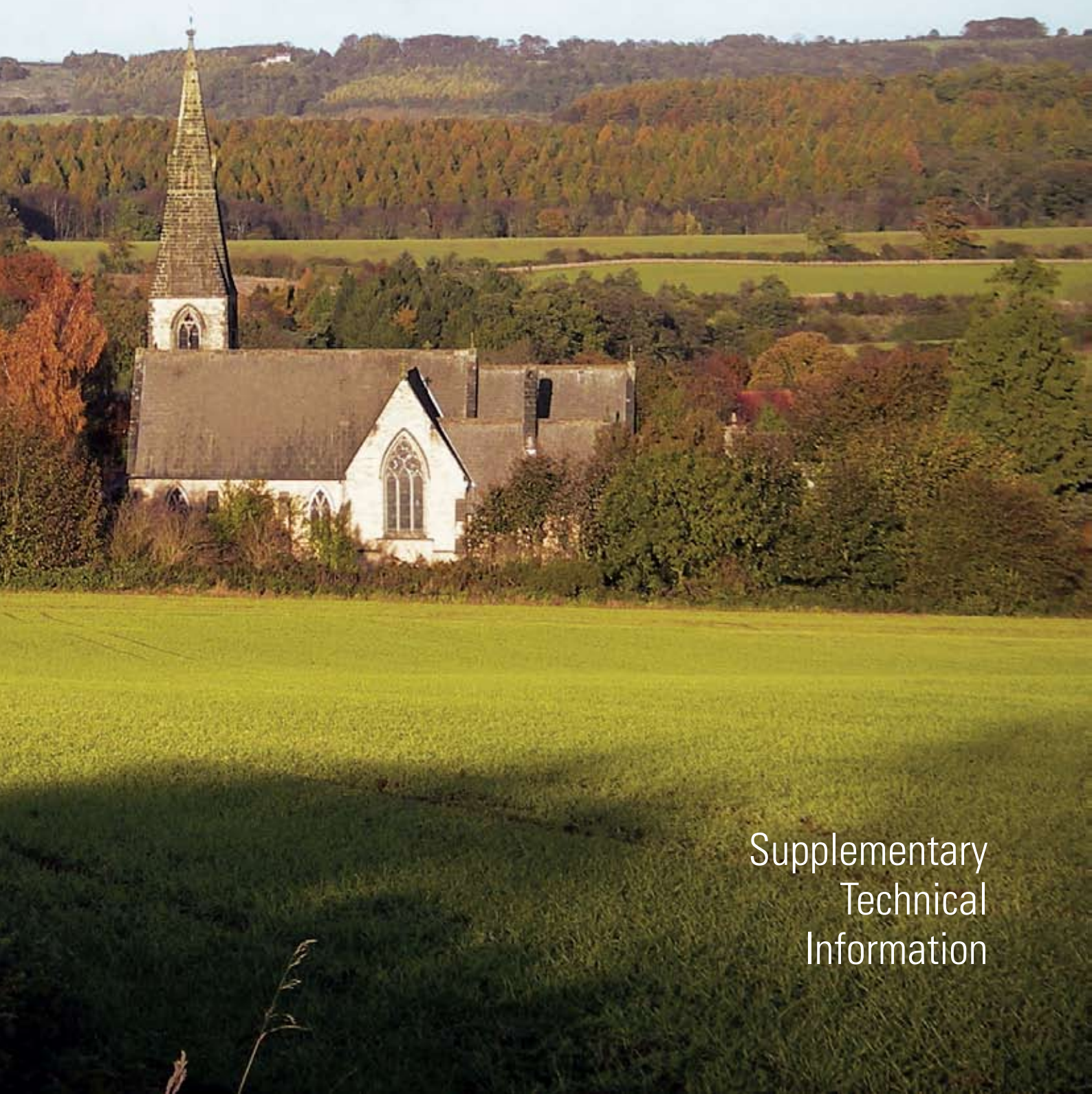


Howardian Hills

Area of Outstanding Natural Beauty



Supplementary
Technical
Information

This section contains additional details and information about the Howardian Hills, as referred to in the main part of the Management Plan

CONTENTS

Natural Environment..... ST1 3

Historic Environment..... ST1 7

Agriculture..... ST1 9

Forestry and Woodland ST1 15

Development..... ST1 18

Recreation, Access and Tourism..... ST1 19

References ST1 20

NATURAL ENVIRONMENT

Wildlife resources

The wildlife of the Howardian Hills has fascinated ecologists for centuries. There is a strong cultural tradition of plant surveying in the area, with Richard Spruce (1817 – 1893) being perhaps the most famous local botanist. Robert Teesdale before him documented the flora of the AONB in the 1780s and '90s and pioneered scientific botany in Yorkshire. These historical plant records give an insight into the exceptional quality of habitat that was once present in the AONB.

More recently, separate surveys of woodlands (1) and all other habitats (2) in 1992 provided important baseline data on habitats within the Howardian Hills. They showed the extent to which formerly extensive areas of semi-natural woodland had been modified by restocking with non-native species, as well as the relative scarcity of remaining semi-natural grassland and fen habitats. The results of the surveys are illustrated in Figure 1, which shows that nearly 80% of the habitats in the AONB are either farmland or are associated with human settlement (urban and amenity). The remaining 20% of habitats are less intensively managed, but nonetheless have been substantially modified by management practices such as woodland plantation and agricultural improvement of pastures. Those wildlife habitats that show the strongest semi-natural characteristics probably represent only about 4% of the total area of the AONB and are therefore extremely precious.

Further information about the extent, occurrence and quality of these semi-natural habitats was gained from a survey of Sites of Importance for Nature Conservation (SINCs) and other key habitats in 1998 (3). This involved detailed survey of specific sites known to be of high wildlife value and has subsequently been used to target management action.

