THE COUNTRYSIDE STEWARDSHIP SCHEME

MONITORING AND EVALUATION OF THE COUNTRYSIDE STEWARDSHIP SCHEME

METHODOLOGY REPORT

by

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EXECTIVE SUMMARY

1.1 This report provides a record and explanation of the methodologies used to conduct an environmental evaluation of the Countryside Stewardship Scheme. This forms part of a larger environmental evaluation of the whole scheme being carried out for the Ministry of Agriculture, Fisheries and Food (MAFF) (now the Department for Environment, Food and Rural Affairs [DEFRA]), by ADAS, the Centre for Ecology and Hydrology[1] (CEH) and the Countryside and Community Research Unit (CCRU).

1.2 The project was divided into two distinct modules that were conducted independently of each other. The methodologies for both modules are described in sufficient detail in order that a similar evaluation exercise should be able to replicate the study and reach comparable conclusions.

Module 1

1.3 Module 1 comprised a detailed evaluation of a sample of management agreements to assess their potential effectiveness in relation to set objectives, the prescribed management, additionality and value for money. This module was multi-faceted and addressed a wide range of objectives.

1.4 A sample of 484 agreements was evaluated over the three years of the project. The evaluation covered a number of stages, including a desk study, agreement holder interviews and field surveys.

1.5 An appraisal and evaluation of each agreement was core to the project. This involved a review and assessment of each sample agreement by a multi-disciplinary team of specialists. Each agreement was evaluated and scored in relation to established criteria. The evaluation also included an assessment of the additionality and value for money provided by the agreement. These agreements were evaluated in terms of their landscape type and reported in landscape topic reports.

1.6 Additional assessments were also made of Special Projects operating under the Scheme, the Scoring System and Management Plans, and these were reported separately. Subsamples of the original 484 sample agreements were used for these assessments.

Module 2

1.7 Module 2 provided an overview of the ecological characteristics and ‘quality’ of the land entered into the Scheme.

1.8 A sample of 451 agreements was field-surveyed during 1998 and 1999. All land cover under agreement was allocated to Biodiversity Acton Plan (BAP) Broad and Priority Habitats. Vegetation quadrats were also recorded, one at random in each agreement and one in each of the Priority Habitats found in each agreement.

[1] Formerly known as Institute of Terrestrial Ecology (ITE).

INTRODUCTION

2.1 This report provides an explanation of the methodologies used to conduct an environmental evaluation of the Countryside Stewardship Scheme (CSS).

Objectives of the Countryside Stewardship Scheme

2.2 CSS is a grant scheme that offers payments to farmers and other land managers for conservation of the countryside. It aims to make conservation part of normal farming and land management practice.

2.3 In general terms the scheme seeks to:

- sustain the beauty and diversity of the landscape;
- improve and extend wildlife habitats;
- conserve archaeological sites and historic features;
- improve opportunities for countryside enjoyment;
- restore neglected land or features;
- create new wildlife habitats and landscape features.

2.4 The scheme operates throughout England although, nationally, it applies to land predominantly outside Environmentally Sensitive Areas (ESAs). The Scheme targets a number of specific landscapes types (see list below), while locally focussing on particular areas within each county. The national target landscapes are:

- Chalk and Limestone Grassland
- Lowland Heath
- Waterside Land
- Coastal Land
- Upland
- Historic Features – Old Orchards
- Field Boundaries
- Arable Field margins
- Countryside around Towns
- Old Meadows and Pastures
- Historic Features – Parkland, Traditional Buildings and other features

2.5 CSS management agreements run for 10 years. They provide annual payments for following prescribed management practices, and supplements for additional work over and above annual management. Additional payments may be made for access agreements and for capital items that contribute towards achieving environmental benefits.

2.6 Although launched in 1991 by the Countryside Commission, responsibility for the scheme was transferred to MAFF in 1996, and, at the time of this project, CSS was run from MAFF's nine Regional Service Centres (RSCs). A team of Farming and Rural Conservation Agency (FRCA) (now Rural Development Service) CSS Project Officers provided professional and technical advice to applicants and agreement holders.

2.7 In 2000, approximately 10,000 agreements were in operation throughout England.

Research Brief

2.8 The requirement was to establish the extent to which the Scheme was able to bring about environmental enhancement or protection, and provide value for money, or had the potential to do so.

2.9 The monitoring and evaluation of CSS was a contract undertaken for MAFF by ADAS, CEH and CCRU. It was a three-year study, forming part of a broadly-based ongoing evaluation of the overall performance of the Scheme. The specific objectives were to obtain information that would contribute to:

- an assessment of the overall environmental impact of the Scheme, particularly in relation to its stated objectives;
- the effective implementation and development of the Scheme.

2.10 The work was divided into two related but distinct modules.

2.11 Module 1 (Paras. 2.13-2.18) involved assessments of a sample of CSS agreements within each of the landscape types in the Scheme, in terms of their objectives, appropriateness, environmental effectiveness and feasibility (Landscape Topics). It concentrated, where possible, on agreements signed after MAFF took over responsibility for the Scheme during 1996. Separate studies (Special Topics) were also conducted on the operation of the Scoring System, and on contributions made by Management Plans and Special Projects.

2.12 Module 2 (Paras. 2.19-2.21) provided an overview of the ecological characteristics and 'quality' of the land in the Scheme. The sole objective of this second module was to characterise the agreement land to provide an indication of the likely changes in botanical composition which may have occurred as a result of the management during the life of the agreement.

Module 1

Landscape Topics

2.13 More specifically, the objectives for Module 1 were to assess the potential environmental impact of the Scheme in relation to its overall objectives by means of a holistic examination of information obtained from a survey of a representative sample of CSS agreements. In particular to assess whether:

- the objectives agreed for the sample site were appropriate and adequate, in terms of feasibility and the environmental context or potential of the land;
- the management prescriptions were appropriate in relation to the objectives;
- the agreement was in accordance with a declared targeting strategy;
- the agreement was maintaining, or had the potential for enhancing, environmental interest which might otherwise have been reduced or lost, or had not previously existed;
- the agreement had not, or was not likely to, result in adverse affects or changes elsewhere on the holding;
- the agreement had the potential to provide value for money.

2.14 Each agreement was assessed as a whole, covering wildlife, landscape, access and the historical aspects of the scheme. The assessments covered the entire farm, not just the agreement land, so that the cross compliance elements of the scheme could be tested.

2.15 Twelve reports were produced, one for each of the eleven landscape types plus one on educational access. They detailed the nature of the assessments, conclusions and recommendations for the future of the Scheme.

Management plans

2.16 As the role of management plans in CSS agreements may be further developed in the future, their contribution to the effectiveness of the scheme was evaluated. The following issues were assessed and reported (Finch, 2000a):

- the administrative process;
- quality;
- environmental effectiveness.

Special Projects

2.17 A further study investigated the use and value of special projects in producing environmental outputs that provided value for money and were consistent with the objectives of the scheme. The resulting report (Finch, 2000b) identifies:

- the role of special projects;
- the administrative process;
- the quality/ease of implementation;
- their effectiveness;
- additionality.

Scoring system

2.18 An evaluation was conducted (Morris & Short 2000) to assess to what extent the Scheme was delivering the following:

- agreements which met local and national targets;
- sites which offered the greatest potential benefits;
- targeting resources which offered the best value for money;
- consistency across regions.

