on the SAC habitat and interest features. It is intended that local authorities can refer to this strategy in the preparation of relevant planning documents.

- 1.1.5 The objectives of this strategy are to establish:
- A framework for assessment of recreational, tourism and traffic management projects affecting the SAC
 - A consistent approach to the protection of the SAC from the significant effects of residential development
 - The type and extent of residential development that may have a significant effect alone or in combination on the SAC
 - Key criteria for the delivery of avoidance measures.
- 1.1.6 New residential development, especially when considered in combination with other plans and projects, will introduce additional users who are likely to have significant effects on the SAC and the developers should therefore provide or contribute to the provision of avoidance measures. These measures must be effective and deliverable. Developers can potentially provide, or make a contribution to, the provision of measures which are necessary to ensure that the development has no likely significant effect on the SAC. By doing so, they may avoid the necessity for residential development to have to undergo an appropriate assessment.
- 1.1.7 We set out four broad areas where mitigation and avoidance measures are required, with the overall aim of ensuring no net increase in recreation pressure, and ideally a reduction in pressure and enhancement to the SAC:
- Habitat Management
 - Access Management and Visitor Infrastructure
 - Publicity, Education and Awareness Raising
 - Alternative Sites
- 1.1.8 In addition we also set out the monitoring that is needed to check that the measures are successful and to allow modifications or changes to the measures as necessary.
- 1.1.9 This strategic approach is needed as all the measures, including the monitoring, need to be organised in advance of development taking place and can only be implemented at a strategic level, necessitating joint working across local authority boundaries and involving a number of different parties. In order for development to proceed, the measures suggested within this document need to be formally adopted by the four Local Authorities as Planning Authorities and by the County Council as the SAC site manager. It is recommended that policy wording within the relevant Core Strategies makes specific reference to the potential for increased housing to lead to adverse effects upon the SAC, and that full commitment to the visitor impact mitigation strategy, and its subsequent implementation is ensured. The development and implementation of a developer contributions document to fund the necessary measures should also be committed to within policy. Agreement will also be needed from the Forestry Commission, Natural England and the AONB Committee, and long term funding secured. This could be achieved in various ways, for example through drawing up an agreed list of works that is costed and timetabled, with the total cost met through a programme of developer contributions collected by local authorities.

1.1.10 In a strategic document it is not possible to address every foreseeable circumstance. There may be some exceptional circumstances where a more or less prescriptive approach needs to be taken, or greater local specificity is needed, in the light of local circumstances or evidence base, or the detail of the proposed new residential development. Such circumstances should be carefully justified.

1.2 Zone of Influence and types of development

1.2.1 The avoidance measures recommended should be applied within a 'Zone of Influence' defined as the area within 12 miles of the perimeter of the SAC (measured as the crow flies from the primary point of access to the curtilage of the dwelling). In other areas of the UK, such as the Thames Basin Heaths and Dorset Heaths, where similar strategies have been put in place, a 5km zone has been used. The selection of 5km has been based on visitor data (Clarke et al., 2006, Liley et al., 2006b), which shows that around 75% of visits originate from within this distance. The 5km zone therefore encompasses the origin of the majority of visitors. Visitor data from Cannock Chase reveals that the Chase draws people from a much larger distance, as discussed in the Footprint Ecology evidence base report (and see Staffordshire University, 2000), hence the selection of 12 miles. The zone is shown in Map 1, which highlights the different local authority boundaries that fall within the 12 mile radius of the SAC.

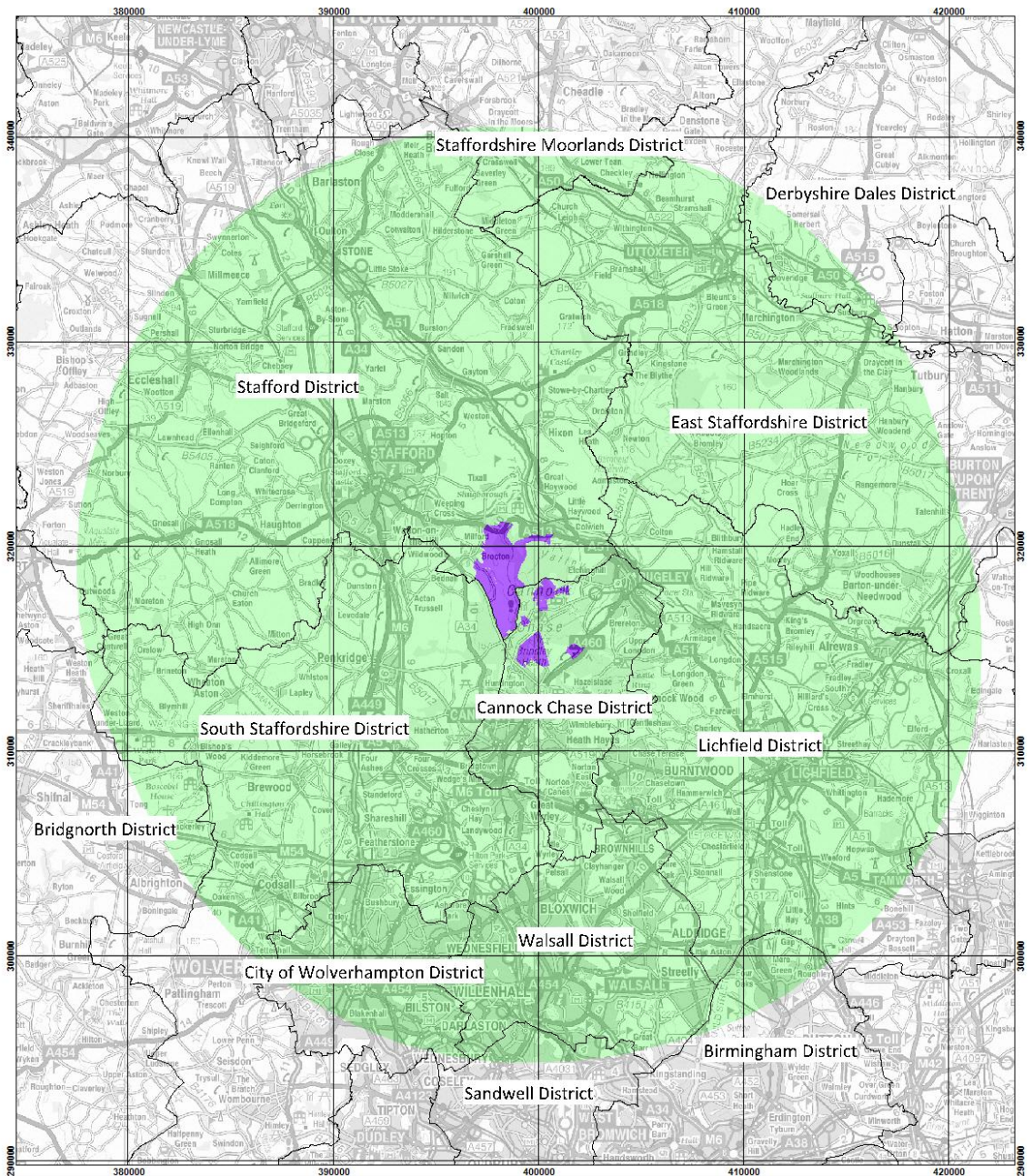
1.2.2 Further monitoring of visitor use at Cannock Chase is necessary to ensure that this zone is correct and the distance should be reviewed when more robust visitor data are available. With such data it may be possible to define the zone of influence with more than one distance band. A more sophisticated approach involving different distance bands would allow different costs to be attributed to different zones, with the understanding that visitors travelling from further afield tend to visit less frequently and for different reasons than local people living directly adjacent to the Chase; and therefore different mitigation and avoidance measures are applicable.

1.2.3 The avoidance measures recommended in this strategy should be applied in relation to the following types of development:






- Proposals for 1 or more net new dwelling units falling within Use Class C3 (residential development).
- Proposals for 1 or more net new units of staff residential accommodation falling within Use Class C1 and C2

1.2.4 Large residential development proposals are the exception, as due to their scale and potential impact and ability to offer their own alternative avoidance measures, these should be considered by local authorities on a case-by-case basis, and therefore subject to appropriate assessment. The numerical definition of 'large development proposals', and the ability of large schemes to provide their own avoidance measures, will vary depending on the particular locality of the proposals. We suggest that developments above fifty dwellings should be considered large and such developments should contribute to the generic visitor impact mitigation set out within this document and should also be expected to provide targeted alternative green space within or close to the development site. The design and suitability of such green space would need to be considered at plan level appropriate assessment.

- 1.2.5 Applications for large-scale development proposals (for example sites with more than 100 dwellings) beyond the zone of influence should be assessed on an individual basis, as it is not the case that development proposals beyond 12 miles can always be assumed to have no likely significant effect on Cannock Chase SAC. Such large scale allocations will be considered in the HRA of the relevant development plan document, but where this has not been the case, a full project level appropriate assessment may be required to ascertain whether such a proposal could have an adverse effect on the SAC. The need for project level HRA outside this boundary cannot easily be defined, but advice should be sought from Natural England, and key factors are likely to be the direct road connectivity between the development and the SAC, and the availability of areas of natural greenspace that meet recreational needs.
- 1.2.6 The recommendations within this strategy apply only to net new residential development. It is considered that one-for-one replacement dwellings will not generally lead to increased recreational pressure and therefore will have no likely significant effect on the SAC. All other applications for planning permission for developments in the vicinity of the SAC should be screened to assess whether they will have a likely significant effect (individually or in combination with other plans or projects) and where necessary a full Habitats Regulations Assessment should be undertaken. The recommendations in this strategy should be applied to applications for full or outline planning permission. Reserved matters, discharge of conditions or amendments to existing planning consents should be considered on an individual basis by local authorities.