The work of the AONB Unit has also led to the discovery of smaller areas of semi-natural habitat. These are not perhaps significant on a regional basis but are still important within a Howardian Hills context. Surveys of these sites have been carried out as they have been discovered, to determine whether they qualify for SINC status or not.

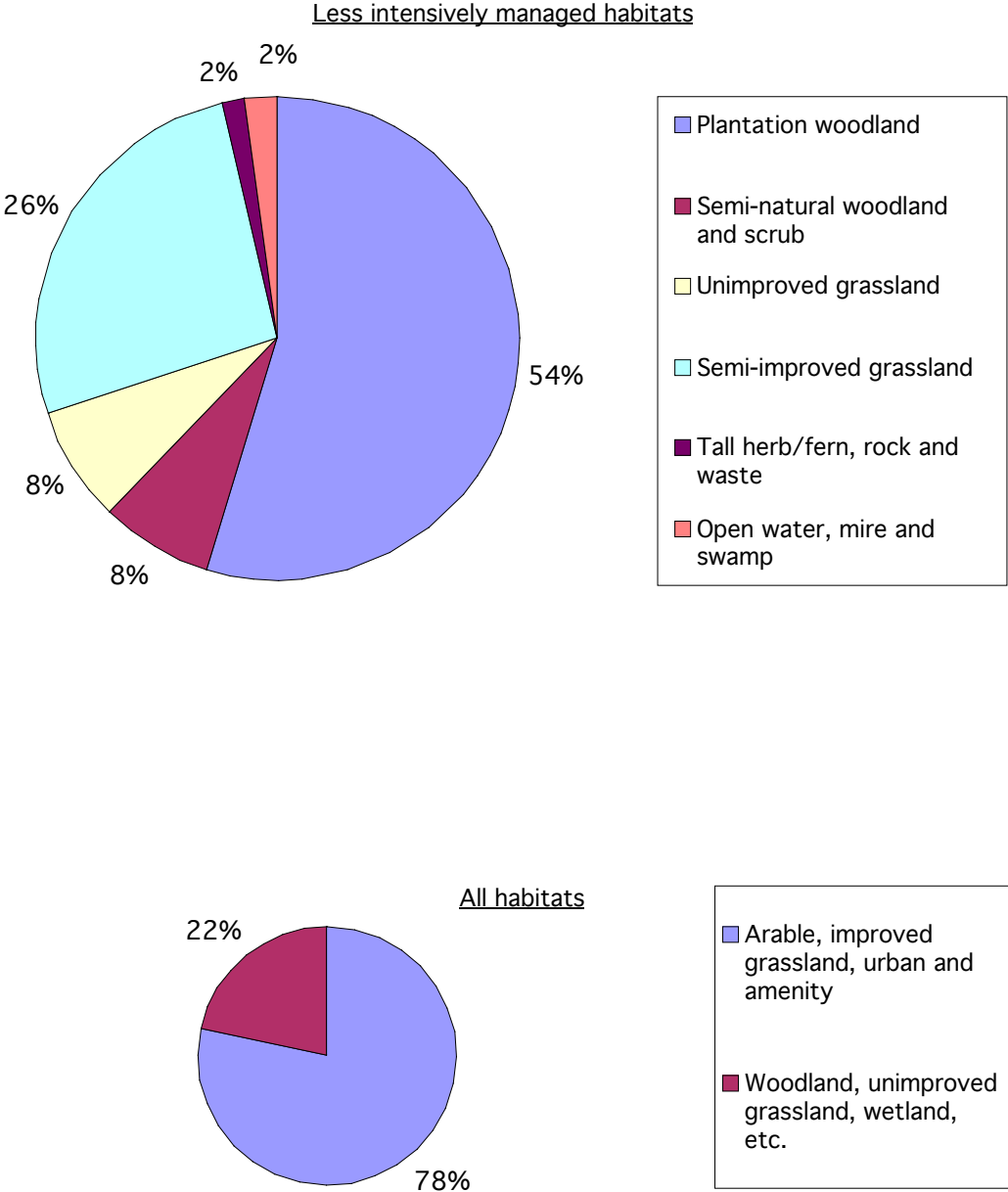
The Joint Advisory Committee (JAC) recognised the botanical importance of road verges in its first Management Plan and commissioned a survey of the AONB in 1998 (4). This provided valuable information on both the biodiversity value of road verges and also management issues affecting them (see Grassland below). The opportunity was also taken to survey roadside hedgerows at the same time. A total of 92km of species-rich roadside hedge was recorded, in 195 separate stretches. This equates to approximately 18% of the roadside boundaries in the AONB (96km out of 515km), although it should be borne in mind that not all roadside boundaries are hedged.

Apart from the above, recent survey work commissioned by the JAC has concentrated on specific sites, largely as part of the Biodiversity Action Planning process. Invertebrate surveys have been carried out on the River Rye, at the Castle Howard Arboretum and on fen habitats in the Coulton and Scackleton area. Some farmers and land managers are now recording the occurrence of farmland bird and mammal species, as part of the application/monitoring processes of the Countryside Stewardship and Environmental Stewardship Schemes. There remains a need for these diverse sources of information to be collated and compiled, in order to improve knowledge of the distribution of scarce species.

It is unlikely that another comprehensive survey of all habitats within the AONB will be carried out in the foreseeable future. The 1992 surveys pinpointed those areas of high value and, whilst small additional areas have subsequently been discovered, it is not felt that there are large gaps in our knowledge of habitat quantity. The main priority for the future is to ascertain the quality of these important areas of habitat, together with more information on the distribution of scarce species, so that future planning and management decisions are adequately informed.

Such information is likely to arise from a variety of sources, including small surveys commissioned by the JAC or partner organisations. Another useful source will be Farm Environment Plans, compiled as part of the application process for the Higher Level Stewardship Scheme.