Module 2

2.19 Module 2 studied the botanical characteristics and quality of the land under agreement in the Scheme. The aim was to identify the environmental resource receiving protection under the Scheme, and to gain estimates of vegetation character, and hence ecological quality, of all agreement land and in terms of UK Biodiversity Action Plan (BAP) habitats. This also provided a baseline for future monitoring of change in ecological quality.

2.20 The module was centred on a field survey performed to assess ecological quality at both national and regional scales. These findings will assist in determining the efficacy of the Scheme in achieving both regional and national targets of habitat

protection, including those set out by BAPs. The objectives of the ecological evaluation were to:

- obtain national estimates of the extent of BAP Broad and Priority Habitats under Countryside Stewardship Agreements;
- obtain national estimates of vegetation character, and hence ecological quality of all agreement land;
- obtain national estimates of vegetation character, and hence the ecological quality, of BAP Priority Habitats on Agreement land;
- analyse the distribution of areas and vegetation characteristics of agreement land (with special reference to Priority Habitats) with regard to geographic location, agreement age and type, and other factors as appropriate; and
- establish a baseline for the future evaluation of changes in ecological quality.

2.21 This module was conducted independently from the Module 1 and resulted in a single report (Carey, 2000b).

DEVELOPING THE METHODOLOGY

Background

3.1 The principal requirements of the methodology developed for this project were that it should be:

- transparent - the reasons for a decision or conclusion to be fully recorded and justified;
- repeatable - the methods used to be fully documented, where possible following standard methodologies, and the data recorded in a format which permits re-survey and evaluation at a later date.

3.2 The methodology devised for Module 1 comprised a series of activities:

- Literature Review
- Preparation of Protocols
- Sample Strategy
- Desk Study
- Agreement Holder Interviews
- Field Surveys
- Appraisal Process
- Reporting

3.3 The main activities in the methodology for Module 2 are the sampling strategy, field survey, data analysis and reporting.

3.4 The outputs of Module 1 consisted of twelve landscape topic reports (four in each of the three years of the project); with a further three reports on special topics (Special Projects; Management Plans and Scoring System) produced at the end of the project. All reports, including the Module 2 report (Carey, 2000b), are detailed in the references and are summarised in an Overview Report (Carey et al, 2000).

Literature Review

3.5 As a first stage, a literature review was conducted by CCRU (CCRU, 1997 unpubl.) reviewing past monitoring and evaluation schemes to identify the methodologies used and the problems encountered with these. Although thirteen reports were examined, the principal report covering the whole scheme was prepared by Land Use Consultants in 1996. The main limitations to the data were due to a limited sample size and small control group, the short monitoring period and changes to the scheme during the monitoring period.

3.6 To limit problems that can be associated with sample size, a 10% (500 cases) sample was selected for this study (see paras. 3.11 and 3.12). Problems associated with the short monitoring period have been addressed by Module 2 which is specifically aimed at providing baseline data for future resurvey and for use in predictive models to assess likely change.

Preparation of Protocols

3.7 In order to ensure consistency across the three years of evaluation, all key activities were governed by detailed protocols to ensure the methods remained consistent. The use of detailed protocols also allowed changes to the methods to be incorporated with the minimum interference with previous data.

3.8 The protocols were initially drafted by specialists within each individual organisation responsible for carrying out a specific task and then subjected to review by the partner organisations. Changes requested by the partners were discussed and, where necessary, the protocols were amended. The finalised protocol was then submitted to MAFF for further review and comment. Any changes requested by MAFF were incorporated.

3.9 For Module 1, protocols were completed for the tasks shown in Table 3.1 below.

Table 3.1. Details of Protocols.

Key Activity	• **Task**	**Appendix**
Sampling Strategy	• Sample design • Search MAFF database • Sample selection	1 2 3
Desk Study	• Preparation of survey plans • Extraction of file data	4 5
Data Collection	• Agreement holder questionnaire • Field survey and historical guidelines • Educational Access	6 7 8
Evaluation	• Contextual analysis • Appraisal and scoring	9 10

3.10 In addition to the above, the project was governed by the ADAS QMS system and standard operating procedures.

SAMPLING

Sampling Strategy - Module 1

Sample Design

3.11 MAFF estimates indicated that 5,000 agreements were likely to be completed during the period 1996-1999. With the aim of drawing approximately 10% as a sample, the sample target size was 500 agreements.

3.12 The sample was randomly selected with proportional allocation over the landscape types (also known as lead landscapes). To prevent over-representation of one landscape type causing under representations of others, the sample was limited to a maximum of 50 per landscape type and a minimum of 33. It was estimated that this would give a standard error of between 6% and 8%.

3.13 One of the topics selected for study, Educational Access, is not a lead landscape type, but a management option (category) running across all landscape types. This was selected for evaluation along with the Watersides, Uplands and Countryside around Towns landscape types in the first year of the study. Since all samples were selected at random, it was possible to select the same agreement in both the Educational Access and one of the other three landscape types. In the event, in 1996, five agreements were duplicated. (In fact, in addition to the 35 educational access agreement sample sites, a further 15 from the other three topic areas were also found to have educational access agreements.)

3.14 Based on the pattern of applications in 1996, the sample was designed to reflect the abundance of the different landscape types within the Scheme at that time, subject to the limits explained in 3.12 above of 33 and 50. A minor modification was made in 1999 to the original target to take account of the increased numbers of Arable Field Margin agreements and the relatively fewer numbers of Field Boundary agreements. The final target sample and achieved sample are shown below (Table 3.2)

Table 3.2. Number of agreements sampled in Module 1 activities.

Topic	**Year of Assessment**	**Target Sample Size**	**Achieved Sample Size**
Uplands	1997	50	46
Watersides	1997	50	42
Countryside around Towns	1997	33	32
Educational Access	1997	33	35
Calcareous Grassland	1998	50	50
Coasts	1998	34	34
Lowland Heath	1998	33	32
Historic Landscapes	1998	50	48
Field Boundaries	1999	34	33
Arable Field Margins	1999	50	51
Orchards	1999	33	33
Old Meadows and Pastures	1999	50	48
Total		**500**	**484**

3.15 Although the brief required that the sample should reflect the management measures adopted for each landscape type, based on a sample size of 500 and the principal stratification into the twelve topics, further subdivision was not considered likely to yield results which could provide a great deal of statistical confidence. Further stratification was not adopted, although the analysis of the final results would allow, due to the sample size, comparisons to be made between a number of criteria such as type of applicant, size of farm, geographical location etc.

Sample selection for Lead Landscapes

3.16 This was a two-stage process involving interrogation of the MAFF Countryside Stewardship Scheme database to provide the primary field, followed by random selection. As the study was principally aimed at assessing agreements entering the scheme whilst under MAFF control, the intention was to select only agreements signed in the year immediately preceding the evaluation, or at least since 1996 where insufficient numbers were present in that year. In the event, it was not possible in the case of Countryside around Towns, Historic Landscapes and Coastal agreements to draw the full sample from the immediately preceding year, and the sample was augmented from earlier agreements.

3.17 Using the above criteria, a search of the MAFF database produced the primary field for each landscape type. Sites were selected using random numbers generated by MINITAB, and reserve sites were selected to allow for some refusals.

3.18 Using the O.S. Grid reference for each agreement, the sample was plotted on maps to assist in planning the fieldwork. The geographical reference was also important to allow analysis of the results to be presented and compared by location.

