

# Yorkshire Dales Limestone Country Project

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## After-LIFE Conservation Action Plan



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# Limestone Country Project

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## **1. Introduction**

### **1.1 Purpose of the After-LIFE Action Plan**

One of the main aims of a LIFE project is to put in place the practices and partnerships that deliver a long-term sustainable future for the habitats and species targeted by the Natura 2000 designation.

This After-LIFE Conservation Action Plan sets out how it is planned to continue and to develop the actions initiated in the Limestone Country Project in the 10 years to March 2018 that follow the end of the project and how the longer term management of the sites will be assured.

### **1.2 Background to the project**

The Limestone Country Project began in June 2002 and ran until March 2007 and then continued under a year's extension until June 2008. The project area includes the United Kingdom's most important karst region, the international biodiversity significance of which is recognised by the designation of two Special Areas of Conservation (SAC) - the Ingleborough Complex SAC and the Craven Limestone Complex SAC (see Map 1). The project area extends to 11,097 hectares and includes 12 Annex 1 habitats listed on the European Union (EU) Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora. The mosaic of habitats includes the most extensive series of limestone pavements in the UK along with the most extensive area of upland semi-natural dry (calcareous) grassland. The Malham Tarn wetland complex (Ramsar) is considered to be one of the most outstanding in the UK.

### **1.3 Overview of the main conservation issues being addressed**

The main threats to the habitats within the project area were as follows:

- **Overgrazing**

Increased grazing intensity is believed to have reduced the frequency of many of the characteristic herbaceous plants of the area, and completely removed them from heavily grazed sites.

- **Farm intensification**

Associated with increased stocking on farms there had been a general intensification of overall farm management.

- **Stock type**

For a variety of reasons, both economic and cultural, there has been a general decline in mixed livestock farming over the last forty years and a move towards specialised sheep farming.

- **Foot and Mouth Disease (FMD)**

In May 2001, many of the farms with land within the project area were affected by FMD. Tens of thousands of livestock have been culled, with several of the target farms having lost all of their livestock.

- **Rabbit grazing**

Rabbits occur at very high population levels throughout the project area, in particular at Bastow Wood, Malham-Arncliffe and Ingleborough Sites of Special Scientific Interest (SSSI). Actual numbers/densities are hard to determine, however some individual farms regularly record numbers of controlled rabbits in excess of 5,000 per annum.

- **Invasive species**

Two invasive species are impacting on the nature conservation interest of the SAC, all varieties of which are proving difficult for land managers to address. Thistles, *Cirsium arvense* and *C. vulgare*, are abundant in some areas. Bracken *Pteridium aquilinum* is encroaching on limestone grassland and pavement areas in Oxenber and Wharfe Woods SSSI, Bastow Wood SSSI and part of Ingleborough SSSI.

- **Pavement damage**

A major threat to limestone pavement has been quarrying and removal of surface limestone for use as decorative rockery stone. This threat has now been addressed through protective legislation (Limestone Pavement Orders).

- **Pollution**

Eutrophication of Malham Tarn caused by fertiliser run-off and domestic sewage residues has been tackled over recent years and significant problems have been overcome. Work is continuing to minimise inputs and monitoring of water chemistry and vegetation is ongoing. There is a further need to reduce fertiliser and farmyard manure applications in the immediate Malham Tarn catchment area.

- **Afforestation and modification of woodlands**

Areas of Annex 1 woodland within the project area have been historically modified through under-planting with non-native conifers, beech and sycamore.

- **Recreation**

Recreational pressures, in particular from four-wheel drive vehicles, are causing limited damage to sensitive vegetation communities, especially alkaline fen habitats.

## **1.4 Objectives of the project**

The overall objective of the Yorkshire Dales Limestone Country Project is:

**“To restore Habitats Directive Annex 1 habitats within the Ingleborough Complex and Craven Limestone Complex SAC to a favourable condition by encouraging a return to mixed farming using hardy upland cattle breeds”.**

The project aims to fulfil the following objectives and results:

- **To restore and/or enhance the diversity of over 1500 hectares of Annex 1 habitats on the site** by converting 15 farming enterprises to more appropriate mixed systems involving traditional hardy cattle breeds through the provision of grants to farmers.