Map 1: Twelve mile zone of influence around Cannock Chase SAC
Cannock Chase Visitor Impact Mitigation Strategy

 footprint ECOLOGY 8 October 2009 Scale 1:254,500	 Cannock Chase SAC	Map reproduced from the Ordnance Survey map by Footprint Ecology with the permission of the Controller of Her Majesty's Stationary Office. © Crown Copyright, All Rights Reserved. Licence numbers 100019422 and 10001968. Contractor licence for the use of OS data provided through Staffordshire County Council and South Staffordshire Council.	
	 12 mile zone of influence		
 District boundaries			

Context and Existing Management

- 1.2.7 The SAC forms the core part of Cannock Chase AONB and is also, in part, designated as a Country Park. Virtually all of the SAC is designated as open access land under the Countryside and Rights of Way (CROW) Act (2000). Recreational access is therefore widely promoted and the area represents an important sub-regional recreational resource, widely used and appreciated by many.
- 1.2.8 Access to Cannock Chase is therefore important and legitimate and important to the local community. Access to the countryside has health benefits (e.g. English Nature, 2002, Bird, 2004, Morris, 2003, Pretty et al., 2005), can provide inspiration (e.g. Hammond, 1998, Saunders, 2005, Snyder, 1990, Tansley, 1945) and is important in generating understanding and awareness of countryside issues and conservation (e.g. Miller and Hobbs, 2002, Robinson, 2006, Thompson, 2005). Access can also, in some instances, be beneficial in terms of the conservation management of sites. Regular visitors can often become attached to local sites and help management through volunteering, promoting responsible access through word of mouth or reporting incidents such as illegal activity or fires.
- 1.2.9 A multitude of landowners, designations, partnerships, interests and aspirations exist within this one site. Their commitment to the strategy and what it needs to achieve is therefore fundamental to its success. The visitor impact mitigation strategy will need to sit comfortably within and alongside a wider suite of plans and strategies for Cannock Chase, including the AONB Management Plan, Forest Design Plan and the Country Park Management Plan, whose purpose is to retain and enhance the landscape, non-designated biodiversity, historic and tranquillity values of the area and people's ability to enjoy those assets in a sustainable way. It is important to note that the visitor impact mitigation strategy cannot encompass these wider duties, as it must serve as a clear and accountable measure to ensure adherence to the Habitats Regulations. It is only with a partnership working approach that the full extent of strategies and duties can be taken forward.
- 1.2.10 Increased housing is likely to lead to increased recreational use which can also have a negative impact on the interest features of the SAC (see the Evidence Base Report). The impacts are, at least in part, related to the volume of people – the sheer footfall from high numbers of visitors. There is therefore a potential for conflict. The Visitor Impact Mitigation Strategy must ensure access without the damage to the SAC.
- 1.2.11 The existing management of the SAC and surrounding countryside recognises the issues and for a long period has been working to resolve any conflict. Examples include:
- Extensive liaison work with key user groups (such as cyclists, dog walkers, horse-riders) facilitated by the AONB team,
 - The establishment of cycling routes through the Forest estate by FC;
 - The establishment of the Visitors Management Group on which sit staff from the 5 Visitors Centres around the Chase;
 - A programme of family walks led by SCC, FC and District Council Rangers on their sites;
 - Extensive heathland conservation/restoration and re-creation works undertaken between 1999-2004 as a result of the successful 'Saving Cannock Chase' HLF bid;

- FC's Forest Design Plan that identifies significant heathland corridors to link isolated fragments of the SAC over a period of time;
- Management of 'honeypot' areas to focus visitors and activities in managed areas, e.g. Marquis Drive, Birches Valley Forest Centre.

1.2.12 This Mitigation Strategy must sit within this framework of on-going work and many of the elements within the strategy will represent extensions of on-going work by existing partners. There is however a statutory need to ensure that measures are clearly set out and successfully implemented. Local Planning Authorities are now working under a legal obligation to make sure that the Core Strategy housing allocations do not result in a significant adverse effect on the SAC; and Local Planning Authorities have a clear rationale and mandate to secure significant financial contributions from developers to help fund these recommendations. Such funding must be clearly attributed to measures that relate to the SAC.

1.2.13 This strategy therefore sets out measures that directly relate to the SAC and to resolving the impacts of access. As such it has a very specific purpose and comes about because there are negative effects of access which must be addressed in order for new housing in the surrounding area to come forward. The measures we set out could be implemented in a variety of ways and by different bodies. Not all measures will be straightforward to achieve and potentially it will not be necessary to implement all measures. New housing will also take place over an extended time period meaning the mitigation measures can also be phased over time. This could provide the opportunity to establish some of the mitigation measures quickly and monitor their effectiveness, honing them and bringing in additional measures over time to coincide with the new housing. One way of securing the mitigation would be for an executive panel to invite applications from relevant bodies to carry out the measures described in this strategy. The executive panel would be in a position to award funds (collected directly through developer contributions). Such a process would mean that existing bodies that are involved in the management of the SAC, the management of surrounding sites or green infrastructure could extend their work. Such a process ensures continuity and provides the potential for existing work and programmes to be enhanced.

2. Habitat Management

2.1 Introduction

- 2.1.1 The principal interest features of the SAC and the reason for its designation are the heathland plant communities with their associated characteristic plants and animals. At present only about three quarters of the SAC supports heathland vegetation and some of this is showing signs of a shift away from dwarf-shrub dominated cover to grass, bracken or scrub dominated communities. The current overall condition assessment of the SSSI/SAC is “unfavourable recovering”, largely because of recent initiatives to focus on bracken and scrub control. This positive habitat management will need to be maintained if the condition is to remain on a positive trajectory.
- 2.1.2 There is a tendency, observed generally in heathland sites and exacerbated by nutrient input from aerial deposition and some recreational activities, for heathers to deteriorate and be overtaken by grasses. There is at present no overarching management tackling the heathers and other dwarf shrubs, but a number of management measures have been initiated, including cutting and burning, which has been undertaken on a reasonable scale since 1991, occurring more sporadically prior to this date. Large scale burning in the late 1970's has resulted in large areas of heather of the same age, which is now a problem as those areas become over mature. A study into the feasibility of re-establishing extensive grazing at Cannock Chase (Penny Anderson Associates Ltd., 2005) concluded that this would be desirable in order to maintain the heathland in a vigorous condition and counter the trend towards conversion of dwarf heather-dominated scrub to grass, or succession to birch or pine scrub. Grazing will also create a mosaic of different vegetation heights and structures, which will be beneficial to heathland flora and fauna by providing a mosaic of suitable habitats. Even if bracken and scrub can otherwise be controlled, an extensive grazing regime will provide optimum conditions for a continuing progression towards favourable condition and the maintenance of the SAC Annex I habitats. It is possible however that in some places where significant tussock grassland has formed, further measures may need to be investigated.
- 2.1.3 Cannock Chase SAC is already under heavy pressure from the impacts of recreational activities – even more so than other heathland areas with well-documented impacts, such as the Thames Basin Heaths and the Dorset Heaths (Table 1). When compared to these other areas, the small size of Cannock Chase, high level of existing housing nearby and high current visitor pressure are clear. The proposed increase in residential development within visitor catchment of Cannock Chase can be expected to add to these impacts, so it is both sensible and desirable to make the designated habitats at Cannock as robust and resilient as possible, in order that they may support the full range of dependent characteristic heathland species and be best placed to cope with ongoing recreational and other impacts. This will be achieved by ensuring that habitat management is appropriate, comprehensive and of the best quality.

Table 1: Comparison of visitor numbers and access levels with the Dorset Heaths and the Thames Basin Heaths. Table taken from Footprint Ecology evidence base report, which details the sources for the different figures.

	Dorset Heaths	Thames Basin Heaths	Cannock Chase
Size of designated area (ha) ¹	8,169	8,294	1,240
Relevant European designations	SPA, SAC, Ramsar,	SPA, SAC,	SAC
No. car-park spaces ²	5,215	1,998	1,086
No. Houses within 500m ³	42,522	38,579	1,355
No. Houses within 5km ³	238,957	302,792	54,883
Estimated current total annual visitor numbers ⁴	5 million	7.5 million	1.27 million
Estimated current visitor density (per ha pa) ⁵	680	842	1024
Estimated change in visitor numbers as a result of new development in adjacent LDFs ⁶	13%	?	9%+

2.2 Joint Working

- 2.2.1 A co-operative and strategic approach to addressing the potential for increased impacts resulting from development has already been taken by the local authorities in whose areas Cannock Chase falls. In order to secure effective habitat management across the whole site, this joint working needs to continue and if and where necessary expand to include other agencies and services that influence the SAC, since alone, none would be able to effect the overall management direction required. The issue of deer control, for example is already the purpose of a joint liaison committee between the County Council and Forestry commission. Here the work could be taken forward with a greater emphasis on SAC habitat management.
- 2.2.2 There needs to be a strategic approach to heathland restoration, in particular from conifer plantation (following on from that set out in the Forest Design Plan), and to the promotion of activities that may impact on the designated site. In both cases the close involvement of Forestry Commission is key. The co-operation and engagement of emergency services, especially the Fire Service, is critical since dealing with fire incidents and also promotion of sensible behaviour and the threats of fire will be invaluable.
- 2.2.3 A model for such joint working across authority and agency boundaries can be seen in Dorset, where for some years the approach to strategic planning and habitat management affecting the SAC/SPA heaths has been effective. A difference at Cannock is that the entire SAC is within the AONB, whereas in Dorset only some of the heathland (south of Poole Harbour) falls within the Dorset AONB.

2.3 Heathland re-creation

- 2.3.1 Much of what was heathland at Cannock, even until recently, has been converted to agricultural use and especially conifer plantation. The area of original heath is thus much reduced, though restoration of heathland vegetation would be relatively straightforward on the conifer sites at Cannock, since in general the soils have not been irreversibly transformed. Indeed, some of the key heathland species are found within the afforested areas, at least during the early stages of tree crop rotation. Woodlarks will feed and breed in clearfell for a few years until the tree cover starts to develop; and nightjars also use the young plantation cover or clearings within tree stands. Because the felled brush offers a barrier to people and most dogs for some time after felling, areas of conifer clearfell can provide a favourable breeding habitat for these species. However, for many specialist heathland invertebrates and plant species and for a species such as Dartford warbler, a recent colonist, such clear fell areas offer more limited opportunities. A balance is needed, with some extensions to the open heath and areas of forestry providing clearfell opportunities as the felling rotation moves from place to place. Opportunities should also be taken to create areas of bare ground in the rotation cycle, for the benefit of a number of heathland invertebrate species. Their temporary nature and rotational replacement would need to ensure relatively short distances between patches lost and new ones created.
- 2.3.2 The internationally important heathland could be extended and some of its original extent restored by strategic removal of planted conifers, and kept as heath by not re-planting with trees but rather controlling scrub or bracken invasion. Such extension, whilst it may take some years to regain the quality of the unplanted heath, can be expected to succeed on these relatively poor, acidic soils. Restored areas should be located where they can add resilience and a buffering character to the SAC itself, or where they would also increase connectivity between heathland blocks, increasing both habitat and resilience. Some at least of the key species will quite readily re-colonise the restoring heath, again imparting an extra degree of robustness and insurance against accidental loss or damage.
- 2.3.3 Before any permanent tree removal is carried out, an assessment of the current species interest should be carried out and in particular careful consideration given to future recreational use patterns. It would not be desirable for a currently little-used area, supporting for instance breeding nightjar, to be restored to heath only to become impacted by heavy recreational activity. With a strategic approach, involving all interested agencies, this should be easily avoided and valuable heathland restored.
- 2.3.4 Conversely, as increased nitrogen inputs are associated with roads and heathland habitats are known to be particularly susceptible to enhanced levels of nitrogen, heathland creation within 200m of roads (unless to provide links across roads between existing heathland blocks) should not be carried out. The enhanced levels of nitrogen could however benefit growing trees.
- 2.3.5 The continuous control of potentially invasive species such as bracken and scrub of tree seedlings like birch or pine must also be maintained. In the past any such growth would have been utilised as part of the rural economy but today such vegetation has little economic value. Left unchecked the heather communities would quickly be lost however.