3.19 Following selection of the sample, MAFF RSCs prepared copy files of all the documents contained in the administrative file. The permission of all agreement holders for surveyors to have access to their land was sought by MAFF before releasing the file information. On the very small number of cases where permission was not granted, the file was not copied and an agreement from the reserve list was selected.

Sample selection for Special Topics

3.20 There were variations in the sampling strategy employed for the additional assessments of the Scoring System, Management Plans and Special Projects. The analysis was broadly based on case studies or sub-samples of agreements previously assessed under the twelve landscape topics.

3.21 The Scoring System analysis was based on 21 case studies of 1998 agreements, drawn from the four landscape types assessed in year three of the project, and selected to determine the strengths and weaknesses of the scoring system in use in that year. The rationale for the selection is given in para 3.22 below. Comparisons were then made with the 1999 scoring system to determine whether the weaknesses

identified had been addressed. The agreements were selected using the following parameters:

- file details including the breakdown scores and documentation relating to the Initial and Full Assessments were available;
- at least two cases from each of nine RSCs;
- one case per Project Officer (PO) interviewed.

3.22 The rationale for selecting the sample was as follows:

- the appraisal session or desk study identified a potential 'issue' concerning that case, e.g. more than one score was recorded in the file;
- there was a variation between the Initial and Full Assessments e.g. one appeared low and the other relatively high in comparison; and
- agreements with comparable Initial and Full Assessment scores to provide a control sample.

3.23 Management Plans were included in 202 (42%) of the 484 agreements available (Table 3.2). All 202 were briefly examined as part of the full appraisal process. A random sub-sample comprising 54 of the 202 agreements was selected for detailed examination. This sub-sample included 46 agreements where a Management Plan was mandatory under the Scheme and eight discretionary Management Plans.

3.24 For the Special Projects evaluation, the MAFF Special Project Database was initially used to identify the full range of Special Projects agreed under the Scheme to date and their geographical distribution (although this was incomplete for 1996 agreements and not fully up-to-date for 1998 ones). Of the 484 agreements in the sample, 98 had Special Projects and, since some had more than one, 120 Special Projects were evaluated in full.

Sampling Strategy - Module 2

3.25 The assessment of ecological quality was based upon an unstratified random survey of all agreements in force at the end of 1997, excepting boundary-only agreements. From a target of 500, a total of 451 agreements were surveyed (8.7% of the total agreements up to 1997), accounting for 8,894 ha.

FILE DATA AND AGREEMENT HOLDER INTERVIEW

Desk Study (Module 1)

3.26 The Desk Study involved a systematic examination of the file records held by the RSCs for each case in the sample. The file scrutiny had the following objectives:

- the collection and collation of objective data about the agreement to feed the survey and evaluation stages;
- an objective assessment of the extent to which the agreement, and any supporting written guidance for the agreement holder, was comprehensive, accurate and consistent with the scheme's overall and detailed objectives.

3.27 The desk study also provided information about the project officer's involvement and determined the influence that this had on the content of the final agreement. Subsequently, a judgement was made on whether this involvement was appropriate, based on the outcome of the fieldwork.

Collection of objective data to feed the survey and evaluation

3.28 Information from the file was extracted to allow the field surveyors to identify the site and contact the land manager. Data were collected about the agreement so that these could be cross-checked with data from the site surveys during the evaluation process. The principal data extracted are listed below, together with a brief explanation of their role in the subsequent evaluation:

1. **Objectives.** Identifying the objectives prepared for the agreement, when combined with data from the site survey, allowed the evaluation team to determine if they were appropriate for the site in terms of the environmental resources of the site, its context, the farm type, and the agreement holder's attitude, resources and experience.
2. **Management prescriptions and capital items.** Details on management prescriptions included in the agreement combined with data from the field study were used to determine whether the chosen prescriptions were the most appropriate to achieve the objectives, given the environmental resource on the farm and the stated objective of the agreement.
3. **National and regional Target Areas & national and regional Objectives.** The desk study noted references made to the national and regional target areas and objectives at a number of stages throughout the application process, and the influence they had on the agreement.
4. **Cross compliance.** Data were extracted from the agreement to identify features covered by cross compliance requirements. These data, combined with data from the field study and interview, were used by the evaluation team to determine if cross compliance was likely to be achieved.
5. **Scores.** Data relating to the scores and the supporting reasons for the scores were extracted and recorded for use in later assessment of the scoring system.
6. **Intentions of the Applicant and Project Officer.** Identifying the intentions of the applicant from file correspondence and the application form and comparing it to the recorded advice and notes by the Project

Officer, provided additional data about the effect of the involvement of the Project Officer and the extent to which their intentions were met or frustrated by the applicant. These latter data were important to assist in the determination of missed opportunities.

7. **Designations and Consultations.** The evaluation took account of designations affecting the site, ensuring that the objectives for the site were checked for appropriateness with the designations. In addition, the views of the consultees provided data against which the objectives could be judged. The use that the Project Officer made of consultations was also indicative of the effectiveness of his involvement.

Assessment of written guidance

3.29 The final agreement and any advice provided by the Project Officer were assessed to determine if it was:

- comprehensive;
- accurate;
- consistent with national objectives;
- consistent with regional objectives.

3.30 Any written guidance, including management plans, given by the Project Officer was compared with the guidance provided in the manual 'MAFF Countryside Stewardship Scheme: FRCA Operating Instructions'.

3.31 All data from the desk study were recorded on survey forms provided in the protocol and retained for the evaluation. With the exception of data in relation to the location of the farm, and the address and name of the contact, no data were made available to the surveyors. This was to ensure that the entire farm was assessed to a uniform standard. Prior knowledge of the agreement area and cross compliance features may have resulted in attention being paid to those areas, to the detriment of the rest of the farm. This could have resulted in a failure to identify any missed opportunities.

3.32 In addition, data from the desk study were used to inform the Agreement Holder Interviews in Module 1.

Agreement Holder Interviews (Module 1)

3.33 The purpose of the interview was to act as a check on data collected from the Desk Study; to provide background data about the land holding, the manager, their experience and attitudes; and to record their views on the scheme, the project officer and any advice they had received.

3.34 This provided a valuable insight into the experience of applicants and represented the only practical method of determining the likelihood of cross compliance and the extent of additionality. Useful information about the anticipated side effects of the agreement was also derived from the interviews.

3.35 The survey was conducted as a face to face interview with the agreement holder on site. The answers to a series of structured questions were recorded on a

survey form (Appendix 6). Data collected during the interview were retained for use in the evaluation stage. The following data were collected:

1. **The farming system, farm size, enterprises, labour and extent of agreement.** This acted as a cross-check to data from the Desk Study and provided a reliable indicator of the resources and equipment available to implement the management prescriptions.
2. **Other grant schemes operating on the land.** If other grants were being received, it was important to identify which features were being aided in order to ensure that they were not assessed as missed opportunities by the evaluation team.
3. **Sources of pre-application advice**. Data on the advice and assistance received in preparing the application enabled an assessment to be made of the effect that specialist advice had on the quality of the application and to test whether it affected the initial score.
4. **Understanding of advice and agreement**. This provided an insight into the agreement holder's grasp of their responsibilities, the consequences of the scheme on their business and the subsequent likelihood of the prescriptions being properly implemented and cross compliance being observed.
5. **Additionality**. The interview tested the agreement holder's intentions for the land in absence of the scheme to allow an assessment of the extent of additionality provided by the scheme.
6. **Educational Access**. Supplementary questionnaires were completed for those agreements that included educational access. These were to determine levels of use of the access and the attitude of agreement holders.
7. **Experience of conservation management**. The agreement holder's previous experience provided an indicator, when combined with other data, as to whether they were equipped with the knowledge and experience to implement successfully the management prescriptions and capital items. A lack of experience, combined with a poor understanding of the advice given with the agreement, might result in the management prescriptions not be fully or successfully implemented.