- **To increase awareness and understanding of environmentally and economically sustainable conservation management** through a programme of publicity events/materials and on site interpretation.
- **To disseminate information regarding the relationships between upland land management and nature conservation to other project/land managers and policy makers** through a series of demonstration events and the promotion of best practice through attendance at conferences and publication of scientific papers.
- **To increase knowledge of the relative nature conservation management benefits of different cattle systems** through a programme of survey and research.

## **2. Overall Project Summary**

### **2.1. Summary of all actions**

The actions carried out under the Limestone Country Project are listed in Table 2.1.1. These actions are summarised here under 7 broad headings:

#### ***2.1.1. Establishing cattle grazing agreements***

The process used to identify willing farmers and then negotiate agreements with them was highly successful. It began prior to the start of the project with staff from the Yorkshire Dales National Park Authority and English Nature visiting over 90 farmer farmers in the potential project area to gauge their interest in farming with cattle. This, combined with other local knowledge provided the project team with a long list of potential farmers. The Limestone Country Project itself began with a launch conference in 2002 (Action A.1.) which targeted over 100 farmers in the project area. Application packs (Action E.6.) were given out at this meeting and this was then followed up with individual site visits to interested farmers (Action A.1.). Those farmers who were eligible were then put into a database and the process of drawing up farm agreements began. This was a three stage process. First, a baseline survey was carried out by the Project Officer to determine the current management of the farm and future infrastructure changes that might be needed in order for the farmer to enter the Limestone Country Project (Action A.2.). This was then combined with other information to develop a whole farm management plan (Action A.3.) for each applicant which formed the basis of the farmers final Limestone Country Project agreement (Actions A.4). Eighteen management agreements were approved, which exceeded the original target of fifteen.

The key to the success of the Limestone Country Project was providing the right level of funding support to enable farmers to convert from their existing system to one that included cattle grazing. This was achieved through a set of annual and capital works grants. The most significant of these was a capital grant to help with the purchase costs of cattle (Action C.1.). The maximum grant available was £10000 (approximately €12600) although this was never 100% of costs and was calculated after subtracting any income the farmers made from the sale of existing stock. Alongside this additional capital grants were paid to cover the costs of adapting infrastructure and providing or adapting cattle handling facilities (Action C.3.), stock protection (Action C.4.) and provision of water supply (Action C.5.).

In addition to these capital items farmers were also provided with grants to help with the loss of income and additional costs incurred during the transition from their existing, largely sheep-based enterprises to one incorporating traditional upland cattle breeds which take longer to bring to market and require the development of premium beef markets to maximise income. The farmers were provided with a transition payment to cover this period (Action D.1.) together with annual grants to cover additional costs (Actions D.2., D.3., D.4. & D.5.). Compliance with the agreements and provision of regular advice during the whole of the project was provided through regular visits and direct contact from the Project Officer (Action D.8.).

As a result of all of these incentives a total of 18 herds (358 animals) were established covering 1839ha which exceed the Project's original targets.

### **2.1.2. Weed and rabbit control**

Weeds and rabbits had become significant problems in parts of the Limestone country Project area to the extent that it was beyond the ability of any one landowner to deal with. Therefore, the Project developed a control programme based on a combination of farmer and external contractor effort (Action C.7.) The Project provided farmers with access to two weed wipers which they and National Nature Reserve staff used to control weeds over 852 hectares of land. This was supplemented by additional work from contractors covering an additional 332 hectares. This combined total of 1184 hectares exceeded the Project's original target.

Rabbit control was carried out by two contractors and covered (with repeat visits) a total of 6867 hectares which vastly exceeded the Project's original target (Action D.7).

### **2.1.3. National Nature Reserves**

The Limestone country Project area contains two National Nature Reserves (NNR). Ingleborough National Nature Reserve is owned and managed by Natural England, Malham Tarn National Nature Reserve is owned and managed by the National Trust. The management plans for both of these Reserves were reviewed as part of the Project (Action A.5.) and revised to incorporate cattle grazing into them. A total herd of 36 cattle covering 273 hectares was established on Ingleborough NNR (Action C.2) and 7ha of Malham Tarn Fen was managed as part of an agreement with a tenant farmer (included in the figures for 2.1.2 above) with 10 Dexter cattle together with some cutting of meadowsweet by the National Trust (Action D.6).