FIGURE 1: WILDLIFE HABITATS



Source: Southern Ryedale and Howardian Hills AONB Phase I survey, 1992. (2)

Woodland

The total area of woodland is extensive, comprising 3,017ha or 15% of the land area of the AONB in 1992 (2). Further more detailed information, and the latest figures for woodland cover, can be found in the [Forestry and Woodland](#) section of this document. Ecological surveys (1) have shown that 50% of the woodlands are of Ancient origin, in that they are thought to have had continuous woodland cover since at least AD 1600. This, together with woodland in the south western corner of the adjacent North York Moors National Park, represents one of the largest concentrations of Ancient woodland in northern England.

Grassland

In comparison with woodland, high-quality grassland habitats are few in number and small in scale. The 1992 Phase I survey (2) found that the best nature conservation sites, i.e. those which have been little altered by ploughing, re-seeding, fertilising or herbicide treatment, totalled only 362ha (1.8% of the area of the AONB). These are concentrated mainly in the Derwent Valley, where several fields are designated as Sites of Special Scientific Interest, with a scattered distribution of sites throughout the rest of the AONB. A further 761ha of botanically much poorer semi-improved grassland was also recorded during the survey, although much of this is of very low quality indeed and is mainly of importance for 'landscape' rather than nature conservation reasons. The floristic diversity of calcareous (limestone) grassland tends to be much higher than that of neutral grassland. Although the underlying rocks in the North Ridge and Caulkleys Bank landscape character areas are strongly calcareous, only 11.5ha of unimproved grassland was recorded during the Phase I survey. 30% (3.5ha) of this occurs at one site, showing the high fragility of this habitat within the AONB. Areas of acidic grassland and lowland heath would once have been common in the Plateau landscape character area, but are now largely confined to rides within forestry plantations.

The road verge survey (4) revealed the importance of verges as a remnant of formerly much more extensive unimproved grassland. Nearly 38ha of unimproved grassland habitat was discovered on 132 separate

stretches of verge. This equates to 10% of the road verge length in the AONB (46km out of 515km). Whilst the majority of the Special Interest Road Verges identified are neutral grassland habitat, significant new areas of both calcareous and acid grassland were also discovered. The most botanically diverse verges occur mainly in the eastern half of the AONB, in the Slingsby and Kirkham areas.

Wetlands

Wetland habitats in the Howardian Hills include rivers/streams/open water and their associated waterside habitats, spring-fed mires and fens and areas dependent upon a high water table or seasonal flooding.

The habitat survey in 1992 (2) recorded 14.5ha of mire. These sites include flushes, which occur as small wet areas along seepage lines on sloping ground, often within woodland. Most of the mire habitat is however found along streams and rivers, particularly in the Derwent Valley and near Coulton, and is a particularly valuable habitat for wetland plants and invertebrates.

85ha of open water was recorded, with the largest water bodies being the lakes at Castle Howard, Wiganthorpe, Newburgh Priory and Pond Head (Oulston) Reservoir. A number of farm and village ponds are also important, although these are relatively scarce. Relatively few of the open water bodies are high-quality mesotrophic (low nutrient level) habitat, with the majority being adversely affected by management practices to some degree. The River Derwent is considered to represent one of the best national examples of an unpolluted lowland river with a 'classic' river profile, supporting diverse communities of aquatic flora and fauna. It is a Site of Special Scientific Interest (SSSI) and a Special Area of Conservation (SAC). Stretches of the Holbeck and the Rivers Rye and Foss, together with their minor tributaries, also provide valuable habitat.

Key species

Hambleton and Ryedale Local BAP Priority species, for which the Howardian Hills is important:

Lapwing
Tree sparrow
Redshank
Spotted flycatcher
Song thrush
Bullfinch
Yellow wagtail
Farmland birds
Wetland birds

Black poplar
Baneberry
Knapweed broomrape
Cowslip
Orchids
Arable flowers

Otter
Water vole
Brown hare
Bat species
White-clawed crayfish
Great crested newt
Bumblebees
Giant bellflower gall-fly

UK BAP Priority species also found in the AONB:

Skylark
Linnet
Eel
Brown trout
Salmon

HISTORIC ENVIRONMENT

Since the Historic Environment Study (5) in 1993, the story of the use of this land covering several thousand years has started to emerge.

Activity from the Mesolithic, the earliest period from which it would be expected to find evidence of humans in the AONB, has been identified by fieldwalking because no structures have been identified here to date. Blades and cores of flint, some from the Wolds and others from pebble flint found on the east coast, have been recovered and show that the natural resources of the area were highly suitable for exploitation by hunter-gatherer communities.

The earliest known man-made structure in the AONB is the Neolithic long barrow (burial mound), which dates to about 3500BC, near Grimston Grange. It was excavated by Canon Greenwell in the 19th century but he failed to find burial remains of the period. Some stone axes have been found in the Terrington area; the stone is highly distinctive showing that some originates in the Lake District and some in Cornwall – evidence of long trade connections at a time when farming was only just beginning.

Bronze Age (2500 – 700BC) round barrows (also burial mounds) are found scattered across the higher ground, often in cemetery groups, on open ground where they would have been visible from quite a distance. Ironically, some of the best-preserved examples are now in forestry plantations where they have been least disturbed. No settlements from any of the prehistoric periods have been confidently identified yet, although potential sites have been noted in aerial photos of arable fields.

Evidence of the Iron Age (800BC – AD700) is relatively plentiful, although most of it comes from aerial photographic plots. These show extensive field systems of small enclosures aligned on trackways defined by a ditch on either side. In places square barrows cluster in a cemetery separated from the rest of the fields and faint circular features suggest roundhouses. Linear dykes may date to this period, although a Bronze Age date has also been suggested.

The rural landscape of fields, enclosures and small villages probably continued into the Roman period (AD43 – 410) in most places and doesn't look any different from the air.