FIELD SURVEYS

4.1 Both Modules 1 and 2 required detailed field surveys to be carried out. The two field surveys were independent of each other in terms of the agreements visited, the nature of the survey and the manner in which the results were summarised.

Module 1

4.2 This survey was designed to investigate whether the landscape, ecological and historical value of farms in the Countryside Stewardship Scheme were accurately classified and evaluated to provide information on the total environmental resource of each holding. The survey strategy sought to adopt and adapt existing systems that were nationally recognised. Where no adequate system existed, the methods used are fully described in the survey protocol (Appendix 7), together with reference data and recording forms.

4.3 A field survey of each sample holding was carried out, collecting information on the landscape, ecology, archaeology and access provision of the whole holding, covering both agreement and non-agreement land. Proformas were developed to collect and record information (Appendix 7). In addition, the surveyors supplied a short pen-sketch outlining the importance of each holding from an ecological, landscape and historical perspective. This provided useful supplementary information for the appraisal process.

4.4 A team of two people, an ecologist and a landscape architect, surveyed the whole farm. Neither surveyor was aware of the extent of the agreement land in relation to the entire land holding, as it was important that all areas were surveyed to the same standard. Specific instructions and details of the survey methods are presented in Appendix 7.

4.5 On completion of the survey the data were copied to provide a secure back-up copy and passed to the evaluation team for summarising.

Ecological Survey

4.6 The main ecological survey system was the Nature Conservancy Council (NCC) Handbook for Phase I habitat survey (NCC 1990). Phase I is a system for classifying and recording habitats according to the primary plant community present. The method of recording communities is contained within the NCC handbook. This was supplemented by a ‘site pen-sketch’, whereby the farm was linked into the surrounding ecological context. Elements from the ITE Countryside Survey Field Handbook also were incorporated. In addition to the mapped Phase I information, target notes on other ecological features relevant to CSS agreements were added to the map as follows:

- the presence and type (sown or natural regeneration) of arable field margins (not included in Phase I methodology);
- the ecological value of hedgerows;
- the ecological value of land on the holding; and
- individual features or species of conservation interest.

Landscape Survey

4.7 The landscape survey was devised using recognised methodologies developed within ADAS (see protocol, Appendix 7) and incorporated both a traditional 'landscape assessment' and survey of its historic character.

4.8 A landscape architect initially surveyed the broad landscape of the land surrounding each holding before beginning the detailed landscape assessment of the holding itself. Individual features, and the extent to which they reinforced or detracted from the overall landscape character, were recorded including:

- type and condition of boundary features;
- presence of individual mature trees or tree-lines;
- presence of water bodies;
- presence and condition of existing public access on the holding; and
- evidence of any tree planting and other environmental work

Features of historic/archaeological interest were also recorded and included:

- historic landscape features such as ridge and furrow, meadow water channels, etc.;
- important traditional buildings;
- important routeways such as green lanes; and
- old parkland features such as pales, ha-has and iron fencing.

4.9 A landscape historian selected a smaller sample of sites to visit, based on the considered importance of features identified from the landscape survey findings and Sites and Monuments Records (SMR). These comprised a cross section of the twelve landscape types. In these cases, a separate landscape history survey was undertaken and included the identification of features such as:

- old industrial remains;
- earthwork remains of former settlements, fortification or burial features.

In order to ascertain information from the SMR, normally held at local County Archaeological Units, County Archaeologists were sent details of the sites being surveyed, with a request for information relating to those sites. The SMR is a nationally recognised source of information pertaining to historical features.

4.10 The results of these surveys were recorded on specifically designed survey forms to provide base data for future surveys and for the evaluation team.

4.11 The survey was principally based around recording the location of features on maps at a scale of 1:10,000 or 1:5,000, which were then described on data record sheets using guidance notes and sketches included at Appendix 7. Fixed-point photography was used to supplement descriptions of important features and to assist in the appraisal process.

Module 2

4.12 The field survey for Module 2 was the fundamental component of this Module, forming a baseline for future study. The survey coincided with the Countryside 2000 Survey, a national survey of land cover and vegetation, and used a methodology that was largely comparable.

4.13 The land was mapped using UK Biodiversity Action Plan Broad and Priority Habitats. Broad Habitats were mapped using a vegetation key, and Priority Habitats on the basis of expert knowledge and the definitions available at the time of the start of the survey. The "Improved grassland" Broad Habitat was subdivided for this survey into "Highly improved grassland", "Semi-improved/improved grassland" and "Sown light grass mixtures". All land with a field margin management code was recorded as a Cereal Margin Priority Habitat; as all fell within the defined Cereal Field Margin Priority Habitat even when cereals were not present. Mosaics were also identified. This information was digitised for analysis using Arc-View.

4.14 A random $200m^2$ vegetation quadrat was recorded within each agreement using Countryside Survey methods. In addition, a quadrat was recorded in every Priority Habitat present at the site, excluding any that had been recorded by the random quadrat. The quadrat positions were mapped and marked in the field to allow precise relocation. Each quadrat was classified in terms of National Vegetation Classification (NVC) (Rodwell, 1991-95) and Countryside Vegetation System (CVS) *(*Bunce et al., 1999*)*; species number and presence of rare[2] and scarce[3] species were also quantified. The quadrats were co-located with the spatial data in the database.

4.15 In addition, a variety of observations were taken (e.g. photographs and target notes on rare species and/or weed infestations) to aid interpretation of future surveys. These data have not been entered digitally, but have been archived at CEH.

[2] Found in less than 16 10km squares in Great Britain.
[3] Found in 16-100 10km squares in Great Britain.

APPRAISAL PROCESS

5.1 The appraisal process was the core of the evaluation for Module 1. It involved a multi-disciplinary team of specialists working together to review and evaluate the sample of agreements. The process was carried out in three stages:

- contextual analysis
- evaluation
- appraisal

Contextual Analysis

5.2 The data obtained from the surveys were complemented by contextual data for the area in which each site lies. The purpose of this was to provide additional background data to the evaluation team.

Contextual Area

5.3 The 1 km square containing the agreement land was referred to as the focal square. Information was assimilated for this focal square. In addition, the same datasets were used to assimilate information for the eight 1 km squares surrounding the focal square and also for the sixteen 1 km squares surrounding those. This system of tiers gives the character of the area immediately surrounding the agreement land and also puts the agreement land in its place in the wider countryside.

Data for contextual file

5.4 The datasets used (apart from historical land-use) were included in the Countryside Information System[4]. The historical land-use data were digitised from the published maps of the Land Utilisation Survey 1930-47. In addition to the datasets outlined below (Table 5.1), the members of the appraisal team had descriptions of the Countryside Character Map (Countryside Commission/English Nature) and ITE land classes (Bunce et al, 1996) and also copies of Scheme objectives, both national and local.

Additional Files

5.5 A list of the Biodiversity Action Plan species[5] was produced for the 10 km square in which each of the agreements was found. The taxonomic groups included were breeding birds; wintering birds; vascular plants; mammals; reptiles; amphibians; moths and butterflies; grasshoppers and crickets; and dragonflies. This information was used by the ecologist to make an assessment of the ecological potential of the area surrounding and including the agreement land.