### **2.1.4. Ecological Research & Monitoring**

An essential aspect of the Limestone Country Project was to ensure that monitoring and research was established at the outset to ensure key lessons could be learnt about the ecological and economic impacts of the project and to help inform others of the benefits of conservation grazing with appropriate cattle breeds. This was achieved in several ways. At the start of the project in 2002 consultants were contracted to carry out a full National Vegetation Classification and Condition Assessment using Common Standards Monitoring techniques of 10,000 hectares of the project area (Action F.1). The results digitised into a Geographical Information System (Action F.9). This was then repeated in 2006 using existing staff from the National Park Authority's Wildlife Conservation Team, Natural England and the project officer (Action F.2). The results were digitised and analysed against the original baseline vegetation condition assessment carried out four years previously. Between year comparisons were difficult to achieve as changes had been made to national Common Standards Monitoring techniques between the two surveys. In addition, responses to changes in management in upland vegetation communities are slow and 3 years was not a sufficient period of time to detect substantial effects. Nevertheless the results showed that:

- In 2006 the amount of Alkaline fen in favourable condition was maintained and the amount that was in an unfavourable but recovering condition increased on land with

Project cattle management agreements compared with elsewhere in the Limestone Country area.

- In 2006 the proportion of calcareous grassland and limestone pavement that was recovering was higher on land with Project cattle management agreements compared with elsewhere in the Limestone Country area.
- In 2006 the proportion of calcareous grassland and limestone pavement that was declining was lower on land with Project cattle management agreements than elsewhere in the Limestone Country area.

The Project also employed Newcastle University to carry out a more detailed scientific assessment of different grazing regimes used in the management of Limestone Country Project agreement land. Using a variety of different sampling techniques in two periods (2003 and 2006) they showed that the diversity of plant species that are most typical of calcareous habitats (known as indicator species) were higher in calcareous grassland and limestone pavement grazed by cattle rather than sheep and that in the case of limestone pavement overall species richness was nearly as high as ungrazed limestone pavement. However, many of the results were ambiguous as the period between sampling was too small and further repeat monitoring should be considered in 2010 and beyond in order to determine long-term changes. The use of GPS tracking of grazing animals was also trialled as part of the project and the results showed that it could play an important role in determining the effects that the animals are having on biodiversity of an area.

#### **2.1.5. Economic Research**

The Project contracted Askham Bryan Agricultural College to determine the economic impact of the project on the farm businesses of the agreement holders (Action F.4.).

The main findings of this research were that:

- 60-80% of farm incomes consisted of subsidies and environmental grants.
- Substituting Limestone Country Project cattle for sheep and a positive impact on the farm business and was a profitable enterprise.
- It was only profitable, however, if premium prices (above the mainstream market) were achieved for the beef produced.
- It was only profitable if the capital costs of cattle purchase and infrastructure changes were supported (as in the Limestone Country Project) otherwise income levels were not higher enough to repay this initial investment.

#### **2.1.6. Awareness Raising & Publicity**

A major part of the project was raising awareness of the need for cattle in grazing the uplands and promoting the project as a model for grazing management in Natura 200 sites. The project was highly successful in this with huge local, national and international press interest throughout the project (Action E.1.). The project attended 6 agricultural shows (Action E.3.), ran 26 demonstration events including two international workshops (Action E.4), attended 37 events at local, national and international levels and produced numerous articles about the project (Action E.5.). During the course of the project 5 very popular newsletters were produced in conjunction with 4 technical reports, a non-technical final report and this more detailed final report (Action E.7.). A website was developed

(Action E.8.) and on-site interpretation placed at 5 sites within the project area (Action E.2.).

### **2.1.7. Marketing**

It was not one of the objectives of the project to develop a new marketing initiative for the sale of the hardy cattle and the beef produced from them. However, workshop was run in the summer of 2003, inviting farmers within the project to listen to marketing proposals and see whether there was any interest in working together as a co-operative. The workshop also involved other marketing and advisory groups and local producers.