Very little excavation of cropmark sites has been done in the AONB so detail is lacking. It seems likely that there were several villas (higher-status Roman farms), the best-known site being indicated by the bath-house found in Hovingham Park. A large enclosure on Diana Hill east of Hovingham may also be a temporary military camp.

Place names show that many of the villages seen today originated in Saxon and Anglo-Scandinavian times, between AD400 and 1066. Each would have had its township boundary and some a church (as at Stonegrave), which has a 10th century cross. The Norman invasion introduced new ideas on land management and also introduced features such as Crayke Castle into the landscape. This was originally a timber motte-and-bailey castle that was later rebuilt in stone and it is likely that most cottages too would have been timber construction on a stone wall plate. The ploughing of the common fields resulted in the well-known 'rigg and furrow' pattern, much of which has now been lost except in pasture fields too steep or poorly-drained to be currently ploughed.

At the other end of the social spectrum, lords of the manor established deer parks for hunting – examples are known from Henderskelfe (Castle Howard) and Sproxton. The Black Death in 1348 will have been a factor, along with climatic deterioration and economic factors, in the abandonment or shrinkage of several villages in the Howardian Hills, with remains still being visible at Crambe, East Newton and Thornton-on-the-Hill.

Monasteries such as Kirkham and Newburgh were established in the 12th century and soon created sizeable estates, managing the land through farmsteads known as granges. Many Grange Farms still survive today, even though the Dissolution of the Monasteries in 1538 broke-up the great church estates. Newburgh Priory converted from a monastic estate into a private estate and is still in existence, although much reduced in size.

One of the key defining features of the Howardian Hills is its extensive designed landscapes, with their magnificent houses and parklands. The building of Castle Howard for example started in 1699, completely removing the village of Henderskelfe and its church, but possibly incorporating the earlier castle in the new house. Other designed landscapes and large country houses of various

scales were established at Gilling, Hovingham, Howsham, Nunnington, Brandsby, Kirkham, Whitwell, High Hutton, Ganthorpe, Swinton, Hildenley, Wiganthorpe, Dalby and Sproxton. These are all still recognisable today to a greater or lesser degree and are important for complex reasons: the design itself, the incorporation of earlier features and the relationship between ancient trees and archaeological features.

Medieval evidence for rural extractive industries such as stone quarrying, coal mining and lime burning is poor, but around the 18th century the need for stone grew as cottages were rebuilt and lime was needed to sweeten the land as part of the agricultural revolution. The new industry of brick and tile making contributed to the rebuilding and gave rise to the characteristic styles well-known today. Extensive remnants from these industries can still be found throughout the area, often in the hidden wet and wooded valleys which are little understood from an archaeological and economic history view and need further study in conjunction with associated wildlife.

Rebuilding was part of the great change that went on from around the 18th century, when agricultural improvement changed the old common fields to enclosed straight-sided fields, as at Coulton.

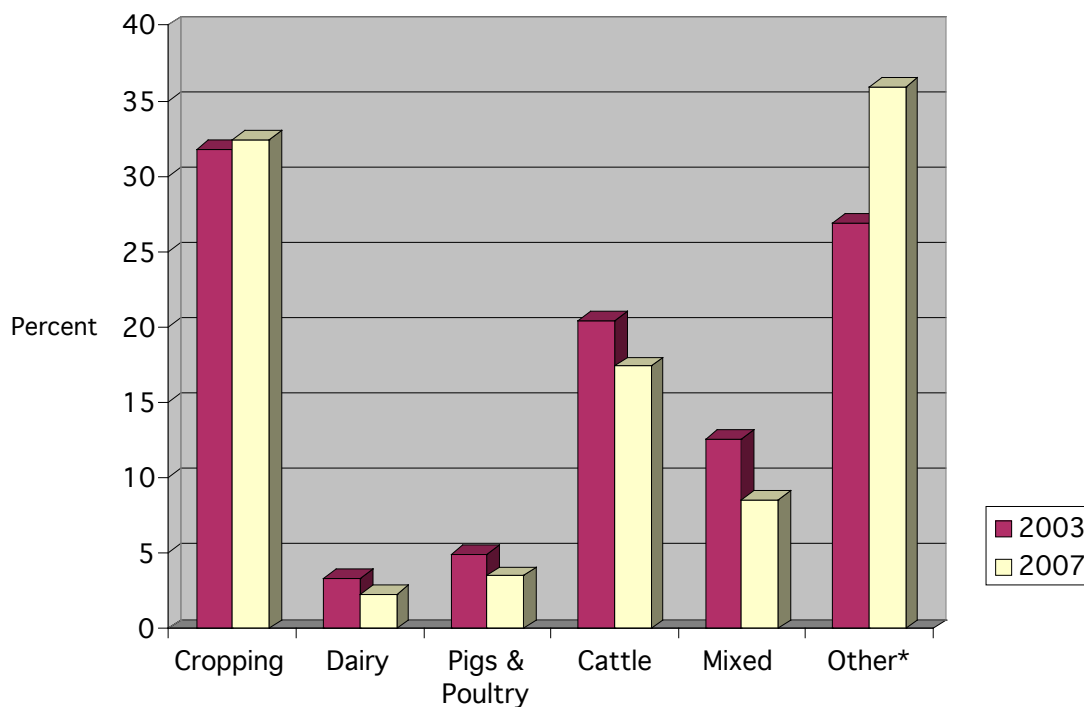
AGRICULTURE

Agriculture in the Howardian Hills

The Defra June Census (6) provides valuable information on the farming systems operating in the AONB and the patterns of cropping, farm structure, income and employment. Although the information is approximate, it does provide a 'snapshot' of the general composition of the agricultural industry, as well as an indication of trends between the years 2003 and 2007 (the approximate lifetime of the previous AONB Management Plan).