2.4 Grazing

- 2.4.1 Perhaps the most significant step to ensuring the long-term health and survival of open, dwarf shrub heath would be re-instatement of livestock grazing. This would keep the heather and other dwarf shrubs like bilberry and gorse vigorous; and most of all the action of grazing animals would selectively target the grasses which threaten to overtake unmanaged heather. Unlike burning or cutting, which tend to be drastic and locally total in their impact, grazing is gradual in its effect and wide-ranging. Nothing else would so economically and sustainably focus on grasses and young scrub growth. Moreover, annual removal of the dead growth of grasses, especially purple moor-grass, would greatly reduce fire risk in the early spring. The addition of animals to the heath can also assist in the creation of some sparsely vegetated or bare ground, which is beneficial to a number of heathland invertebrates.
- 2.4.2 Livestock can also be an attraction, as is the case in many areas such as the New Forest and Dartmoor, adding to the rural scene and reinforcing the sense of an active cultural landscape. There is potential for widespread publicity with the introduction of grazing, and people may visit especially to see the animals. Local media coverage may be favourable. Such coverage and the opportunities with the public interest should be used to promote the wider issues and to engender public support for the management measures required within this strategy.
- 2.4.3 The feasibility study (Penny Anderson Associates Ltd., 2005) and subsequent study on shepherded grazing (Swanson et al., 2008) have set the context necessary to reinstate grazing. Including the minor roads within a large continuous grazing unit could additionally help to control traffic, since speed limits would be needed and this may discourage use of the roads as fast “rat-runs”. Any grazing of the SAC heathland would need to be accompanied by the provision of alternative sites for dog walking/exercise since some dog walkers, and some other types of users, may chose to avoid areas where they know livestock will be present. Ample, attractive alternative sites would need to be provided from the outset, so that choice is available. The new fencing and other infrastructure needed to introduce grazing may provide an opportunity to review aspects of access to the SAC. Boundary fencing may potentially alter visitor access points, though adequate provision for all existing access should be normal standard; this requires careful consideration in the development of any grazing regime.

2.5 Fire

- 2.5.1 There is already a high awareness among countryside managers of the need to prevent and control wild fires. There has not been a severe extensive fire at Cannock for some 30 years, though small fires regularly occur and the abundance of older heather and dead winter grass and bracken make the risk ever prevalent. It would be prudent at the next point of review of existing provisions with the Fire Service, to revisit the provisions for preventing and fighting fires, including the strategic fire-break system, management of firebreaks (given that new access into otherwise quiet areas is not desirable) and emergency procedures for alerting of fire incidents in light of SAC interest feature protection. Fire breaks could, in some places be located on existing access tracks reducing the likelihood of creating further access routes and perhaps discouraging some existing routes (by leaving a rough, uneven surface), where adjoining heathland blocks would benefit from a reduced track network to reduce disturbance to breeding birds for example. Access points and emergency water supplies and the nature of available equipment must also be part of this strategic review.

- 2.5.2 All of these characteristics will be of importance in the use of fire as a management tool. Whilst wild fire (caused by deliberate arson or carelessness) is very often extremely damaging and often at the worst time of year, controlled fire can be a useful means of habitat management. The insurance of a good firebreak system, adequate water supplies and the advice and awareness of the Fire Service are a key part of controlled burning too.

2.6 Conclusions

2.6.1 We summarise habitat management measures in Table 2.

Table 2: Habitat management measures within the strategy.

	Measures	Aim	Notes
1	Assessment of potential to increase heathland extent	Targeted piece of work to identify opportunities to extend area of heathland in context of biodiversity and access.	Will be informed by an understanding of forestry requirements and landowner interest. There are some existing measures in FC Forest Design Plan.
2	Heathland re-creation in line with recommendations in 1	Increased area of heathland providing greater space for heathland species and more robust SAC	Will depend on the recommendations in 1
3	Re-instatement of grazing	Enhanced management resulting in more robust site and better condition; potentially positive knock-on effects relating to traffic and access	Extensive grazing by cattle the ideal, other types of animal may also be appropriate.
4	Review of procedures and systems for fire prevention and fighting	Targeted piece of work to assess current approaches to fires and identify potential improvements	Current fire plan reviewed as a result
5	Continuation of existing programme of scrub management and bracken control	More robust site in better condition	On-going management is essential even if grazing is re-introduced
6	New fire fighting equipment, enhanced fire breaks system as recommended in 4.	Enhanced fire prevention and fire fighting provision	Will depend on recommendations in 4.

3. Access Management & Access Infrastructure

3.1 Introduction

- 3.1.1 A relatively small proportion of visitors to Cannock Chase are likely to understand the different designations and recognise whether they are within the SAC, the Country Park or the AONB. In this section we focus on access management on Cannock Chase, recognising that much of the access provision relating to the SAC also serves other parts of the Cannock Chase area.
- 3.1.2 In total, the area of land with public access within Cannock Chase AONB is almost 3900ha (58% of the AONB area). Cannock Chase Country Park is some 1500ha and is owned by Staffordshire County Council. The public also has access to Shoal Hill Common and the freehold areas of the Forestry Commission woodland. Within the AONB itself there is the Cannock Chase Visitor Centre (Staffordshire County Council) and Birches Valley Forest Centre (Forestry Commission). Shugborough, in the north of Cannock Chase AONB, is an attraction in its own right.
- 3.1.3 The international importance of the heathland and need to ensure recreational activities and level of use are managed appropriately, are recognised in the AONB Management Plan. The plan, with respect to managing visitors, has a list of actions that includes the provision of information and interpretation, developing the role of visitor centres, the production of separate strategies on cycling, interpretation, transport and car-parking and encouraging visitors to enjoy the AONB without causing damage.
- 3.1.4 As a response to concerns about visitor numbers and their impacts to Cannock Chase AONB, a programme of access management measures and monitoring was established in the early 1980s (see Daniels, 1986). The aims of the five year Countryside Commission sponsored project were to achieve a redistribution of visitors by increasing awareness of potential locations to visit, creating new attractions, facilities and opportunities for access, and widespread publicity. The project was largely successful (full details are given in Daniels, 1986) and therefore sets a precedent to this strategy and highlights the potential that can be achieved through a carefully planned, integrated project.
- 3.1.5 Interestingly some individual measures were not successful, for example experimental closure of a car-park (the Sycamores) appeared to have little impact in reducing visitor numbers at the desired locations, as visitors still tended to visit favoured locations, but simply parked at different car-parks and walked further to get to their chosen destination (Rodgers et al., 1981). A summer Sunday bus service was also unsuccessful, and failed to be viable after five years of trials.
- 3.1.6 Cannock Chase offers a particularly attractive destination for visitors – the elevation, open vistas and extensive countryside create a particular experience that is not easily replicated in alternative locations. While alternative sites may be successful in drawing a proportion of visitors seeking outdoor informal recreation away from Cannock Chase, such as regular dog walkers if the alternative is more convenient, there will be a further proportion that will still seek the unique qualities of Cannock Chase. With an understanding that Cannock Chase AONB will always attract visitors, management of access within the AONB should seek to attract people towards more robust and less sensitive locations, and also reduce the fragility of SAC habitat, to enable features to be

better able to absorb a level of recreational pressure. The areas of heath are designated open country and therefore have a right of access. Measures to encourage people to particular parts of the AONB will therefore need to involve a suite of incentives to attract people to particular locations, possibly with access management measures brought in at the most sensitive parts of the SAC. It is necessary to bear in mind that increased recreation in open areas within the forest but outside the SAC may support bird species (nightjar and woodlark) that are vulnerable to disturbance. The ideal habitat type to encourage visitor use is therefore the coniferous woodland within the AONB. The locations of these areas will change over time as new areas are planted and others clear-felled.

3.2 Parking

3.2.1 A draft parking strategy for the Cannock Chase area is currently in preparation, being led by Staffordshire County Council and the Forestry Commission. Such a strategic approach, auditing and reviewing the current parking facilities is essential and is built on here.

3.2.2 The current distribution of car parks is such that there are numerous parking locations, many small, but with the focus very much around the SAC. In total we have estimated that there are c.1086 car-park spaces around the SAC and a total of 86 different car-parks and lay-bys. Most visitors arrive by car and the result is a relatively even distribution of people with all areas within the SAC relatively busy. There is a charge for parking at the car-parks at Cannock Forest Centre (FC), Cannock Chase Visitor Centre, Milford Common (SCC) and Shugborough. While the parking charges do provide revenue there is the potential that some visitors avoid the parking charges by using other car-parks, therefore increasing numbers of visitors to the SAC. There are some car parks where a lack of resources to enforce charging has resulted in some visitors not paying.

3.2.3 The following existing problems are recognised by the County Council (J. Quigley *pers. comm*):

- The popularity of the Marquis Drive site has grown and, despite enlarging the car park and improving roadside parking, demand outstrips provision.
- Similarly the Cannock Forest Centre site is also at capacity in terms of car parking provision, leading to antisocial parking in gateways and roadsides. The entrance to the main visitor parking is in close proximity to local residents and due to its design is often congested.
- Some car parks, especially those set back from the road or enclosed by vegetation, suffer from anti-social behaviour and thefts from parked cars.
- Informal car parks, especially at the roadside lay-bys, develop haphazardly.
- Entrances and exits to some car parks are potentially hazardous.
- Some car parks are little used and are largely redundant.
- Several car parks are located close to the most environmentally sensitive habitats and are remote from roads and visitor centres for management purposes.
- Any improvements to car parks can be seen, without careful design, as 'urbanisation' of a very natural area.
- Some car parks have long, rutted or potholed access tracks making them less attractive to those looking for parking places.

- 3.2.4 It is recommended that an overall car parking strategy is developed and this should address the closure of a proportion of the 86 car-parks, over time with a phased approach. Given that access increases in the region of above 9% are expected, then potentially at least 9% of car-park spaces should be removed from the around the SAC. This should be considered with the aim of reducing the range of car-park locations to a smaller number, essentially drawing parking more to the edges of the SAC and more focused into designated, easily controlled and policed car-parks. Lay-bys and informal parking around the SAC should be prevented through ditching / banking. It is possible that, due to their location in close proximity to sensitive areas, some larger car-parks may also need to be closed or relocated. Where car-parks are closed, the land should be carefully restored to heathland/ semi-natural vegetation.
- 3.2.5 Car-park closures are likely to be contentious and considerable public opposition is likely. The provision of alternative, extra facilities in other locations and careful consultation and community engagement will be necessary. The closures could be implemented as part of wider habitat and people management initiatives and the closures could also be phased to coincide with new development, therefore allowing the closures to take place over an extended time period (and potentially phased with development). Areas for potentially enhanced access around, but outside the SAC could potentially include Forestry Commission holdings within the AONB. Clearly therefore it is essential the Forestry Commission is brought into the key discussions on the way forward towards implementation of measures to mitigate the effects of recreational pressure on the SAC. There are existing areas of conifer plantation that currently have limited parking facilities and relatively low levels of recreational use.
- 3.2.6 In addition, in line with the draft parking strategy for the AONB, the following measures should be implemented as standard at all parking locations:
- Access and exits should be safe with suitable, well-maintained visibility splays.
 - They should be named and have appropriate and consistent signage.
 - Where possible, they should be close to roads and have vegetation managed to make them open to casual view.
 - Access points, track entrances and barriers should be reviewed with the aim of reducing redundant and under-used entrances and installing improved barriers. This measure will also improve ease of access for emergency vehicles.
 - Interpretation boards and information highlighting routes and promoting responsible access should be provided at all parking locations.
 - A reduction in car park use without closure could also be achieved by reducing the number of spaces or by installing and enforcing car park charges.
- 3.2.7 There is scope for additional, new parking to also be provided elsewhere in the AONB, away from the SAC. Any new parking should be accompanied with other access infrastructure (marked trails, interpretation, routes etc). These outlying car parks may over time become specialised and provide for a particular user group such as horse riders. Similarly outlying car parks may fall under the car park permit scheme meaning that only permit holders can use them.
- 3.2.8 A consistent approach to car-park charges should be considered. This needs careful review and implementation, but the charges should help to fund some of the measures within the strategy and be consistent with the facilities provided. A system where there was a charge for all parking (i.e. applying charges at all car-parks around the SAC) could

be one such approach. Passes could be purchased on an annual basis for those who visited regularly. Car-park charges would potentially encourage some of the visitor use away from the more congested parts of the SAC and should be set so that it is cheaper or free to park at alternative sites, including those within the AONB but outside the SAC. The introduction of more widespread parking charges, though likely to be opposed by many visitors, could also help to foster the idea that the area does need looking after and that management measures are necessary and expensive. This will need to be considered in line with retaining adequate provision of vehicular access to the AONB for those users where car access is their only means of visiting and enjoying Cannock Chase.