The marketing workshop was funded through Action C.6 and was a very effective way of delivering this marketing advice rather than the half-day per farmer originally proposed. Also, the workshop allowed farmers within the project to meet and talk face to face.

This led to The Yorkshire Dales National Park Authority, through its Sustainable Development Fund, supporting a parallel initiative to develop a market for the beef produced by the Limestone Country Project farmers.

Eventually working with The National Park Authority and English Nature the farmers established Limestone Country Beef Limited an independent company established and run by the farmers themselves. The company is now developing small-scale markets through speciality butchers.

Despite the lack of progress in developing a clear Limestone country Beef brand the farmers are achieving some commercial success with their individual beef sales:-

- 4 Farmers selling direct via a box scheme
- 1 Farmer doing a regular farmers market
- 1 farmer supplying their local shop which is a village owned co-operative
- 3 farmers supplying retail butchers

## **2.2 Summary of Overall Project Assessment**

The project has exceeded all its objectives and in fact has exceeded expectations. The project has been viewed locally, nationally and internationally as a model for the successful conservation grazing management of Natural 2000 sites and has achieved the overall objective of restoring Annex 1 Habitats to favourable condition by encouraging a return to mixed farming using hardy upland cattle breeds.

18 herds of cattle covering over 1800 hectares of Natural 2000 habitats were supported by the project which exceeds the objective of 15 herds covering 1500 hectares.

A huge programme of events, publications, workshops and conferences was developed which disseminated information on the project to a wide local, national and international audience. The work of the project has been used to guide other significant projects and has influenced agricultural policy at all levels (see section 4.3.). The project was awarded the Eurosite 2005 Award in recognition of its contribution to European nature conservation

The ecological research and monitoring programme demonstrated that the different types of grazing regime present within the project area gave different nature conservation results with sites grazed with cattle within Project agreements producing better results than sites outside the project.

**Table 2.1.1 Summary of all Limestone Country Project actions**

<b>Action</b>	<b>Overall target</b>	<b>Completed to date</b>
A.1 Introductory farm visits	100	100+
A.2. Baseline Farm Surveys	20	17
A.3. Whole Farm Management Plans	20	17
A.4.Limestone Country Management Agreements	15 (1500hectares)	18 (1839hectares)
A.5. Revision of National Nature Reserve Management Plans	2	2
C.1. Establishment of hardy breed herds on farms	15	18
C.2. Establishment of hardy breed herd on Ingleborough NNR	1	1
C.3. New buildings for cattle housing	1	1
C.3. Adaptations to existing buildings	12	3
C.3. Cattle handling facilities	9	11
C.4. Electric fencing kits	16	3
C.5. Stock water facilities	10	7
C.6. Marketing information	1 workshop	1 workshop
C.7. Invasive weed control	1,000 hectares	1184 hectares
D.1. Transitional grants to farmers	17 farmers	17
D.2. Electric fencing maintenance grants	16 farmers	0
D.3. Water facility maintenance grants	10 farmers	2
D.4. Straw bedding grants	10 farmers	8
D.5. Remote site supplement	9 farmers	17
D.6. Management of Malham Tarn Fen	1 site	1 site
D.7. Rabbit control	1,000 hectares	6,867 hectares
D.8. Advisory & compliance visits	15 farmers	18 farmers
E.1. Press & publicity	-	Very high levels of interest
E.2. Installation of interpretative panels	5	5
E.3. Agricultural shows	5	6
E.4. Demonstration events	12	26
E.5. Wider dissemination	-	37 events, numerous articles
E.6. Application packs	-	40+
E.7. Technical reports	4	4
E.7. Interim report	1	1
E.7. Newsletters	4	5
E.7. Laymans Report	1	1
E.7. Final Report	1	1
E.8. Website	1	1
F.1. Baseline vegetation condition assessment	10,000hectares	10,000hectares
F.2. Repeat condition assessment	10,000hectares	10,000hectares
F.3. Ecological research final report	1	1
F.4. Economic research final report	1	1
F.5. Advisory group meetings	8	4
F.6. Management group meetings	10	10
F.7. Overall co-ordination	-	-
F.8. Project officer	1	1
F.9. GIS database	1	1
F.10 Independent audit	1	1