5.6 Data collected on the historical background of the area of the farm and its surroundings were provided from the County Sites and Monuments Records (SMR) to the landscape historian, following a written request.

[4] Maintained at CEH, Monks Wood

[5] Source - Biological Record Centre, CEH, Monks Wood; BTO (breeding birds).

Table 5.1 The contents of the contextual file for each individual agreement

Section	Description	Units/Scale
Section 1 Background	Report for Agreement Number	Agreement number
	Grid Reference:	1 km square
	Mean altitude:	metres
	County:	1 km square
	Character Area:	1 km square
	ITE Land Class:	1 km square
Section 2 Designations	Common Land	hectares/km
	Moorland Line	hectares/km
	SSSI	1 km square
	National Park	1 km square
	AONB	1 km square
	ESA	1 km square
	Heritage Coast	1 km square
	LFA	1 km square
Section 3 Ordnance Survey Geographic Reference	Open Country	hectares/km
	Water Inland	hectares/km
	Water-Sea	hectares/km
	Rivers	hectares/km
	A-Roads	hectares/km
	B-Roads	hectares/km
	Minor Roads	hectares/km
	Motorways	hectares/km
	Towns	hectares/km
	Villages	hectares/km
	Canals	hectares/km
	Railways	hectares/km
Section 4 Land Cover from CS 1990 Land Cover Map	Coastal	hectares/km
	Coniferous Woodland	hectares/km
	Dense shrub Heath	hectares/km
	Heathland Grass	hectares/km
	Inland Bare Ground	hectares/km
	Water Bare Ground	hectares/km
	Managed Grassland	hectares/km
	Open Shrub Heath	hectares/km
	Rough Grass	hectares/km
	Saltmarsh	hectares/km
	Estuary	hectares/km
	Suburban	hectares/km
	Tilled Land	hectares/km
	Unclassified	hectares/km
	Urban	hectares/km
Section 5 Historical Land Use	Arable	hectares/km
	Meadowland	hectares/km
	Industrial	hectares/km
	Urban Zone	hectares/km
	Waterways	hectares/km
	Mixed Woods	hectares/km
	Heathland	hectares/km
	Moor	hectares/km
Section 6 Countryside Information System	Soils	km
	Geology	km

Evaluation

5.7 In the evaluation, each expert independently provided responses to a series of evaluative questions in relation to their specific interest in ecology, landscape, archaeology, the agreement holder interview and the desk study. These were designed to address specific concerns in the evaluation process. The questions themselves are reproduced in Table 5.2 below.

5.8 The data from the survey, together with the contextual information for each site, were given to each member of the evaluation team. The evaluation team consisted of five members, representing the main survey interests:

- Chairperson
- Ecologist
- Landscape architect
- Landscape historian
- Researcher on farmer interview/desk study

5.9 Each member summarised the survey data that they had collected and entered the information for each site against a set of common evaluation criteria (key characteristics). The evaluation criteria provide the first point of synthesis of the empirical information collected during the surveys. The proforma was transparent and traceable back to specific pieces of information from the empirical surveys. At this stage the proforma required a descriptive summary of key characteristics of the agreement only. Scores were only added during the final evaluation.

5.10 The criteria used in this element were based on the principal objectives of the study as a whole, therefore not all of the criteria were addressed by each of the surveys to the same degree. The relative importance of the criteria could vary from site to site.

5.11 A common set of key criteria was applicable to all surveys and these were identified as first generation criteria. They were:

- Agreement Negotiation;
- Appropriateness;
- Environmental Effectiveness;
- Compliance;
- Side Effects.

5.12 To allow these first generation criteria to be measured empirically they were expanded into more detailed second-generation criteria, which provided the fine grain of issues, but were not common to all surveys. These second-generation criteria were the questions against which the agreements were evaluated. The table overleaf (Table 5.2) shows the first and second-generation criteria.

Table 5.2. Evaluation criteria addressed in Appraisal Process

Agreement Negotiation

Q1. How consistent, effective and accountable has the scoring system been?
Q2. How comprehensive, accurate and consistent has the written advice to agreement holders been?
Q3. To what extent have agreements been modified after the first application?
Q4. What has been the influence of the Project Officers and partner organisations on the final agreement?
Q5. What has been the experience of agreement holder of the advice given during the agreement negotiations?
Q6. What opportunities to meet the scheme objectives have been missed during agreement preparation?

Appropriateness

Q7. To what extent are the objectives for the agreement land appropriate, adequate and feasible (in relation to the current and potential environmental quality of the land).
Q8. To what extent are management prescriptions appropriate in relation to the objectives of the agreement?
Q9. To what extent do the objectives of the agreement accord with the overall objectives of the scheme?
Q10. Is the agreement in accordance with the agreed targeting strategy?

Environmental Effectiveness

Q11. To what extent is the quality and character of the landscape potentially being maintained or enhanced by the agreement?
Q12. To what extent are biodiversity, historical features, access and landscape features actually or potentially being maintained or enhanced by the agreement?
Q13. To what extent are high quality features that are difficult or impossible to replace being maintained?
Q14. To what extent do management plans contribute to the agreement and its objectives?
Q15. To what extent do special projects contribute to the agreement and its objectives?

Compliance

Q16. To what extent are agreement holders likely to comply with the agreement?
Q17. To what extent do the agreement holders' attitudes, motivations, objectives and experience accord with the environmental objectives of the scheme?
Q18. To what extent are cross-compliance elements of agreements likely to be met?
Q19. To what extent is the agreement holder able to carry out the work prescribed on the agreement land?
Q20. To what extent is the agreement holder satisfied with the agreement?
Q21. What decisions in relation to the agreement land would have been made in the absence of the scheme?

Side Effects

Q22. Is the agreement maintaining, or does it have the potential for enhancing, environmental quality on the agreement land that might otherwise have been reduced or lost or might not have existed?
Q23a. What are the likely effects or changes in environmental quality on the rest of the holding as a result of CSS participation?
Q23b. What are the likely effects or changes in environmental quality on adjacent land outside the holding as a result of CSS participation?
Q24. To what extent do the agreement objectives accord with other applicable environmental policy designations (Countryside Character maps, English Nature Natural Areas, Biodiversity Action Plans)? (also relevant to appropriateness)

5.13 The outcome of the summary stage was a completed evaluation proforma with all of the second-generation criteria questions completed, but not scored.

Appraisal

5.14 In the appraisal, the appraisal team collectively discussed and appraised each agreement, using the individual expert responses provided in the evaluation stage. An overall summary score and supporting written commentary was produced for each of the following five criteria:

- agreement negotiation;
- appropriateness;
- environmental effectiveness;
- compliance;
- side effects.

An assessment of the additionality provided by the agreement was also undertaken.

5.15 The members of the appraisal team met and discussed an overall assessment of each agreement based on the individual assessments produced from the evaluative proformas. At this point conflicts of interest between disciplines became apparent and were discussed and resolved by expert judgement of the evaluation team.

5.16 Although the evaluation process was based on expert judgement, it was a requirement of the brief that the process was transparent and repeatable. Therefore, where possible decisions were rule based and each rule recorded for future use.

5.17 The team then scored each specialist's response to the second-generation criteria. The score comprised two elements. The first, either low or high, indicated the relevance of the answer to the first generation criteria; and a second score indicating whether the effect was positive or negative. The descriptors that informed the award of a positive or negative score are reproduced in Table 5.3 below. These descriptors express the extreme ends of the spectrum of possibilities. In reality most agreement lay between these extremes.