3.2.9 In parallel with car parking charges and changes in car parks, measures will need to be put in place to ensure parking is not possible along the side of roads or on grass verges.

3.3 Particular activities: dog walking

3.3.1 The lack of clear guidance and information for dog walkers in the Cannock Chase AONB and the need for a structured AONB-wide framework for managing access and behaviour has been highlighted by another author (see Jenkinson, 2009; a study commissioned in order to identify opportunities to improve current management practices within the AONB). Jenkinson identifies the following to be addressed across the AONB:

3.3.2 “Promoting a common culture within organisations, between partners and to the general public, that sees walkers with dogs as valued and legitimate visitors, who can have negative impacts if they behave selfishly or irresponsibly.

- Defining explicitly how walkers with dogs are expected to behave, in a way that can accommodate differences between sites.
- Ensuring that dog walkers’ needs are recognised and met as far as possible, within a balanced approach that equally respects all other interests.
- Adopting a framework to help decide when and where additional restrictions on dogs are necessary.
- Establishing what behaviours, if any, are the priorities to change over a given time, and how improvements can be assessed.
- When and how formal enforcement action will be taken by access managers and dog wardens, etc.”

3.3.3 These measures outlined by Jenkinson are all relevant to the SAC designation and potential mitigation. With respect to the SAC designation, it is dog fouling (both faeces and urine) that is the principal issue, resulting in nutrient enrichment and vegetation change (see Taylor et al., 2005 for review). While some types of litter, such as food waste, discarded around car-parks can also cause enrichment, dog fouling is particularly high in nutrients and can occur over a wide area and on a daily basis. Dogs off leads and the disturbance consequences for Annex I bird species are also a concern, particularly the training of gun dogs across clear fell areas (but this issue falls outside the SAC designation). The overall aim of mitigation measures should therefore be for there to be no net increase in dog walkers within the SAC and ideally an alteration in dog walking patterns so that less sensitive parts of the AONB are made more attractive. Clearly, it will be beneficial to more actively encourage owners to pick up after their dogs within the SAC and keep dogs under close control, on leads during the bird breeding season (March – end August).

- 3.3.4 In order to achieve these aims, a range of attractive and dedicated areas for dog walking should be provided outside the SAC boundary, extending and enhancing the existing facilities. Provisions to attract dog walkers include safe parking areas where dogs can be let out of the car safely, dog agility areas, areas of short open grass and varying terrain of interest to the dogs, and way-marked routes providing a range of circular routes up to c.3km and potentially longer. Ideally these new dog walking locations would be created in areas of permanent / long term forestry to ensure no increased disturbance in areas likely to support nightjars or woodlarks in the near future. These new walking sites should be promoted to dog walkers through leaflets, interpretation and face-to-face contact.
- 3.3.5 Within the SAC, the practices of dogs on leads and the necessity to pick-up after the dog should be promoted. Signage, leaflets and face-to-face contact will be necessary to ensure dog owners are aware of behaviours that are inappropriate. There is an existing code of conduct for the AONB but there is potential for this to be made more widely available. The recommended period for keeping dogs on leads in this code could be extended to ensure that the nightjar breeding season is incorporated (i.e. to end of August).
- 3.3.6 Formal enforcement may also be required, but clearly this should be seen as a last resort measure (the need for enforcement will be identified through monitoring, see section 6). Dog walkers should be made aware of alternative locations where the need to keep their dogs on leads and to pick up after their pet is not so important.

3.4 Particular activities: cycling

- 3.4.1 At present cycling is predominantly focused at Birches Valley. The “chase the dog” mountain bike route and the stile cop trails promoted at the visitor centre all lie outside the SAC. However some of the promoted leisure routes include the Sherbrook Valley. It is likely that families and groups will stop in this area and therefore such routes are increasing the volume of people and footfall within the valley, as well as the use of the tracks. A longer cycle route extending to 20k will be provided shortly by FC and alternative leisure routes should be provided to avoid the Sherbrook Valley which should no longer actively be promoted for cycling.
- 3.4.2 Clear interpretation and wardening within the SAC should be implemented to ensure cycling is confined to existing bridleways and designated cycle tracks outside the SAC. Leaflets and online material should promote particular areas and not direct people to use areas within the SAC. Numbers of cyclists should be monitored to ensure that adequate facilities (e.g. parking) are provided at the sites outside the SAC such as Birches Valley.

3.5 Particular activities: horse riding

- 3.5.1 The AONB partnership has been working with horse riders within Cannock Chase AONB for some time. As with cycling, suitable areas for riding should be promoted and areas where horse riders are welcomed should be provided, alongside measures to push use away from the SAC and in particular to ensure riding does not occur away from bridleways. Provision of areas to park horse-boxes, suitable terrain for riding and low risk of conflict with other users (cyclists, dog walkers etc) will be important.

3.6 Other activities

- 3.6.1 Other activities, such as orienteering, geo-caching, jogging and walking should be focused away from the open heath and Sherbrook Valley. Monitoring and careful liaison with local groups and users are essential, to minimise impacts to the SAC, and resources will need to ensure that there is an adequate level of staffing to work with these groups. It may be necessary to promote different areas within the AONB in different years, to avoid effects of disturbance to the Annex I birds associated with the clearfell and open habitats. Guidelines and suitable ways of providing such opportunities may therefore need to be developed with each group.
- 3.6.2 At Marquis Drive, signage and way-marked routes should be revised and potentially redeveloped to direct use. In the long term, the presence of livestock on Brindley Heath may result in some changes of use and this should be monitored and appropriate facilities provided.
- 3.6.3 We suggest that it is also necessary to undertake a review of the activities and events scheduled by the different organisations within the AONB. Some events that draw in large numbers of people should be reviewed as these could add to the overall pressure on the area and if they take place during spring/summer, have an adverse impact on the distribution of species such as nightjar.

3.7 Phytophthora outbreak

- 3.7.1 A current issue of concern at Cannock Chase is the plant disease *Phytophthora pseudosyringae* which occurs within the SAC on bilberry. The disease can be spread by recreational users and is therefore likely to be difficult to control / limit within the site. The disease causes stem die-back and death in bilberry plants. Various measures including surveys, testing, signage (asking people to keep to paths) are currently in place. It is difficult to envisage how long-term an issue the disease will be. As long as the disease remains an issue of concern it will be necessary to maintain the control measures and adequate resources (to maintain the signage, on-site wardening etc) will need to be targeted to ensuring recreational users are not spreading the disease. Continued monitoring is essential.

3.8 Public transport

- 3.8.1 Despite the previous failure of a bus route within the Chase, it is recommended that a new attempt be made to establish a bus route. This does link to the current AONB management plan (see action PA11). A careful assessment is required to determine the kind of routes, timetabling, kind of service and charges that would be most likely to ensure the service was a success. If this is combined with the measures suggested for reducing car parking, instituting car park charges and providing additional information, the service could potentially have an impact in reducing traffic. A dedicated service would have the following advantages:
- Responsible access can be promoted on timetables, posters within the bus, leaflets etc
 - Visitors can be given maps and recommended routes that direct them away from sensitive areas
 - The points at which visitors can be dropped off can be controlled to aid redistribution of people
 - Air pollution and traffic congestion is potentially reduced

3.8.2 The bus should focus on dropping people at locations away from the SAC, and could provide a service to a range of different locations outside the SAC but within the Cannock Chase area. The potential for the bus to carry some bicycles should be explored, for example certain scheduled buses could tow a trailer for carrying bicycles.

3.9 Staff

3.9.1 Adequate staff resources are essential to ensure that there is face-to-face contact with visitors and an active wardening presence on the site, with staff time dedicated to promoting responsible access and dealing with issues relating to access pressure. The provision of such dedicated time and staff roles ensures that other staff are not deflected from the essential habitat management of the SAC. If the measures suggested here are put into place, then additional staff will be required both within the SAC (i.e. on County Council owned land) and also outside the SAC, for example on FC land. The cross-organisation staff presence will be necessary to ensure the smooth implementation of car-park closures, grazing and some of the other measures.

3.9.2 A dedicated team of wardening / ranger staff is therefore required. They would have the following specific remit, expanding on the visitor work already taking place and working across the SAC and where relevant on adjacent land within the AONB:

- Production and distribution of leaflets, maps, signs etc promoting responsible access
- Face-to-face contact with visitors, providing guidance on responsible access, routes etc.
- Policing to prevent undesirable activities – cycling off dedicated routes, dogs off leads, owners not picking up after their dog etc.
- Watching for fires when conditions are such that there is a high risk of a major fire (dry weather, busy days etc)
- On-site presence should emergency services need support (e.g. directing fire services within the site).
- Guided walks and events promoting responsible access, awareness of the importance of the site
- Education events, especially with local schools
- Maintenance of access facilities, for example dealing with vandalism, damaged gates etc and clearing of litter / fly tipping.
- Monitoring / research (see section 5).

3.9.3 A suitable model for such a dedicated team can be found in the Dorset Urban Heaths Partnership (UHP). The Partnership is made up of 5 local authorities, Dorset Wildlife Trust. The Herpetological Conservation Trust, Natural England, Dorset Police and Dorset Fire and Rescue Service. The Partnership's function is to minimise urban pressures on the heaths. The objectives of the partnership are achieved through a core team of around twelve staff, employed on behalf of the partnership by Dorset County Council. The core team co-ordinates area-wide work such as an additional and flexible site wardening service to support partners at times of high risk to the heaths; employment of professional teachers to run a schools' education programme; and organising inter-

partner communication and monitoring protocols. It is not the intention of the partners to prevent people visiting the heaths but to minimise the possibility of these visitors causing damage to their natural and cultural heritage and to provide alternative opportunities for countryside recreation and encourage people to explore them. The work of the partnership is funded from a variety of sources including developer contributions. The UHP wardens (seasonal and full time) work closely with the partner organisations whose sites they are wardening. This includes regular liaison with partners' site managers as the wardens need to be well briefed by partners about likely contentious issues e.g. felling, grazing projects etc. Warden effort is focussed on the European heathland sites during the critical summer "arson and recreational use" months. In these periods the UHP wardens maintain a high visibility patrolling presence. During periods of poor weather and the winter months wardens will work on other strategic tasks. These include monitoring of the conditions of sites and quantifying urban effects e.g. dumping; liaising with partners about ongoing projects so that these can be monitored (before & after); carrying out visitor surveys of heaths and other countryside sites; and collecting and inputting data collected by the partnership such as data relating to visitor numbers.