### **3. After-LIFE Action Plan**

#### **3.1. *Maintaining grazing agreements with Limestone Country Project Cattle***

One of the primary aims of the Limestone Country Project was to demonstrate a mechanism for encouraging farmers to return to mixed farming patterns utilising appropriate cattle breeds to carry out sustainable conservation grazing. This was very successfully achieved in the project. However, it was important that this then lead to long-term sustainable changes in the incentives available to the farmers in the existing Limestone Country Project but also in the wider Limestone Country and indeed nationally where cattle are needed for conservation grazing. The economic research carried out as part of the Limestone Country Project showed that farmers in the project area were heavily reliant on farm subsidy and environmental grants. It is predicted that this reliance will continue into the future and, in fact, will shift more and more to reliance on environmental grants.

Towards the end of the Limestone Country Project the agri-environment schemes in England went through a major review with all previous schemes being amalgamated into a single Environmental Stewardship Scheme (ESS) with two levels – Entry Level Stewardship (ELS) and Higher Level Stewardship (HLS). The ecological parts of the HLS scheme are intended to provide incentives to farmers to carry out conservation management of the most important habitats and species in England.

The Limestone Country Project recognised that HLS was the best opportunity for the future sustainability of the project. With the knowledge and experience gained from the project both the Department of Environment, Food & Rural Affairs and individuals within the European Commission were lobbied by the Project partners to recognise the importance of cattle in upland conservation grazing. This lobbying was successful and the HLS now includes a supplementary payment equivalent to the Limestone Country Project transition payment targeted at encouraging conservation grazing with cattle. During the extension year of the project the Limestone Country project team has worked with the farmers in existing agreements plus additional farmers in the project area to transfer them into the new 10 year HLS agreements under the same management regimes. This work is largely complete and will be completed by staff from the Yorkshire Dales National Park Authority and Natural England and ensures the continuation of the management practices brought about by the Project.

#### **3.2. *Weed control***

Having brought the main problem areas under control it is essential that these areas are maintained free of problem weeds. This will be achieved by bringing farmers in the Project area into the Environmental Stewardship Scheme which requires specific management practices to manage land according to the ELS and HLS management agreements. However, this will only be successful with monitoring and dialogue with the farmers. This will be achieved as part of the scheme Care & Maintenance carried out by Natural England staff responsible for the ESS agreements.

### **3.3. *Rabbit control***

Rabbits are, and will continue to be, a major problem within the Yorkshire Dales National Park Authority. The Project has successfully reduced their numbers within the areas targeted but numbers will quickly rise again if not kept in check. However, this requires the levels of coordination over a wide geographical area that the Limestone Country Project was able to carry out and is not currently available elsewhere. There is currently no obvious solution to this problem. However, the Yorkshire Dales National Park Management Plan contains an objective to determine the extent of invasive species and pest problems across the National Park and develop a strategy for their management by 2010. This work is being lead by the Yorkshire Dales National Park Authority and will contain proposals for coordinated rabbit control as part of the strategy.

### **3.4. *National Nature Reserves***

The Limestone Country Project has lead to significant changes in the management of the two National Nature Reserves and the use of Limestone Country Project cattle is now deeply embedded in the management ethos for both of these Reserves. At Malham Tarn the cattle being used to control vegetation on the fen belong to a former Limestone Country Project agreement holder who has already transferred into an HLS agreement.

The cattle at Ingleborough are owned by Natural England and managed by Bill Grayson (one of the founder partners in the Limestone Country Project) and are integral to the long-term management of the NNR for the foreseeable future. The grazing management at Ingleborough provides an opportunity to further investigate and research best practice as the management is not constrained by the socio-economic needs of individual private farmers.

### **3.5. *Ecological Research & Monitoring***

The comprehensive baseline habitat mapping and two periods of Condition Assessment carried out by the Limestone Country Project have provided a comprehensive baseline for future comparative monitoring. As part of its statutory role in managing Natura 2000 sites Natural England will coordinate future Condition Assessment as part of a 6 year cycle.