Table 5.3. Appraisal Scoring System - Descriptors

	NEGATIVE ASSESSMENT	***POSITIVE ASSESSMENT***
	AGREEMENT NEGOTIATION	
Q1	Score has little rationale and takes little account of historic, landscape or ecological features, or access.	Score is both rational and effective and takes full account of historic, landscape and ecological features, and access where appropriate.
Q2	Written advice is poorly presented, unclear unhelpful, shallow and misleading.	Written advice is well presented, clear, helpful, comprehensive and thorough.
Q3	Changes made detract from the agreement.	Changes made make an important contribution to improving the agreement.
Q4	Minimal involvement of the project officer, little pre- or post-application support. Little interest from other organisations.	Project Officer fully involved at all stages, good and positive pre- and post-application support. Good involvement from other agencies where appropriate.
Q5	Farmer's experience is of poor and unhelpful advice which caused concern and did little to further the application process.	Farmer's experience is of good, helpful advice that improved the application process.
Q6	A number of environmental opportunities exist on the farm which could have been included in the agreement.	No missed opportunities - all key environmental features have either been included in agreement, or are covered by x-compliance, or separate funding.

Continued over

	NEGATIVE ASSESSMENT	*POSITIVE ASSESSMENT*
	APPROPRIATENESS	
Q7	Agreement objectives are not appropriate for the site, or are not feasible, given the nature of the site.	Objectives are wholly appropriate, and are feasible.
Q8	Management prescriptions are not appropriate to achieve the objectives for the agreement.	Management prescriptions are wholly appropriate to achieve the objectives for the agreement.
Q9	Agreement objectives do not accord with the scheme objectives.	Agreement objectives fully accord with the scheme objectives.
Q10	Agreement does not accord with agreed targeting strategy.	Agreement fully in accordance with agreed targeting strategy.
	ENVIRONMENTAL EFFECTIVENESS	
Q11	The quality of the landscape is neither being enhanced nor maintained by the agreement.	The quality of the landscape is both maintained and enhanced by the agreement.
Q12	Biodiversity, historic features, access and landscape are neither being enhanced nor maintained.	Biodiversity, historic features, access and landscape are being both maintained and enhanced.
Q13	High quality features are neither maintained nor enhanced by the agreement.	High quality features are both maintained and enhanced by the agreement.
Q14	Management plans have not been used appropriately and effectively as part of the agreement.	Management plans have been used effectively and appropriately as part of the agreement.
Q15	Special projects have not been used appropriately and effectively as part of the agreement.	Special projects have been used effectively and appropriately as part of the agreement.
	COMPLIANCE	
Q16	Agreement holders are unlikely to comply with the agreement. Field survey shows evidence of non-compliance.	Agreement holders are likely to fully comply with the agreement. Field survey shows evidence of compliance.
Q17	Agreement holder not interested in environmental objectives, motivated by economic or agricultural factors	Agreement holder's attitudes and motivations fully accord with environmental objectives of the scheme.
Q18	Cross-compliance elements of the agreement are unlikely to be met.	Cross-compliance elements of the agreement are likely to be fully met.
Q19	The agreement holder is unlikely to be able to carry out the work prescribed in the agreement.	The agreement holder is fully able to carry out the work prescribed in the agreement.
Q20	The agreement holder is wholly dissatisfied with the agreement.	The agreement holder is fully satisfied with the agreement.
Q21	The land would have been managed identically in the absence of the scheme. (i.e. little or no additionality)	There may have been serious environmental damage in the absence of the scheme. (i.e. considerable additionality)
	SIDE EFFECTS	
Q22	The agreement may lead to damage to other environmental quality on the holding.	The agreement is likely to lead to both maintaining and enhancing other environmental quality not specifically covered by the agreement objectives.
Q23 (a)	Environmental quality on the rest of the holding is likely to be damaged.	Environmental quality on the rest of the holding is likely to be maintained or enhanced.
Q23 (b)	Agreement may lead to the environmental damage on adjacent land outside the holding.	Agreement enhances and improves the environmental quality on adjacent land outside the holding.
Q24	The agreement objectives do not accord with other (identifiable) applicable environmental policy designations.	The agreement objectives are fully in accord with other (identifiable) applicable environmental policy designations.

5.18 When all the second generation criteria for one first generation criterion had been scored, an overall score and summary for the first generation criterion was awarded, using a scale of -5 to +5. This score was, to some extent, a subjective analysis of the composite second-generation scores. However, the aim was not simply to reflect the relative number of positive/negative scores, but the importance of the scores to the first generation criterion. Thus, it was not a simple summation of the number of positive scores against the number of negative scores, but a reflection of the severity of the impact the scores might have on the first generation criterion. It was, therefore, possible to have more negative scores, for example, but achieve an overall positive score.

Issues arising from the evaluation

5.19 Additionality was one particular aspect of the evaluation that could not easily be scored; and for which no particular evaluative questions or scoring framework were constructed. The concept of additionality relates to the benefits from the individual agreement that go beyond what the agreement itself would be expected to achieve under the scheme. The concepts considered in respect of additionality are generally accepted as being impossible to quantify in monetary terms with any meaning, although additionality does have some bearing on 'value for money'. In its broader context, additionality is influenced by three distinct but related factors discussed below.

5.20 The first factor is the notion of *what would have happened in the absence of the scheme*. Additionality would be high where the agreement holder would have undertaken none of the tasks covered by the agreement in the absence of the scheme, and additionality is at its highest where they would have undertaken an environmentally damaging operation instead. In this sense, the scheme represents good 'value for money' because of the added benefit. However, where the scheme is paying an agreement holder for something they would have undertaken anyway the additionality is low.

5.21 Additionality also includes, as the second factor, a sense in which *environmental damage is slowed, halted or reversed*. Again additionality is at its highest when environmental damage is reversed and low where it is merely slowed. This factor could also have a relevance to users of CSS sites subject to access agreements in respect of *the uptake of environmental knowledge*. Additionality would be high if those sites providing access engendered a significant positive change in attitude towards the environment on the part of visitors as a result of the visit. It would be low if there was a negligible change in attitudes.

5.22 The third factor influencing additionality relates to *public benefit*, and reflects, to some extent, accountability in the use of public money. If the money is to be provided to the agreement holder, what does the public receive in return? Where the site is crossed by existing or newly created access routes the benefit may be high, or where the habitat for a rare species is enhanced it may also be high. However, if the land is isolated from the public and they receive little direct or indirect benefit then the resulting public benefit is considered to be low. Such benefits might be either consumed, or not consumed. The latter non-consumptive benefits relate to what might be termed 'option' demand. The public receives some satisfaction from knowing of the existence of the sites or scheme, even if they never actually utilise them. The increased awareness of conservation issues on the part of the agreement holder is also a factor relating to public benefit, since a farmer or land owner who acquires new knowledge regarding conservation issues may transfer that knowledge to other aspects of their land management.

5.23 One of the consequences of this taxonomy is that additionality under one of these factors may be high, but it may be low under one or both of the other two factors. For example, if a conservation body managed a site under CSS that was open

to the public generally, including an educational aspect, the public benefit aspect may result in high additionality. Should the site be of high environmental quality then additionality linked to the halting of environmental decline is only moderate if the scheme is seen as enhancing an area already of high biodiversity. Moreover, the additionality might be deemed low because, in the absence of the scheme, such an organisation might be prepared to undertake such work since it accorded well with its own objectives for the site.