Farm types – The percentage of farms in different categories is illustrated in Figure 2.

FIGURE 2: PERCENTAGE OF FARMS OF DIFFERENT TYPES



Source: Defra June Census (6)

* 'Other' includes farms where either no particular sector dominates or specialist cropping (e.g. horticulture) takes place

Farming patterns are strongly influenced by soil types, which are graded between 1 (excellent) and 5 (very poor). In the Howardian Hills the soils are variable but mainly of good quality. 83% of the land is categorised as Grade 3, with much of the remainder being equally split between Grade 2 and non-agricultural/urban land. Only 1.1% of the land area is categorised as Grade 4. The best farmland occurs on the deeper soils over limestone along the North Ridge, where nearly 70% of the land is devoted to arable cropping. In contrast, grass pasture dominates the steep ground on the southern flank of the Howardian Hills.

Agricultural land use – The pattern of variable soil quality creates a landscape typical of mixed lowland agriculture, where land versatility allows some flexibility in cropping and stocking. Figure 3 shows the trends in agricultural land use and stock numbers over the last 4 years. It appears that the definitions of some of the data categories may be slightly different for the two reference years.

However, the most significant trends include decreases in the area of winter barley and sugar beet, with increases in the areas of other cereals (believed to be mainly oats), potatoes and rough grazing. The dairy herd has continued to contract, whilst the number of pigs has halved. It is interesting to note that the Mid-Term Review of the Common Agricultural Policy came into effect in the middle of this comparison period, when direct commodity support was replaced by the de-coupled Single Payment Scheme. This may account for some of the trends in crop and livestock figures.

FIGURE 3: AGRICULTURAL TRENDS 2003-2007

	2003	2007	% change 2003-2007
AGRICULTURAL LAND USE (ha)			
Wheat	3,915	3,986	+1.8%
Winter barley	1,677	1,133	-32.4%
Spring barley	775	612	-21%
Other cereals	242	453	+87.2%
All Cereals	6,609	6,184	-6.4%
Potatoes	435	574	+31.9%
Sugar beet	235	112	-52.3%
Oilseed rape	1,282	1,454	+13.4%
Beans & Peas	N/A	N/A	N/A
Horticulture	24	25	+4.16%
Other Crops and Fallow	521	1,287	+147%
All Crops And Fallow	9,106	9,636	+5.8%
Short-term grassland	963	841	-12.6%
Long-term grassland	3,233	2,905	-10.1%
Rough Grazing	118	143	+21.2%
All Grassland	4,314	3,889	-9.8%
Farm Woodland	621	606	-2.4%
Set-aside	1,547	970	-37.3%
Other land on farms	284	401	+41.2%
All Agricultural Land	15,872	15,502	-2.3%
LIVESTOCK (No.)			
Dairy herd	1,203	953	-20.7%
Beef herd	707	4,189	+492.5%
Other Cattle and Calves	4,099	1,595	-61.1%
Sheep and Lambs	28,995	23,937	-17.4%
Pigs	41,569	21,303	-48.7%
Fowls	N/A	N/A	N/A

Source: Defra June Census (6)

Farm incomes and employment – Over the period of the reference years, incomes from all types of farm have continued to decline, with the exception of dairy farms which have seen a significant recovery. The knock-on effect of this has been that, although the number of farms has remained almost constant, agricultural employment has continued to fall. See Figures 4 and 5.

**FIGURE 4: NET FARM INCOME PER HECTARE
2003-2006, NORTH EAST and
YORKSHIRE & HUMBER**

Type of Farm	2003	2006	% Change 2003-2006
Cereals	203	155	-23.6%
General Cropping	281	248	-11.7%
Dairy	205	250	+26.3%
Cattle and Sheep (lowland)	150	146	-2.6%
Mixed	248	138	-44.3%
Pigs	1,212	774	-36.1%

Source: Farm Business Survey, Government Office Region Report, 2006/07

FIGURE 5: AGRICULTURAL EMPLOYMENT 2003-2007

	2003	2007	% Change 2003-2007
Full-time Workforce	231	185	-19.9%
Part-time Workforce	205	200	-2.43%
Seasonal or Casual	27	15	-44.4%
TOTAL WORKFORCE	463	400	-13.6%

Source: Defra June Census (6)

Land tenure – This is an important factor affecting both future farm management and cultural structure in the AONB. Owner/occupiers have greater flexibility (and often incentive) to diversify their farm business into a range of new enterprises. Farm amalgamations have become increasingly common in the current agricultural climate, involving both owner/occupied and tenanted land. When a farm business closes, the land is likely to be amalgamated with a neighbouring farm (either via sale or tenancy), to create a larger and more efficient enterprise. The farmhouse is often either sold or let separately, with a small parcel of land. This process can lead to a reduction in the number of full-time farm holdings, as well as loss of employment and change to the social fabric of parishes. The large Estates rarely sell land however and this would allow the future ‘re-assembly’ of tenanted farms, should the agricultural climate become more favourable for both owners and tenants. The large number of Estates in the Howardian Hills does mean that this fragmentation process could potentially be reversed in the future. Figure 6 shows that the proportions of Owned and Rented land have not changed significantly in recent years.