- 3.9.4 The exact structure of the team at Cannock Chase, and how the team works with local site staff employed through the County Council and Forestry Commission will need to be addressed. Existing teams could be expanded or a mobile, dedicated team with cross working both on FC land and on the SAC could be established.

3.10 Conclusions

- 3.10.1 We summarise measures relating to access management and access infrastructure in Table 3.

Table 3: Summary of measures relating to access management and access infrastructure.

	Measures	Aim	Notes
7	Preparation and implementation of a car-parking strategy across the SAC and surrounding areas	Reduction and redistribution of access points and parking spaces around SAC and closure of at least 9% of car park spaces around/within SAC. Car-parks no longer small and diffuse but fewer in number and larger. Focus on closing informal lay-bys, pull-ins etc.	Could be phased over time – e.g. over Core Strategy Plan Periods. Potentially a need to review/audit existing car-parks further?
8	Enhanced parking provision and access in areas outside the SAC	Shift in parking provision away from the SAC	Should happen in conjunction with 7 to provide compensation for car-park closures
9	Enhancements to existing car-parks as necessary	To make car-parks and parking easier to manage and to enhance the welcome for visitors	
10	Consistent car-parking charges	All SAC car-parks to charge for parking	All car-parking related measures could be taken forward as an integrated car parking strategy for the SAC and incorporated into the suite of plans and strategies for Cannock Chase.
11	Provision of dog walking areas outside the SAC boundary	Dog walkers encouraged to use areas outside the SAC.	Could include agility areas and other dedicated facilities for dog walkers
12	Dog walkers encouraged to keep dogs on leads and pick-up after their dog	Reduction in dogs off leads and extent of dog fouling within SAC	
13	Enforcement of requirements to keep dogs on leads and to pick-up	Reduction in dogs off leads and extent of dog fouling within SAC	Dogs on leads most important for period March - August
14	Cycling encouraged on bridleways and designated cycle routes	Reduction in cycling within SAC and cycling restricted to designated routes.	
15	Encourage horse riders to use designated routes and provision of dedicated facilities for horse	Horse riders welcomed and encouraged outside SAC	Facilities to include safe parking for horse boxes.

	Measures	Aim	Notes
	riders in areas well outside SAC.		
16	Redesign and enhancement at Marquis Drive to focus visitor routes and visitor numbers away from Brindley Heath.	Visitor numbers reduced on Brindley Heath.	A starting point would be to understand the role of Marquis Drive in influencing and directing use of the area.
17	Review of events and activities scheduled and promoted within AONB.	Reduction in large events drawing large crowds to general area and clear guidelines in relation to such events.	
18	New bus route around Chase.	Reduction in car use and greater control over where visitors are dropped off, with few drop-off points within the SAC.	Need to investigate options for carrying bicycles

4. Publicity, Education and Awareness Raising

4.1.1 Additional publicity material, signage, guided walks, events, school groups and web based material are required, to support the other measures within the strategy and to raise awareness relating the nature conservation importance of the SAC. The material will need to achieve the following:

- Promotion of access to less sensitive parts of the AONB and to sites outside the AONB
- Promotion of responsible access, such as dogs on leads, picking-up after dogs, cycling on designated routes / bridleways only etc.
- Support for the management of the site such as grazing, fencing and car-park changes through enhanced understanding of the ecology and nature conservation importance of the site
- Greater liaison and enforcement activity by police (paid for as part of the overall mitigation measures)

4.1.2 There will be some cross-over with existing material and events produced by different organisations and there are obvious links to the AONB Interpretative Strategy. It will be important for the different organisations to work together and review existing practices. It will be necessary to ensure consistency in signage, messages and presentation, an issue already recognised in the current AONB management plan.

4.1.3 In particular the following should be developed:

- Schools pack and programme of schools visits
- Web presence providing information on different activities, where to go, details of contact details, listings of events etc.
- Tailored leaflets with maps for the following user group/activities: dog walkers, cyclists, orienteering, walkers. Leaflets should encourage responsible access and highlight areas where each activity can be enjoyed without damage to the SAC and where dedicated facilities are provided. It may be necessary to add additional leaflets in response to changes in the types of activity people wish to undertake (e.g. activities such as geo-caching may become more prominent in the future).
- Material promoting the visitor centres and downplaying other access points within the AONB.
- Material promoting bus routes to the Chase and how to use the bus to undertake different activities.
- Leaflets providing information and context on issues likely to be contentious – grazing and redistribution of parking in particular.
- Interpretation highlighting responsible use and promoting understanding of the nature conservation importance of the site.
- Programme of guided walks and events promoting understanding of the nature conservation importance.
- Enhanced community links with local residents / parish councils / community groups / volunteers etc through talks, guided walks etc.
- Provision of leaflets/maps etc to promote alternative sites to visit / undertake activities

- Encouragement for the public to report undesirable activities such as a phone number at centres, on some displays and leaflets. Some guidance on what to do, or not do if undesirable activities are witnessed, and what details to record.
- 4.1.4 Face-to-face contact with visitors will play an important role in publicity, education and awareness raising. Dedicated staff (see section 3.9) will be necessary, providing a welcome and face-to-face contact with visitors and a deterrent to those potentially undertaking activities which would cause harm to the SAC. These site staff should have a close working relationship with the police to ensure effective enforcement, where necessary.

4.2 Conclusions

- 4.2.1 We summarise measures relating to publicity, education and awareness in Table 4.

Table 4: Summary of measures relating to publicity, education and awareness raising.

	Measures	Aim	Notes
19	Dedicated team of staff with a remit to cover access issues across the SAC and wider area	Increased staff resource to deal with access issues and provide face-to-face contact.	At the more detailed costing stage there may be the opportunity to consider work of existing staff and best means of establishing increased staffing levels
20	Schools pack and programme of schools visits.	Promote understanding of the nature conservation importance and sensitive nature of the SAC.	Targeted to local schools
21	Enhanced web presence providing information on different activities.	Easy to access information for relevant user groups, providing clear and consistent messages.	Information such as where to go, details of contact details, listings of events etc
22	Tailored leaflets with maps for the following user group/activities: dog walkers, cyclists, orienteering, walkers. Other groups to be included as necessary.	Groups made to feel welcome and provided with clear messages about responsible behaviour, where they can go, potential enforcement etc.	Leaflets should encourage responsible access and highlight areas where each activity can be enjoyed without damage to the SAC and where dedicated facilities are provided.
23	Material promoting bus routes to the Chase and how to use the bus to undertake different activities.	Promotion of bus route to help take-up.	
24	Leaflets, web presence etc. providing information on issues likely to be contentious – grazing and redistribution of parking in particular	Support for potentially contentious management	Potential links to AONB interpretation strategy need to be investigated
25	Interpretation highlighting responsible use and nature conservation	Promoting the nature conservation importance and sensitive nature of the site to users.	Potential links to AONB interpretation strategy need to be investigated
26	Programme of guided walks and events promoting nature conservation	Promoting the nature conservation importance and sensitive nature of the site to users.	Could extend existing programme
27	Enhanced community links with local residents / parish councils / community groups / volunteers etc through talks, guided walks etc.	Promoting the nature conservation importance and sensitive nature of the site to local residents.	Community links are already fostered, this needs to continue and potentially expand
28	Provision of leaflets/maps etc to promote alternative sites to visit / undertake activities.	Better understanding among visitors as to where to go and where different facilities can be found.	
29	System for the public to report	Encouraging visitors to act responsibly and	Existing AONB Code of Conduct does

	Measures	Aim	Notes
	undesirable activities such as a phone number at centres, on some displays and leaflets.	reduction in undesirable activities.	provide some numbers.

5. Alternative Sites

5.1 Alternative sites concept

- 5.1.1 As suggested in Section 3, it is recognised that the particular characteristics of the AONB mean that for many visitors there will be no realistic alternative to Cannock Chase, but for some activities this may not be the case. For these at least there is a role for alternative sites, in conjunction with other measures, to reduce pressures on Cannock Chase.
- 5.1.2 The key area in which impacts must be reduced or at least not increased as a result of visitor pressure arising from the Councils' Core Strategies is the SAC. Some of the other parts of the AONB and wider Chase where there is scope to divert some pressures away from the SAC are outlined in Section 3. These may present the most immediate and obvious means of diverting pressures from the SAC but beyond that, a strategic review of other green space opportunities across the four local authority areas should be undertaken. The objective would be to identify a suite of alternative locations that can offer suitable characteristics to accommodate at least some of the visits and pursuits currently concentrated on the Chase. It is important to note that this would need to be a strategic and cross boundary approach in order to work effectively. This could effectively result in the recreation needs of a development in one district being met in another neighbouring district.
- 5.1.3 The concept of alternative sites is logical but, as it is a new initiative, the effectiveness of suitable alternative natural green space (SANGs) is as yet largely untested. Both in the Thames Basin area (Surrey, Berks, N Hants) and in SE Dorset, where in both cases the close proximity of SAC/SPA heathland to high numbers of existing and proposed housing is a feature, there will be a heavy reliance on SANGs being provided and being effective. The concept has been embraced in those areas by the relevant local authorities, Government Offices and Natural England.
- 5.1.4 Guidelines for SANGs in Thames Basin Heaths area have been produced (e.g. Liley et al., 2009). These have been drawn up from information gleaned from a number of visitor surveys in both areas, to determine the reasons for visiting outdoor sites, and the characteristics of the existing used locations. Whilst these guidelines specifically address the local situations on these southern heaths, in particular the nature of the heathland sites currently under heavy pressure, many of the principles are generic and the requirements for SANGs provision should be widely applicable.
- 5.1.5 SANGs may be created from existing open space available to local authorities, but at present with no or limited public access; from sites with some access but where visit levels could be increased; and from newly established open space. In all cases the SANGs need to be a long-term provision if they are to genuinely offer mitigation for internationally designated sites and satisfy the requirements of the Habitats Regulations.
- 5.1.6 If SANGs are to draw visitors away from the SAC heathland they have to be of sufficient size, character and quality; indeed a number of essential and desirable qualities need to be accommodated if SANGs are to be effective. The area required for such alternative site provision that could be applied would be in the order of 16ha per 1000 new

population – a level generally to be applied for this purpose for mitigation for the heathland SAC/SPAs in SE Dorset.