5.24 In the appraisal process, all three of these additionality factors were considered. The findings, based on answers to Question 21 and, to a lesser extent, Questions 17 and 19 (see Table 5.3), were summarised on the cover sheet for each of the sample sites, but no score was given.

5.25 In a similar vein, assessing the extent of missed opportunities presented some problems. Missed opportunities occurred when a feature of environmental significance was not identified and addressed by the agreement. This subject is dealt with in detail in the individual topic reports, but two main types of missed opportunities were identified:

- those which were missed because the agreement was not properly structured;
- those which were missed because the scheme was not structured appropriately to afford protection.

5.26 It was important to identify missed opportunities in order to assist in the evaluation of the Project Officer's performance and the scheme as a whole. The main problem associated with missed opportunities was that, whilst the survey identified the location of these features, it was not always apparent why they had been excluded from the agreement. Sometimes features were excluded for legitimate reasons; for example, because the agreement holder was cautious in their ambitions and keen to negotiate an agreement that was within their capabilities and resources; or, because the feature was covered by another grant scheme. However, on occasions the features were genuinely missed. To determine if a missed opportunity occurred, a rule was established.

5.27 A feature was classified as a missed opportunity if it was both important to the character of an area and under threat, and, it was not included for cross compliance or its presence noted on file as being worthy of protection by a future scheme or an alternative grant scheme.

ADDITIONAL APPRAISAL METHODOLOGY FOR SPECIAL TOPICS

Management plans

Desk Study

6.1 A desk study of the file records for the sample of agreement sites was undertaken focusing on the following questions:

- Was the preparation of a management plan a mandatory requirement under CSS?
- When was the management plan produced?
- Was the management plan funded under the agreement?
- Did the agreement refer to the management plan?
- Who prepared the management plan?

Quality Assessment

6.2 The quality assessment considered if the following elements were included:

- aims or objectives;
- the background context to the site, e.g. statutory designations, surrounding land uses, the wider landscape, together with an evaluation of its importance;
- survey information on the existing condition of the site including landscape, ecology and historical features;
- a proforma work programme including description and timing of the proposed works;
- a clear map referring back to the work programme;
- a check against the full appraisal summary sheet for the agreement.

6.3 These criteria are based on those included in the Project Officer Operating Instructions and the applicants' advisory pack. The plans were subsequently given overall assessments as excellent, good, satisfactory, poor or very poor, using these criteria.

Comparison of Appraisal Scores

6.4 To complement the evaluation, scores given to each sample agreement with a management plan for environmental effectiveness and compliance in the main appraisal were compared with an equal number of agreements in the sample where no management plan was either required or prepared. Only these two criteria, environmental effectiveness and compliance, were used in this analysis in order to isolate the role of management plans to improve the effectiveness of the agreement and to provide sufficient guidance to enable the agreement holder to complete the work involved. The criteria for scoring these two factors are included in Table 5.3 above.

Special Projects

The Evaluation

6.5 Information gathered from the sample agreements with special projects was used to address the issues listed below. The structure for the appraisal of special projects followed, as far possible, that carried out for the full monitoring project.

The role of special projects in CSS

- to confirm the existence of a special project, and details of its content;
- to evaluate the administrative process of setting up the special project;
- to evaluate how a special project is documented in the agreement;
- to evaluate whether all work carried out under special projects is appropriately done in that way;
- to evaluate whether special projects help to achieve the objectives of agreements.

Quality/ease of implementation

- to evaluate whether details for each special project is clear;
- to evaluate the role of the management plan in a special project;
- to evaluate whether skills are available to complete the work required.

Effectiveness

- to evaluate whether special projects lead to environmental benefit on the holdings concerned.

Additionality

- to evaluate whether any of the work carried out on special projects would have been completed in the absence of the scheme.

Scoring System

6.6 The assessment was based on a sample of 21 agreements from 1998, in order to determine the strengths and weakness of the scoring system used in that year. They were selected from the four landscape types assessed under Module 1 in year three of the project, Arable Margins, Field Boundaries, Old Meadows and Pastures and Old Orchards. These strengths and weaknesses were then re-assessed against the 1999 scoring system to see how far improvements had been made.

6.7 The core data were gathered in 21 telephone interviews with the POs who had been involved with each of the selected cases. The interview included specific site related questions and general questions on the 1998 scoring system, and sought suggestions for change. The issues raised were compared against the 1999 scoring system to see if the new system had eradicated or retained these points.

6.8 The interviewer and PO independently prepared for the interview by examining the file for each selected case in order to familiarise themselves with the issues. Important documents used in this preparation included:

- the application and supporting information;
- the Initial Assessment Proforma;
- responses concerning consultation;
- management plans;
- site visit notes;
- the Full Assessment Proforma;

- the signed agreement;

6.9 The methodology was not designed to be statistically representative but to enable a qualitative and in-depth analysis of the scoring system. Individual cases were studied in detail and discussed with the PO concerned. In this way, the effectiveness of the scoring system in delivering appropriate agreements and its overall efficiency could be assessed.

Evaluation Criteria

6.10 Since the scoring system is a key factor in determining the allocation of the scheme budget, it was important to assess the extent to which the system was delivering the following:

- agreements which met the objectives of the scheme;
- agreements which met national and local targets;
- sites which offered the greatest potential benefit for enhancement;
- the targeting of resources to those agreements which offered the best value for money;
- consistency across and within regions.

6.11 Attention was also paid to characteristics associated with applications that may have led to difficulties within the scoring process. These included the size and quality of the proposed agreement; the level of environmental knowledge and resources of the agreement holder; and the complexity of the management proposed for the agreement land. The implications of the scoring system for certain landscape types and target areas were also considered.

6.12 The scoring system has two distinct stages. In the Initial Assessment, applications are scored in order to determine if and when they receive a site visit. The assessment of this stage determined if the Initial Assessment was effective in identifying potentially good sites and applications, or identified reasons for potentially good sites being lost. The consistency between POs in the implementation of the scoring system was also examined.

6.13 Following a site visit, usually undertaken by the same PO who completed the Initial Assessment, a draft agreement is prepared. The Full Assessment comprises scoring this draft agreement. To judge the Full Assessment it was necessary to consider:

- whether the scoring system was able to reflect the value of a site;
- how a site related to the Scheme objectives at a national, regional and local level;
- the importance of national commitments, such as Biodiversity Action Plans, in securing agreements;
- how highly specialised but important sites scored, even though they might have only fulfilled a narrow range of Scheme objectives;
- consistency between POs in the implementation of the scoring system;
- consistency between Regions considering the number and quality of application received in each.

MODULE 2

Data analyses

Analysis of coverage of BAP Habitats

7.1 Both the Broad and Priority Habitats were quantified for each agreement using the ArcView Geographic Information System. These statistics were analysed in terms of location (i.e. nationally and by the nine MAFF Regions), the age of the agreement, and management prescriptions to identify patterns of variation within the data. Making the assumption that the sample was representative of the Scheme as a whole, estimates of the area of each Broad and Priority Habitat in the whole Scheme up until 1997 were made. This was achieved by multiplying proportions of the total area occupied by individual habitats in the sample by the total area in the Scheme up until 1997.