FIGURE 6: LAND TENURE 2003-2007

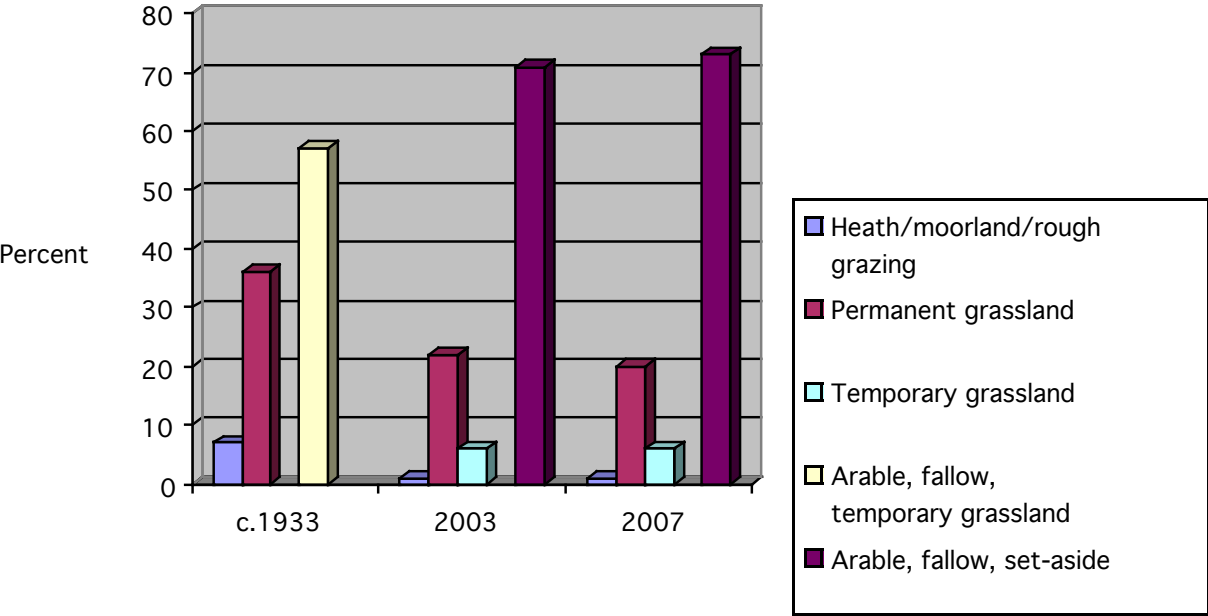
Land Tenure (in hectares)	2003	2007	% Change 2003-2007
Owned land	10,689	10,454	-2.2%
Rented land	5,602	5,809	+3.7%

Source: Defra June Census (6)

The agricultural landscape – The Howardian Hills landscape is special because of its mix of lowland agriculture and extensive woodland. The significance of the woodland resource is described in the [Forestry and Woodland](#) section of this booklet, but the pattern of farmland use also has a significant impact on the character of the landscape. One of the simplest indicators of this is the relative balance between grassland (both long-term and short-term) and arable cropping, although it is often the relative location of these uses within the landscape that re-inforces its character. Figure 7 shows how this balance has changed, both over recent years and also in comparison to Dudley Stamp’s Land Use Utilisation survey of the early 1930s.

Figure 7 shows that the balance between arable and grassland has changed little over recent years. It is felt that this ratio is unlikely to alter significantly in the future. Good arable land will continue in cultivation, with permanent grassland also remaining as such due to factors like poor soil, steep slopes, etc. It is however likely that the more marginal arable land will fluctuate between arable and temporary grassland, depending upon the relative returns from cereals and livestock. It is also possible that some of the lower-lying arable land will become longer-term grassland, if climate change increases the amount of flooding and hence makes it difficult to carry out cultivations on wet land.

FIGURE 7: BALANCE BETWEEN AGRICULTURAL LAND USES



Source: Defra June Census (6)
 L Dudley Stamp Land Use Utilisation Survey, c.1933. © Natural England (2008)

Policy background

After a period of quite significant change in farm support policy, the new regimes are now being refined in order to 'fine-tune' them. It is likely that this situation will prevail for the life of this current Management Plan, although a major review of the Common Agricultural Policy (CAP) is due in 2013. A brief overview of the main items of relevance follows:

- The Single Payment Scheme (SPS). This was introduced as a farm support mechanism de-coupled from agricultural production. It is currently based primarily on the level of historic payments that a farm received, but will increasingly move towards an area-based payment over the next 4 years. Part of the SPS sum is deducted (modulated) and used to fund the Rural Development Plan for England (RDPE).
- The RDPE is the Government's integrated programme for rural development in England. It includes training and business development initiatives administered by the Regional Development Agency (Yorkshire Forward), the Environmental Stewardship Scheme run by Natural England, Forestry Commission grants for woodland planting/management and the LEADER programme of community development.
- CAP Health Check. This has just been completed and proposes minor changes to regulations introduced as part of the Mid-Term Review several years ago. Some of the larger farms in the AONB may be affected by the cap on overall payments, but otherwise the effects are predicted to be relatively limited. England already has a high level of voluntary modulation and, even though the compulsory (EU) level will rise, the voluntary (England) level will fall correspondingly. The CAP is due for a major review in 2013. The likelihood is that farm support payments will reduce further, with funds being channelled into rural development and agri-environment schemes instead.

FORESTRY AND WOODLAND

The woodland resource

The percentage of woodland cover is one of the defining features of the Howardian Hills landscape and was quantified as 3,017ha or 15% of the AONB in 1992 (2). No comprehensive habitat survey work has been carried out since then, although the Native Woodland Development report (7) roughly estimated woodland cover as 3,900ha (19%). Data from the Forestry Commission's National Inventory of Woodland and Trees (8) indicates 3,369ha of woodland over 2ha, equating to 16.5% of the AONB land area. The true figure for total woodland cover is therefore estimated to be in the region of 18%, when woods under 2ha are also included.

Information supplied by the ecological appraisal of woodlands in 1992 (1) provided a valuable insight into their biodiversity significance. This information was updated for some sites in 1999, during the survey of Sites of Importance for Nature Conservation (SINCs) (3). The 1992 survey provided a useful basis for analysing the various woodlands present, based upon their historical origins, main tree species and National Vegetation Classification category.