5.2 Alternative sites requirement at Cannock Chase

5.2.1 Under the Core Strategy proposals for new housing in the four local authority areas bordering Cannock Chase, the approximate number of additional houses within a “zone of influence”, defined as 12 miles from the SAC, are set out in Table 5.

Table 5: Estimates of SANGs provision required, based on assumption of 2.36 people per dwelling and a provision of 16ha per 1000 people.

Local Authority	Approximate no of dwellings within 12 miles of SAC	Approximate number of people (assuming 2.36 per dwelling)	Approximate SANGS provision (based on 16ha per 1000 people)
Cannock Chase	5650	13,334	213ha
Lichfield	6270	14,797	237ha
Stafford Borough	8630	20,367	326ha
South Staffs	737	1,739	27ha
Total	21,287	50,237	804ha

5.2.2 A variety of sizes and types of site may be more effective, and almost certainly easier to resource, than provision of single SANGs in each authority area. Perhaps more useful to consider is the total area of SANGs required, not divided by local authority, since some authorities may find alternative sites more or less difficult to provide; and visiting patterns do not necessarily follow authority areas. The total SANGs requirement to offer realistic alternatives to Cannock Chase SAC across the four CS areas is thus in the region of 804ha.

5.3 Alternative site characteristics

5.3.1 The over-riding objective must be to reduce overall impact on the SACs so that no net increase in visitors follows the Core Strategy proposals. It would be unrealistic to attempt to provide SANGs that offered a convincing replacement for the relatively extensive, elevated and undulating heathland and wooded plateau of Cannock Chase, but there will be some more routine or very frequent activities for which the very special features, landscapes and habitats of these locations are not essential. Thus one or more convenient and suitable dog walking areas, with easy access and parking (free), and where additionally there was no enforcement/pressure on dog walkers to pick up mess and where dogs could be let off the lead, could be expected to draw some elements of the current and future pressures away from the SAC. Similarly it may be possible to find alternative sites that cater for other activities and pursuits that do not absolutely require the SAC/AONB characteristics. So, some shorter walks, jogging and some riding and cycling practices may be adequately provided for on less special but more convenient local sites. For instance, the provision of a tailor-made mountain bike “adrenalin” course for young riders, in an urban or semi-urban location may prove as popular because of convenience of access, as the more remote Chase.

- 5.3.2 In order to reinforce the convenience of the alternative sites, and encourage a shift in visitor use, it may be necessary to start to impose restrictions on some of the more damaging behaviour patterns on the SAC at the same time as the alternative sites are promoted. Such restrictions would be matched by lack of restrictions on the SANGs, for example dogs on lead and the requirement to pick up mess from the SAC, but not necessarily so on the SANGs.
- 5.3.3 Specific visitor surveys for Cannock Chase would be needed to determine precise visitor needs here, but much information already exists especially from the southern heaths and this could be applied generically. The attraction of those heaths tends to be the extensive space, ability to do a range of (often reasonably long) walks in semi-natural habitat and the relatively wild feel of the heaths (Atlantic Consultants, 2003, Atlantic Consultants, 2005, Clarke et al., 2008, Liley et al., 2006a, Liley et al., 2006c, Liley et al., 2008). Particular additional features at Cannock Chase would include the ancient oak trees and the streamside areas, popular for picnics/paddling/family outings. SANGs should therefore provide such a range of opportunities.
- 5.3.4 Accommodation of some longer walking routes – 3km or more – on at least some of the SANGs is likely to be necessary and this implies a certain minimum size of SANGs, though longer routes could be assembled through linked footpaths and bridleways on several nearby smaller sites. The audit of existing open space for each authority area would reveal the opportunities and also highlight gaps in the network where site acquisition or long-term access agreements may need to be put in place. It would also show capacity of sites to accept more visitors if enhancement works are carried out. A walks leaflet could be created and promoted to highlight the opportunities for long walks away from Cannock Chase.
- 5.3.5 Such methods of enhancement of existing but under-used open spaces for this purpose could include:
- Improved access
 - Changes to the distribution, size and location of existing car parks or additional car parks
 - Improvements to existing car parks
 - Extensions to path or bridleway networks
 - Improvements to paths and bridleways such as all weather surfaces, boardwalks etc.
 - New and better signage
 - Removal of intrusions such as derelict buildings, rubble, dumped material and litter
 - Safety measures (such as maximising visibility around car-parks).
- 5.3.6 Unless there are visitor figures for existing open space that might become SANGs, the commissioning of targeted surveys to determine visitor levels and patterns of use would be highly desirable, to avoid assuming a capacity for extra visitors that may not actually exist. Certainly Natural England would have to be satisfied in all cases that the alternative sites proposed, whether new or as a result of enhancement of existing sites, are realistic and genuinely adequate as mitigation for increased visitor pressures likely to fall on the SAC.
- 5.3.7 On the southern heaths, although it is heathland habitat that is the prevailing landscape type, visitor surveys have shown that heath vegetation is not a specific requirement in people's choice of site for recreation (Liley et al., 2006c). Rather it is the mix of

characteristics that influences access patterns. Thus, availability, size, naturalness, safety, lack of intrusive infrastructure, ease of parking and/or access, lack or restrictions, variety of landscape/views are all important considerations. Some of these are opposites, so a mixture of SANGs with the full variety represented would have the best chance of attracting new and existing visitors to choose the alternative rather than the SAC for at least some of their recreational needs.

5.4 Checklist of alternative sites features

5.4.1 In summary, the Local Authorities will need to propose a suite of SANGs which will, taken together, mitigate the potential effects on the SAC from the proposed new residential development in their areas. New SANGs will need to be in place prior to the new residential development that they are designed to serve, and improvements to existing sites also carried out prior to development. Although not all SANGs can provide all the required features, a suite of SANGs should seek to provide the following:

- Some walks of over 5km
- Routes for cyclists and horse riders of over 5km
- Some routes suitable for wheelchair users
- Some sites where users such as dog walkers and horse riders are separated on marked routes
- Water features
- Viewpoints
- Walks within deciduous woodland
- Areas free from traffic noise

5.4.2 Each individual SANGs should aim to provide all of the following characteristics or features; without all of these, there is doubt that the site would function effectively in drawing pressure from the SAC. Additionally, each SANGs should aim to provide for at least one of the further “desirable” features.

Essential features

- SANGs should be able to offer the features described below without their functionality being compromised by unsuitable size, shape, location, topography or other inherent characteristics.
- For all sites there must be adequate parking for visitors, unless the site is intended for local pedestrian use only, i.e. within easy walking distance (400m) of the developments linked to it. The amount of car parking space should be determined by the anticipated numbers using the site and arriving by car.
- If the site is intended for local pedestrian use only then there must be excellent access for people arriving on foot, with a range of access points directly linking housing and the SANGs.
- All SANGs with car parks must have a circular walk that starts and finishes at the car park.
- It should be possible to complete a circular walk of 2.3-2.5km around the SANGS, and for larger SANGs a variety of circular walks.
- Car parks must be easily and safely accessible by car and should be clearly sign-posted.

- The accessibility of the site must include access points appropriate for the particular visitor use the SANGs is intended to cater for.
- Access points should have signage outlining the layout of the SANGS and the routes available to visitors
- The SANGs must have a safe route of access on foot from the nearest car park and/or footpath/s.
- SANGs must be designed so that they are perceived to be safe by users; they must not have trees and scrub covering parts of the walking routes.
- Paths must be easily used and well maintained but most should remain unsurfaced to avoid the site becoming too urban in feel. A majority of paths should be suitable for use in all weathers
- SANGs must be perceived as semi-natural spaces without intrusive artificial structures, except in the immediate vicinity of car parks. (Unobtrusive way-markers and some benches are acceptable).
- All SANGs larger than 12 ha must aim to provide a variety of habitats for users to experience (e.g. some areas of woodland, scrub, grassland, heathland, wetland, open water).
- Access within the SANGs must be largely unrestricted with plenty of space provided where it is possible for dogs to exercise freely and safely off lead.
- SANGs must be free from unpleasant visual, auditory or olfactory intrusions (e.g. derelict buildings, intrusive adjoining buildings, dumped materials, loud intermittent or continuous noise from traffic, industry, sports grounds, sewage treatment works, waste disposal facilities,).
- SANGs should be clearly sign-posted or advertised in some way.
- SANGs should have leaflets and/or websites advertising their location to potential users. It would be desirable for leaflets to be distributed to new homes in the area and be made available at entrance points and car parks.

Desirable features

- Dog walkers should be able to take dogs from the car park to the SANGs safely off the lead.
- Where possible it is desirable to choose sites with a gently undulating topography for SANGs
- SANGs should provide a naturalistic space with areas of open (non-wooded) countryside and areas of deciduous woodland and water features
- Where possible it is desirable to have a focal point such as a view point, monument etc within the SANGs
- Ideally, smaller SANGs should not have grazing stock; and on larger SANGs, some areas always free from grazing stock should be available

5.5 Conclusions

5.5.1 We summarise measures relating to alternative sites in Table 6.

Table 6: Summary of measures relating to publicity, education and awareness raising.

	Measures	Aim	Notes
30	Audit of potential sites that could function as SANGs and potential measures needed to bring them forward and make them work.	Detailed assessment of available sites and potentials to function as SANGS. Enables strategic view of SANGs network.	
31	Phased creation of c.800ha of alternative greenspace serving people living within 12miles of the SAC.	Network of alternative sites attracting some users away from the SAC.	Range of sites and locations necessary. Delivery of sites can be phased and linked to development, but must occur in advance of development taking place.

6. Monitoring & Further Research

6.1.1 In this section we set out monitoring that is necessary to provide feedback to ensure that the mitigation and avoidance measures are working and to allow the measures to be refined as necessary to enhance their success. The following elements to mitigation are required:

- Biological recording (of key species and habitats likely to be affected by recreational use)
- Extent of impacts (fire occurrence, erosion etc)
- Behaviour of people (behaviour within the SAC and how this changes, e.g. sticking to paths, dogs off leads etc)
- Visitor numbers (visitors' total 'footfall' within the SAC and on surrounding sites / land)
- Housing (locations and extent of new development)

6.1.2 These elements interlink and taken together will provide an overall picture of recreation, its impacts and how things change with mitigation. We discuss each element in more detail:

6.2 Biological Recording

6.2.1 Biological recording should address the following in a standardised way, allowing direct comparisons over time. Monitoring should cover examples of the range of SAC features and incorporate comparisons between high and low visitor pressure, and also differing management regimes.

- Annual monitoring of Annex I birds, recording the spatial distribution of territories within and surrounding (i.e. adjacent forestry) the SAC
- Monitoring of road-verges within the SAC recording species and vegetation communities
- Monitoring of vegetation alongside paths and extending away from paths at a sample of locations (to determine any changes in vegetation alongside paths). A rigorous and carefully designed methodology will need to be established.
- Monitoring of vegetation communities within the Sherbrook Valley, ensuring any changes in vegetation type and species dominance can be identified
- Continued monitoring of the *Phytophthora* outbreak, recording distribution of occurrence within the SAC and extent of die-back.