However, the research carried out by Newcastle University highlighted a real need to continue to monitor change over a much longer period than the relatively short timescale of the Project. The research completed so far is effectively a baseline which has started to assess the impact of changes in grazing during the initial restoration phase. Further research is needed to understand how cattle grazing will lead to long-term improvements in biodiversity and species richness beyond the restoration phase. There is currently no funding available to continue this research but the Yorkshire Dales National Park Authority plans to seek funding to carry out a repeat of the Newcastle University sampling in 2012.

### **3.6. *Economic Research***

As with the Ecological Research the Economic Research was very much a baseline assessment of the economics of Limestone Country farms together with some predictive models of the likely impact of changing the farm business to incorporate cattle. It would be

desirable to repeat this research at intervals to determine whether the models were correct. There is currently no obvious funding source for this. It is proposed that the Yorkshire Dales National Park Authority and Natural England will investigate funding opportunities to repeat this research in 2012.

### **3.7. Awareness Raising & Publicity**

The Limestone Country Project has been hugely successful in raising awareness of the use of cattle in sustainable grazing management. The project has had huge coverage at local, national and international levels and is looked upon as a best practice example for a wide range of other projects and policy initiatives.

The website, demonstration events and conference presentations were the most effective means of promoting the Project. Unfortunately, all the staff involved in the Project have moved on to new posts and their ability to organise further demonstration events and attend large numbers of conferences is very much reduced. In addition, funding for the website as a separate external website will come to and end at the end of March 2009.

However, it is essential that the lessons from the Limestone Country Project continue to be disseminated. Therefore the following is proposed:

- Staff at Ingleborough National Nature Reserve will host visits to the Project area in response to requests using the Limestone Country Project cattle systems on the Reserve as a focus. In addition, a nearby project farmer will receive these visits when required to give a private farmer perspective of the project.
- The Yorkshire Dales National Park Authority's Senior Wildlife Conservation Officer (formerly Limestone country Project Manager) will attend up to 4 external conferences or workshops per year if invited.
- The most important parts of the Limestone Country website will be transferred into the Yorkshire Dales National Park Authority's website and managed by them. It will still retain its own identity under the current URL of [www.limestone-country.org.uk](http://www.limestone-country.org.uk) but will need to be adapted to fit into the National Park Authority's website management system.
- All of the publications produced by the project are in electronic format so will be available on request from the National Park Authority even when they are out of hardcopy print.

### **3.8. Marketing**

Limestone Country Beef Limited is now an established independent company wholly run by some of the Project farmers. In addition a number of other project farmers have developed their own markets. The Limestone Country Project and the parallel marketing work by some of the Project partners has therefore left a beef marketing mechanism in place.

It is anticipated that the farmers may need further business support and advice in the future. This will mainly be delivered through a newly approved Yorkshire Dales LEADER

programme which will seek to address some of the socio-economic issues of the area through the provision of grants in a number of Investment Themes. The primary theme relevant to Limestone Country Project farmers is:

“To develop markets and products utilising the area’s strong image, local market potential and special environmental assets”.

There are a number of relevant programmes and actions within this theme:

- Programme 1: Developing Innovative Community Service Provision/Hubs and promoting community cohesion:
  - Providing a hub to promote local foods, products and creative industries
- Programme 4: Supporting Diverse and Sustainable Rural Businesses
  - Supporting and facilitating farmer networks
- Programme 5: Distinctive Local Products
  - Support for local produce markets, and the development of better links between local producers, retailers, buyers, and consumers
  - Support for local product branding and collective marketing activity
  - Support for new product development, market research and market testing
  - Support for the development and implementation of business co-operation for product development and marketing particularly to address issues of scale which may constrain developmental potential
  - Support for collaborative activity around particular products or processes to share knowledge and information and feed in to network development or formal collaborative working
  - Support for network development and cross sectoral working within the regional and local product context.
- Programme 6: To encourage collaborative ventures within supply chains based on farming and the products of other land based primary products.