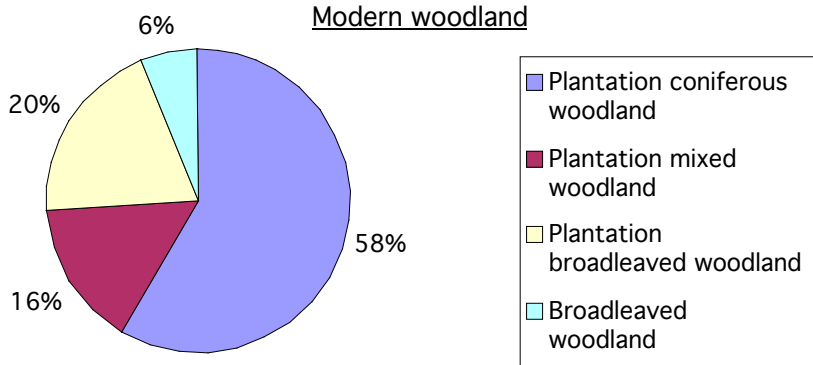
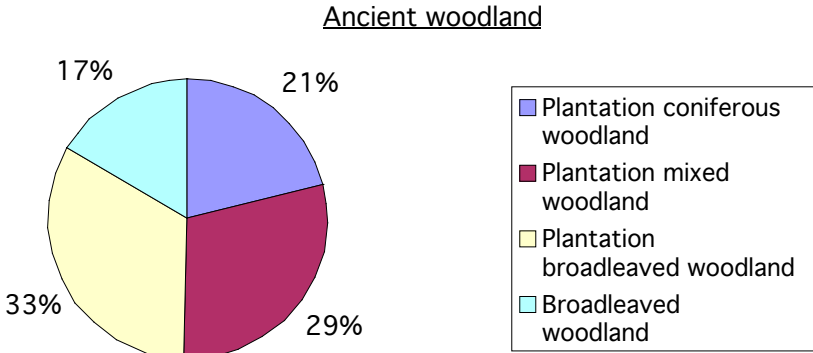
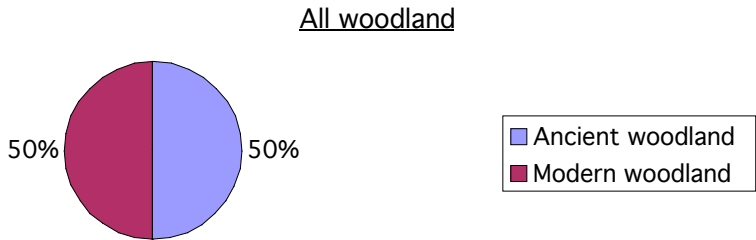
The proportions of woodland in the different categories are illustrated in Figure 8. The 1992 data shows that:

- 50% of the woodland is of Ancient origin, of which:
 - 16.6% retains a semi-natural character.
 - 83.4% is replanted, mainly with broadleaf or broadleaf/conifer mixes.
- 50% of the woodland consists of more recent plantations, of which:
 - 73.8% contains conifers or a conifer/broadleaf mix.
 - 26.2% is broadleaved.

Further information from the National Inventory of Woodland and Trees (8) indicates the following species composition:

- Of the 3,369ha of woodland larger than 2ha in size:
 - 39% is coniferous.
 - 40% is broadleaved.
 - 13% is mixed.
 - 6% is young trees (species not yet discernible).
 - 1% is open space (including felled land).
 - 1% is shrubs.

FIGURE 8. WOODLAND TYPES



Although the original survey data is now 16 years old, it provides a comprehensive baseline position against which trends in woodland composition and management can be judged. It is possible therefore that the survey may be repeated at some time in the future.

In addition to the continuous tree cover of woodlands, the Howardian Hills also contains a large number of in-field/boundary trees and designed historic parklands, both of which contribute significantly to the well-wooded appearance of the landscape. Many of these trees are veteran or ancient trees and are an important habitat for rare invertebrates (9 & 10).

Land tenure

The National Inventory of Woodland and Trees (8) indicates that 80% of woodland in the AONB is in private ownership, with the remaining 20% owned/leased by the Forestry Commission. Ownership of private woodlands is divided between large Estates or landowners (who tend to have multiple objectives for their woods) and individual farmers. In small farm woodlands, pheasant shooting may often be the primary activity, with little or no woodland management work carried out. For larger Estates and landowners, the objective is likely to be commercial timber and wood production, often in combination with pheasant shooting. There are a number of large conifer plantations, many on Ancient Woodland Sites, which were formerly owned by the Forestry Commission. These are now in private ownership, having been sold during the Commission's now-suspended Disposals programme. Many of these woods were not thinned during their first thirty years, resulting in restricted management options for their new owners. It must be accepted that some large-scale felling may be necessary in order to return them to sustainable management.

DEVELOPMENT

Socio-Economic situation in the AONB

The primary focus of local economic activity is the market towns of Malton, Easingwold and Helmsley, all of which are outside the AONB. They act as the main centres for employment, shopping, leisure and health services, with smaller facilities located throughout the AONB.

The Local Development Strategy for the North York Moors, Coast and Hills LEADER programme (11) contains detailed information on employment, education, income, access to services, etc for a wide area, including the AONB. Key characteristics of the AONB are:

- A Sparse population living in Villages and Hamlets/ Isolated Dwellings, as categorised by Defra's Rural Definition 2004.
- Low unemployment. The Ryedale District Housing Needs Survey (12) indicates that most people work within the District, with some out-commuting to bigger employment centres such as York.
- High self-employment and VAT Registration rates. This is often the case in sparse rural areas that are dependent upon agriculture, forestry and tourism.
- Educational Attainment and Household Income levels are generally high.
- Accessibility to services is very low, with the whole of the AONB falling into the Most Deprived category in that section of the Index of Multiple Deprivation.
- High house prices (45% higher than in adjacent Urban areas), leading to problems of affordability.