6.3 Extent of impacts

6.3.1 All fire incidents should be recorded within and adjacent to the SAC. The locations of all fires should be recorded – for large fires this would involve mapping the boundary, but small fires (less than 100m²) could be logged as point data and the area estimated. Basic information about each fire, such as date, time, possible cause etc. should be logged. The crucial element to the recording is that all fires are recorded in a standardised fashion, allowing changes in fire incidence to be picked up. Maps of locations should be used to guide wardens / site staff, and data on the potential cause should be used to help

target appropriate measures (for example highlighting the need for work with local schools).

6.3.2 Path width and soil compaction are relatively straightforward to record, though whether it will be possible to link a change in compaction to a reduction in visitor numbers may be difficult. Both erosion and compaction should be monitored using a series of fixed points, where photographs and simple measurements are recorded (soil compaction, path width, extent of rutting and poaching etc). Fixed points should be stratified to include those near access points and at regular intervals along main routes. Tracks that are already very highly compacted may not show any further change in the monitoring, and may not therefore be appropriate to include in the monitoring. A review of vehicle tracks to determine suitable monitoring points could also inform decisions on which tracks should be closed off to further vehicle use, unless for emergency or unavoidable requirements, and which should remain open as the key vehicle routes. Simple counts of dog faeces within standard areas could be included within the fixed point monitoring described above.

6.3.3 All other types of incidents should be recorded in a standard fashion so that, for example, all cases of fly-tipping or vandalism or use of off-road vehicles can be reviewed. It would be important also to record the resources expended in order to deal with these incidents, in order to establish the cost of reacting to such issues, which is being diverted from the positive work on environmental enhancement. Recording should take place across the SAC and adjacent areas so that any trends in such incidents can be reviewed and, should any become particular or increase, appropriate measures (such as policing) can be implemented.

6.4 Visitor Behaviour

6.4.1 Visitor behaviour encompasses the types of activity undertaken by visitors (such as dog walking, mountain biking or walking), how these activities are undertaken (such as whether dogs are kept on leads) and the choice of route within sites. Many projects (such as wardening) will directly impact visitor behaviour, and the creation of alternative sites may result in particular user groups using the new sites. This is therefore a crucial area for monitoring.

6.4.2 People's behaviour can only be accurately monitored by direct observation or interviews. A standard methodology should be developed that can be adopted as necessary on project sites. There is the potential for the methodology to be designed so as to provide counts of visitors (see below) within standard time periods and interviews (for example following Clarke et al., 2006). The access monitoring toolkit designed by Faber Mansell et al for Natural England would provide a basis for recording. Route data is particularly difficult to record accurately and will be difficult on a large site such as Cannock Chase. GPS units are now cheap and effective enough to be handed out as part of such surveys and, when collected back again at the end of a visit, can be used to show speed, route travelled and the time spent in different areas (see Tourism South East Research Services and Geoff Broom Associates, 2005 as an example of such technology). Units that are the size of key rings are appropriate and accurate enough to record the necessary data.

6.4.3 A further use of the count data is to calibrate the automated counters (see below).

6.5 Visitor Numbers on heathland sites and alternative sites

6.5.1 Recording the number of people visiting on a regular basis will be critical to assessing the effectiveness of mitigation measures. Various types of projects such as the creation of new sites, car-park modification, publicity initiatives etc may all result in a change in the number of people at different locations, and it is essential to understand these changes. The changes may not always be exactly as anticipated.

6.5.2 We suggest a number of different approaches:

- A household survey which (mailed to a random sample of houses) would ask about patterns of access to local sites (including Cannock Chase). This will provide geo-coded data (by postcode) for the range of sites visited by people living at particular locations and provide additional data such as frequency of visit, mode of transport used, reasons for visiting etc. Analysis of these data will give a clear indication of the “zone of influence” (see section 1.2) and highlight particular areas from where people are drawn to Cannock Chase. These areas should then be the focus of alternative site provision and some of the other initiatives within this strategy. Five thousand questionnaires were posted in a similar study in Dorset (Clarke et al., 2008, Liley et al., 2008), giving an indication of the scale necessary in such a piece of work.
- On-site monitoring should be established over an extended time period and include the SAC, adjacent land (e.g. within the AONB) and alternative sites. A wide range of visitor monitoring methods exists (for a review see Cessford and Muhar, 2003), including direct observation, heat sensors, pressure pads, infra-red beams, mechanical counters (such as turnstiles) and video capture. Automated counters will provide an extended data set and will allow gradual change to be detected when run for a number of years. A series of counters should therefore be established across the SAC at strategic points around the periphery and in the centre. It is recommended that a particular counter type is chosen and its use standardised across sites (to allow direct comparison).
- Car-park counts can be done very quickly, and provide a simple easy measure of use. It may be that car-park monitoring may provide a simple index to visitor numbers and in the future will provide a simple and repeatable index of visitor levels (e.g. Barnard, 2003). It will also be necessary to inform the success of the parking measures. It is recommended that counts be collected for all car-park locations that give access to the SAC (small car-parks, lay-bys and other informal parking should be included in addition to the large well-known car-parks) and all other main car-parks in the AONB. On a selection of dates all car-parks should be counted simultaneously allowing direct comparison between years, and in addition counts for all car-parks should be collected individually, at random. Such random counts can be collected simply by site staff in the course of their normal duties, simply recording a snapshot of the number of cars present in the car-park. Time of day, day, date and weather should also be recorded. The car-park counts should be used to inform the car-park closures and redistribution.
- Direct counts and interviews should also take place to supplement the data above. These would take a form similar to the visitor survey of the AONB (Staffordshire University, 2000), sampling at various locations around the AONB. The direct counts will allow the numbers of different types of users (cyclists, walkers, dog walkers, families etc) to be recorded and allow calibration of the automated counters. The interviews will provide data on parking locations, choice of route, interpretation used, home postcode etc. The counts and sampling should be established in such a

way that they can be repeated at regular intervals (e.g. every five years) and the data be comparable.

6.6 Housing distribution and allocation

6.6.1 The current spatial distribution of housing can be extracted from postcode databases within a GIS. While these are updated regularly, it is important to have a definitive record of where new housing has been built, and crucially the dates that particular houses were occupied. All new housing should therefore be mapped within a GIS, with each property recorded as point data and information such as date built, size etc also recorded. These data will provide a clear indication of the pattern of new development, especially windfalls, and it is hoped that this can then be linked to any changes in visitor patterns etc. on the SAC.

6.7 Conclusions

6.7.1 We summarise monitoring and further research elements of the strategy in Table 7.

Table 7: Summary of monitoring and further research elements of the strategy.

	Measures	Aim	Notes
32	Annual monitoring of Annex I birds.	Detailed knowledge of Annex I birds to inform targeting of access measures.	Territory locations within and beyond SAC (i.e. including all forestry blocks)
33	Monitoring of road-verges within the SAC	Long term information on road verge vegetation and impacts of traffic	Comparable data to record changes in the distribution of key species and vegetation communities over time.
34	Monitoring of vegetation alongside paths	Long term information on vegetation alongside paths, quantifying impacts from trampling and the success of different mitigation measures.	Repeated at regular intervals and using a standard method. Monitoring conducted on paths and away from paths and fixed point locations.
35	Monitoring of vegetation communities within the Sherbrook Valley,	Recording change in vegetation within the valley and potential causes of change.	Long term data picking up any changes in vegetation type and species dominance.
36	On-going monitoring of <i>Phytophthora</i> outbreak	To ensure comprehensive data on distribution of occurrence and extent of die-back within the site is recorded and used to guide access management.	
37	Recording of all fire incidents	Standard data set on fire incidence to determine change over time.	All fires mapped and area determined.
38	Monitoring of path structure and width	Recording changes in path width and impacts from trampling. To inform	Could be linked to 34 and conducted at identical locations.

	Measures	Aim	Notes
		access management.	
39	Incident recording	Recording incidents, to determine whether additional measures are required.	Standard recording system required across entire area.
40	Direct observation of visitor behaviour	To record any changes in activities and patterns of access. To inform management.	
41	Household survey	To identify the zone of influence and inform the distribution and need for alternative sites.	Provision of alternative sites should be linked to the results of this survey.
42	Network of automated counters within SAC, wider AONB and alternative sites	To provide long term data on visitor numbers and changes in numbers	Important to establish network of counters quickly.
43	Direct counts and interviews	Basic information on home postcodes, activities undertaken etc to inform alternative site provision, zone of influence and measures within the strategy.	Important to commence this quickly and to repeat at regular intervals.
44	Database of all new housing within zone of influence	To accurately record locations of new housing in order to provide information on levels of increase in zone of influence.	

7. Summary of Recommendations

- 7.1.1 A strategy has been set out which will ensure the integrity of the SAC remains unaffected by further development in the region of Cannock Chase. The strategy will require formal adoption by all relevant parties and it will need to commence prior to the new houses being occupied. Many of the elements within the strategy can be phased over time to match the building of new housing. Many of the mitigation measures proposed will need to happen simultaneously or well before new development in order to function as measures to counteract the effects of new development.
- 7.1.2 Our vision for the potential roles of different organisations and how the strategy might actually be implemented is illustrated in Figure 1. The four local authorities (who could levy developer contributions) and County Council (who manage the SAC), and the Forestry Commission (who manage most of the surrounding land) all need to be part of a partnership approach, with the advice of Natural England and other nature conservation bodies (RSPB, Wildlife Trusts), and key services such as Fire Service, and within the wider remit of the AONB Committee. Smaller groups liaising on day-to-day management of habitats, access management and monitoring may also be required.
- 7.1.3 We summarise the different elements of the strategy in Table 8. This strategy forms the umbrella document to set out a suite of potential measures to ensure that recreational pressure does not have any further adverse effects upon the Cannock Chase SAC as a result of increased housing in the vicinity of the site. It is now recommended that all partners take the recommendations forward to the development of a detailed and costed implementation plan, addressing the practicalities of the different measures. Such a detailed plan will resolve any issues relating to the implementation of different measures and will ensure that key requirements (such as the phasing of implementation) can then be established. The implementation plan will allow costs to be derived, from which developer contributions can be ascertained. The implementation plan will also provide the flexibility for partners and stakeholder organisations to plan the work and fit the different elements into or alongside their existing work programmes.