Housing

The AONB has a relatively high proportion of rented housing (40%), when compared to North Yorkshire as a whole (30%) (13). Much of this is provided by the Estates, with properties ranging from terraced cottages through to large farmhouses. The availability of these is likely to remain fairly constant in the long-term, as Estates are generally not disposing of property at the current time. One of the main issues however, as highlighted in the Ryedale Housing Needs Survey, is the low income of many local people and hence the affordability of accommodation, whether to buy or rent. This situation has worsened markedly in recent years, due to large increases in house prices throughout the AONB and the wider area.

Government policy encourages the majority of new housing to be located close to services, e.g. within market towns, to reduce the need to travel. Current Local Plan and Local Development Framework (LDF) policies echo this, but also recognise that limited housing development could take place in villages, particularly those with a good range of services. Policies within the Local Plans/LDFs also stipulate the percentage of low-cost affordable housing that should be included within new housing developments. The Hambleton LDF stipulates a 50% affordable housing rate on all sites (with developer contributions where the site is only for 1 unit). Ryedale District Council is currently developing its LDF policies on affordable housing. It is proposing that the threshold for affordable housing provision in rural villages should be sites where 5 or more new houses are to be built, with a 40% affordable rate (in line with Regional Spatial Strategy guidance). At the time of writing, only one such allocated housing site exists within current village Development Limits in the AONB. This has received planning consent for market and affordable housing, but the scheme is currently on hold due to the downturn in the housing market. Other 'windfall' sites of an applicable size could however come forward for re-development.

RECREATION, ACCESS AND TOURISM

The AONB is an important area for quiet recreation for both local people and visitors. It caters for a wide range of activities, from the more traditional such as walking, horse riding, cycling and country sports, through to occasional events like motorcycle scrambling, hot-air ballooning and road-cycle racing. These activities are generally adequately dispersed or at low frequency, so that serious or prolonged conflict is rare. Touring by car along the quiet country lanes is popular, as is visiting the attractive stone-built villages such as Coneysthorpe, Terrington, Hovingham and Brandsby. These generally cope well with the number of visitors they receive, although parking problems do occur during busier periods. One of the assets of the Howardian Hills is its network of public footpaths and bridleways, which offer extensive opportunities for exploring the unspoilt beauty of the AONB away from main roads.

The area is rich in heritage and the five main historic houses open to the public attract large numbers of visitors. Castle Howard is the main draw, with around 215,000 visitors per year. Nunnington Hall attracts around 60,000 and the ruined Kirkham Priory around 6,000. Other popular historic houses include Newburgh Priory (1,000 visitors) and Hovingham Hall (1,400), although these have limited opening times. A number of small visitor attractions (e.g. Yorkshire Lavender) are dotted around the AONB and there is a 9-hole golf course at Gilling Castle.

Current facilities for staying visitors are relatively limited, with accommodation available in village hotels/pubs and bed-and-breakfast in farmhouses and guesthouses. There are a number of small farm-based caravan and camping sites, with larger sites for both static and touring caravans at Coneysthorpe, Slingsby, Sproxton and Welburn.

A Visitors and Users Survey conducted in 2003 (14) provided detailed information on the source of visitors and their reasons for visiting the Howardian Hills. The survey results should be treated with caution, as they reflect the sampling pattern used rather than the whole AONB, but they do tend to confirm established theories about the origins and motivations of visitors. Just under half of all trips to the AONB (45%) were made to visit a particular attraction/place and the majority of visitors (64%) had come from the Yorkshire area. 82% of them were repeat visitors, indicating that the area is attractive and that people are willing to return. The majority (63%) appeared to be day visitors, although those who stayed did so for an average of 4.4 days and used serviced accommodation. The majority of people surveyed were in the over-45 age bracket and from the higher social groups. Feedback from visitors and focus groups with local tourism providers indicated that people are attracted by the unspoilt landscape, the peace and tranquillity and the sense of 'discovery'.

REFERENCES

1. Ecological Survey of Woodlands in the Howardian Hills AONB, A Weston, North Yorkshire County Council, 1992.
2. Southern Ryedale and Howardian Hills AONB Phase 1 Survey, A Weston, University of York/English Nature, 1992.
3. The North Yorkshire SINC's and Key Habitats Survey (BioDat), Bullen Consultants, North Yorkshire SINC Survey Steering Group, 1998.
4. Howardian Hills AONB Roadside Verge and Hedgerow Survey, Bullen Consultants, Howardian Hills AONB Joint Advisory Committee, 1998.
5. Howardian Hills AONB Historic Environment Study, M McElvaney, North Yorkshire County Council, 1993.
6. Defra June Census statistics:
http://www.defra.gov.uk/esg/work_htm/publications/cs/farmstats_web/2_SURVEY_DATA_SEARCH/AONB/aonb_data.htm
7. Native Woodland Development in the North York Moors and Howardian Hills, G F Peterken, Forestry Commission/NYMNPA/HHAONB/English Nature/Royal Forestry Society, 2002.
8. The National Inventory of Woodland and Trees, Forestry Commission, 2002.
9. Invertebrate Survey of Veteran Trees, A Drane, Howardian Hills AONB Joint Advisory Committee, 2003.
10. Invertebrate Survey of Veteran Trees, A Godfrey, Howardian Hills AONB Joint Advisory Committee, 2003.
11. LEADER Local Development Strategy: <http://www.moors.uk.net/content.php?nID=698>
12. Ryedale District Housing Needs Survey: http://rdc-extranet.temp.netconstructgroup.com/pdf/Housing_Needs_Survey_07.pdf
13. 1991 Census of Population, Small Area Statistics (SAS), 10% Sample, ONS, Crown Copyright.
14. The Howardian Hills AONB Visitors and Users Survey, Bowles Green Ltd, Howardian Hills AONB Joint Advisory Committee, 2003.