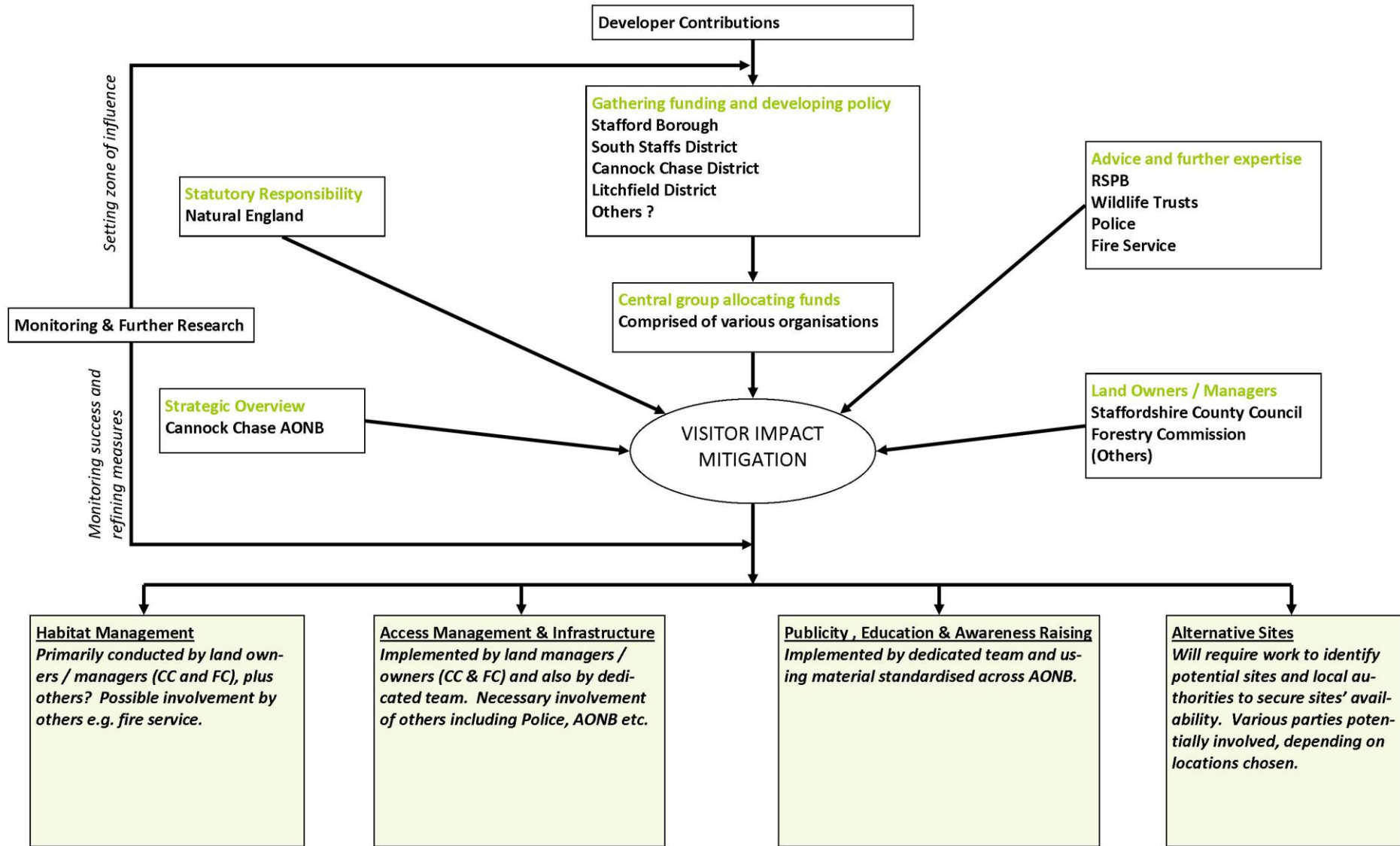


Figure 1: Potential roles of different organisations and how the strategy might be implemented

Table 8: Summary table of all elements within strategy.

		Measures	Aim	Notes
Habitat Management	1	Assessment of potential to increase heathland extent	Targeted piece of work to identify opportunities to extend area of heathland in context of biodiversity and access.	Will be informed by an understanding of forestry requirements and landowner interest. There are some existing measures in FC Forest Design Plan.
	2	Heathland re-creation in line with recommendations in 1	Increased area of heathland providing greater space for heathland species and more robust SAC	Will depend on the recommendations in 1
	3	Re-instatement of grazing	Enhanced management resulting in more robust site and better condition; potentially positive knock-on effects relating to traffic and access	Extensive grazing by cattle the ideal, other types of animal may also be appropriate.
	4	Review of procedures and systems for fire prevention and fighting	Targeted piece of work to assess current approaches to fires and identify potential improvements	Current fire plan reviewed as a result
	5	Continuation of existing programme of scrub management and bracken control	More robust site in better condition	On-going management is essential even if grazing is re-introduced
	6	New fire fighting equipment, enhanced fire breaks system as recommended in 4.	Enhanced fire prevention and fire fighting provision	Will depend on recommendations in 4.

		Measures	Aim	Notes
Access management and infrastructure	7	Preparation and implementation of a car-parking strategy across the SAC and surrounding areas	Reduction and redistribution of access points and parking spaces around SAC and closure of at least 9% of car park spaces around/within SAC. Car-parks no longer small and diffuse but fewer in number and larger. Focus on closing informal lay-bys, pull-ins etc.	Could be phased over time – e.g. over Core Strategy Plan Periods. Potentially a need to review/audit existing car-parks further?
	8	Enhanced parking provision and access in areas outside the SAC	Shift in parking provision away from the SAC	Should happen in conjunction with 7 to provide compensation for car-park closures
	9	Enhancements to existing car-parks as necessary	To make car-parks and parking easier to manage and to enhance the welcome for visitors	
	10	Consistent car-parking charges	All SAC car-parks to charge for parking	All car-parking related measures could be taken forward as an integrated car parking strategy for the SAC and incorporated into the suite of plans and strategies for Cannock Chase.
	11	Provision of dog walking areas outside the SAC boundary	Dog walkers encouraged to use areas outside the SAC.	Could include agility areas and other dedicated facilities for dog walkers
	12	Dog walkers encouraged to keep dogs on leads and pick-up after their dog	Reduction in dogs off leads and extent of dog fouling within SAC	
	13	Enforcement of requirements to keep dogs on leads and to pick-up	Reduction in dogs off leads and extent of dog fouling within SAC	Dogs on leads most important for period March - August

		Measures	Aim	Notes
	14	Cycling encouraged on bridleways and designated cycle routes	Reduction in cycling within SAC and cycling restricted to designated routes.	
	15	Encourage horse riders to use designated routes and provision of dedicated facilities for horse riders in areas well outside SAC.	Horse riders welcomed and encouraged outside SAC	Facilities to include safe parking for horse boxes.
	16	Redesign and enhancement at Marquis Drive to focus visitor routes and visitor numbers away from Brindley Heath.	Visitor numbers reduced on Brindley Heath.	A starting point would be to understand the role of Marquis Drive in influencing and directing use of the area.
	17	Review of events and activities scheduled and promoted within AONB.	Reduction in large events drawing large crowds to general area and clear guidelines in relation to such events.	
	18	New bus route around Chase.	Reduction in car use and greater control over where visitors are dropped off, with few drop-off points within the SAC.	Need to investigate options for carrying bicycles
Publicity, Education and awareness raising	19	Dedicated team of staff with a remit to cover access issues across the SAC and wider area	Increased staff resource to deal with access issues and provide face-to-face contact.	At the more detailed costing stage there may be the opportunity to consider work of existing staff and best means of establishing increased staffing levels
	20	Schools pack and programme of schools visits.	Promote understanding of the nature conservation importance and sensitive nature of the SAC.	Targeted to local schools
	21	Enhanced web presence providing information on different activities.	Easy to access information for relevant user groups, providing clear and consistent messages.	Information such as where to go, details of contact details, listings of events etc

		Measures	Aim	Notes
	22	Tailored leaflets with maps for the following user group/activities: dog walkers, cyclists, orienteering, walkers. Other groups to be included as necessary.	Groups made to feel welcome and provided with clear messages about responsible behaviour, where they can go, potential enforcement etc.	Leaflets should encourage responsible access and highlight areas where each activity can be enjoyed without damage to the SAC and where dedicated facilities are provided.
	23	Material promoting bus routes to the Chase and how to use the bus to undertake different activities.	Promotion of bus route to help take-up.	
	24	Leaflets, web presence etc. providing information on issues likely to be contentious – grazing and redistribution of parking in particular	Support for potentially contentious management	Potential links to AONB interpretation strategy need to be investigated
	25	Interpretation highlighting responsible use and nature conservation	Promoting the nature conservation importance and sensitive nature of the site to users.	Potential links to AONB interpretation strategy need to be investigated
	26	Programme of guided walks and events promoting nature conservation	Promoting the nature conservation importance and sensitive nature of the site to users.	Could extend existing programme
	27	Enhanced community links with local residents / parish councils / community groups / volunteers etc through talks, guided walks etc.	Promoting the nature conservation importance and sensitive nature of the site to local residents.	Community links are already fostered, this needs to continue and potentially expand
	28	Provision of leaflets/maps etc to promote alternative sites to visit / undertake activities.	Better understanding among visitors as to where to go and where different facilities can be found.	
	29	System for the public to report undesirable activities such as a phone number at centres, on some displays and leaflets.	Encouraging visitors to act responsibly and reduction in undesirable activities.	Existing AONB Code of Conduct does provide some numbers.

		Measures	Aim	Notes
Alternative Sites	30	Audit of potential sites that could function as SANGs and potential measures needed to bring them forward and make them work.	Detailed assessment of available sites and potentials to function as SANGS. Enables strategic view of SANGS network.	
	31	Phased creation of c.800ha of alternative greenspace serving people living within 12km of the SAC.	Network of alternative sites attracting some users away from the SAC.	Range of sites and locations necessary. Delivery of sites can be phased and linked to development, but must occur in advance of development taking place.
Monitoring and Further Research	32	Annual monitoring of Annex I birds.	Detailed knowledge of Annex I birds to inform targeting of access measures.	Territory locations within and beyond SAC (i.e. including all forestry blocks)
	33	Monitoring of road-verges within the SAC	Long term information on road verge vegetation and impacts of traffic	Comparable data to record changes the distribution of key species and vegetation communities over time.
	34	Monitoring of vegetation alongside paths	Long term information on vegetation alongside paths, quantifying impacts from trampling and the success of different mitigation measures.	Repeated at regular intervals and using a standard method. Monitoring conducted on paths and away from paths and fixed point locations.
	35	Monitoring of vegetation communities within the Sherbrook Valley,	Recording change in vegetation within the valley and potential causes of change.	Long term data picking up any changes in vegetation type and species dominance.
	36	On-going monitoring of <i>Phytophthora</i> outbreak	To ensure comprehensive data on distribution of occurrence and extent of die-back within the site is recorded and used to guide access management.	
	37	Recording of all fire incidents	Standard data set on fire incidence to determine change over time.	All fires mapped and area determined.
	38	Monitoring of path structure and width	Recording changes in path width and impacts from trampling. To inform access management.	Could be linked to 34 and conducted at identical locations.

		Measures	Aim	Notes
	39	Incident recording	Recording incidents to determine whether additional measures are required.	Standard recording system required across entire area.
	40	Direct observation of visitor behaviour	To record any changes in activities and patterns of access. To inform management.	
	41	Household survey	To identify the zone of influence and inform the distribution and need for alternative sites.	Provision of alternative sites should be linked to the results of this survey.
	42	Network of automated counters within SAC, wider AONB and alternative sites	To provide long term data on visitor numbers and changes in numbers	Important to establish network of counters quickly.
	43	Direct counts and interviews	Basic information on home postcodes, activities undertaken etc to inform alternative site provision, zone of influence and measures within the strategy.	Important to commence this quickly and to repeat at regular intervals.
	44	Database of all new housing within zone of influence	To accurately record locations of new housing in order to provide information on levels of increase in zone of influence.	

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