Vegetation

7.2 The vegetation from each quadrat was categorised in terms of the Countryside Vegetation System (CVS) and the NVC. In addition, species counts were given, and Red Data Book and nationally scarce species found in quadrats highlighted. As each quadrat was located within an individual parcel of land with its own Broad or Priority Habitat code, it was possible to analyse the frequency distribution of these indicators by Habitat, and also by the other codes held within the database, e.g. location in the country and age of the agreement.

Rare species

7.3 Records of Nationally Scarce and Red Data Book species were also extracted from the database and these represent the species for which Biodiversity Action Plans have been written.

Statistical issues

7.4 The data on Broad and Priority Habitats were presented in terms of proportions without confidence limits. This is because the underlying distributions were unlikely to be normal, because of the way that individual agreements "sample" Broad Habitats whilst vegetation types tend to have been all-or nothing. As a result, usual methods of assessing errors could have been highly misleading. The area of land of vegetation categories determined by quadrats could, however, be assigned errors because the data were collected objectively, accepting the assumption that the quadrat was representative of the whole parcel of land.

Management Codes

7.5 The frequencies of combinations of management codes (amalgamated to take account of year on year changes) and Broad and Priority Habitats were examined in the data analysis process.

Comparison with Countryside Survey 2000 data

7.6 The distribution of CVS classes and Broad Habitat classes were compared with the results of CS2000 to give a general comparison between the vegetation under agreement and the vegetation in the English countryside as a whole.

REFERENCES

CAREY, P. (1998) *Monitoring and Evaluation of the Countryside Stewardship Scheme: **Topic Report on Upland Agreements***. Report by ADAS, CCRU and ITE to Ministry of Agriculture, Fisheries and Food. MAFF: London.

CURRY, N. & SHORT, C. (1998) *Monitoring and Evaluation of the Countryside Stewardship Scheme: **Topic Report on Educational Access Agreements***. Report by ADAS, CCRU and ITE to Ministry of Agriculture, Fisheries and Food. MAFF: London.

FINCH, C. (1998) *Monitoring and Evaluation of the Countryside Stewardship Scheme: **Topic Report on Countryside Around Towns Agreements***. Report by ADAS, CCRU and ITE to Ministry of Agriculture, Fisheries and Food. MAFF: London.

FINCH, C. (1998) *Monitoring and Evaluation of the Countryside Stewardship Scheme: **Topic Report on Waterside Agreements***. Report by ADAS, CCRU and ITE to Ministry of Agriculture, Fisheries and Food. MAFF: London.

CAREY, P. (1999) *Monitoring and Evaluation of the Countryside Stewardship Scheme: **Topic Report on Lowland Heath Agreements***. Report by ADAS, CCRU and ITE to Ministry of Agriculture, Fisheries and Food. MAFF: London.

HUNT, J & FINCH, C. (1999*) Monitoring and Evaluation of the Countryside Stewardship Scheme: **Topic Report on Historic Landscape Agreements***. Report by ADAS, CCRU and ITE to Ministry of Agriculture, Fisheries and Food. MAFF: London.

PRISCOTT, A. (1999) *Monitoring and Evaluation of the Countryside Stewardship Scheme: **Topic Report on Coastal Agreements***. Report by ADAS, CCRU and ITE to Ministry of Agriculture, Fisheries and Food. MAFF: London.

SHORT, C (1999) *Monitoring and Evaluation of the Countryside Stewardship Scheme**: Topic Report on Calcareous Grassland Agreements***. Report by ADAS, CCRU and ITE to Ministry of Agriculture, Fisheries and Food. MAFF: London.

BARNETT, C.L. CAREY, P.D. FIRBANK, L.G. GARBUTT, R.A. GREENSLADE, P.D. HOWARD, D.C. MANCHESTER, S.J. MYHILL, D. ROBINSON, J. SCOTT, R. J. SMART, S. M. WALKER, K. J. AND WARMAN, E.A. (2000) *Monitoring and Evaluation of the Countryside Stewardship Scheme**: Module 2 The Ecological Characterisation of Land under Agreement.*** Report by ADAS, CCRU and CEH to Ministry of Agriculture, Fisheries and Food. MAFF: London.

CAREY, P. (2000a) *Monitoring and Evaluation of the Countryside Stewardship Scheme: **Topic Report on Arable Margin Agreements***. Report by ADAS, CCRU and CEH to Ministry of Agriculture, Fisheries and Food. MAFF: London.

CRABB, J., SHORT, C., TEMPLE, M., DAUVEN, A., WINTER, M. AND AUGUSTIN, B., (2000) ***Economic Evaluation of the Countryside Stewardship Scheme***. Report by ADAS Consulting Ltd and the Countryside and Community Research Unit, London, MAFF.

FINCH, C. & BLYTHE, C (2000a) *Monitoring and Evaluation of the Countryside Stewardship Scheme:* ***Special Report on Management Plans***. Report by ADAS, CCRU and ITE to Ministry of Agriculture, Fisheries and Food. MAFF: London.

FINCH, C. (2000b) *Monitoring and Evaluation of the Countryside Stewardship Scheme:* ***Special Report on Special Projects***. Report by ADAS, CCRU and ITE to Ministry of Agriculture, Fisheries and Food. MAFF: London.

HUNT, J. (2000) *Monitoring and Evaluation of the Countryside Stewardship Scheme:* ***Topic Report on Orchard Agreements.*** Report by ADAS, CCRU and CEH to Ministry of Agriculture, Fisheries and Food. MAFF: London.

MORRIS, C. (2000) *Monitoring and Evaluation of the Countryside Stewardship Scheme:* ***Topic Report on Old Meadow and Pasture Agreements***. Report by ADAS, CCRU and CEH to Ministry of Agriculture, Fisheries and Food. MAFF: London.

MORRIS, C. & SHORT, C (2000) *Monitoring and Evaluation of the Countryside Stewardship Scheme:* ***Special Report on the Scoring System***. Report by ADAS, CCRU and CEH to Ministry of Agriculture, Fisheries and Food. MAFF: London.

ROUTH, C. (2000) *Monitoring and Evaluation of the Countryside Stewardship Scheme:* ***Topic Report on Field Boundary Agreements***. Report by ADAS, CCRU and CEH to Ministry of Agriculture, Fisheries and Food. MAFF: London.

CAREY, P., FINCH, C., HUNT, J., MORRIS, C., PARKIN, A., PRISCOTT, A., ROUTH, C., & SHORT, C. (2001) *Monitoring and Evaluation of the Countryside Stewardship Scheme:* ***Overview Report***. Report by ADAS, CCRU and CEH to Ministry of Agriculture, Fisheries and Food. MAFF: London.

GLOSSARY

AONB	Area of Outstanding Natural Beauty
BAP	Biodiversity Action Plan
BHS	Biological Heritage Site
CA	County Archaeologist
CCRU	Countryside and Community Research Unit
CEH	Centre for Ecology and Hydrology (formerly ITE)
CF	Community Forest
CoAg	Countryside Agency
CSS	Countryside Stewardship Scheme
DMV	Deserted Medieval Village
EH	English Heritage
EN	English Nature
ESA	Environmentally Sensitive Area
EA	Environment Agency
FC	Forestry Commission
FRCA	Farming and Rural Conservation Agency
FWAG	Farm and Wildlife Advisory Group
FWPS	Farm Woodland Premium Scheme
HIS	Hedgerow Improvement Scheme
ITE	Institute of Terrestrial Ecology (now CEH)
LA	Local Authority
LNR	Local Nature Reserve
MAFF	Ministry of Agriculture, Fisheries and Food
NNR	National Nature Reserve
NP	National Park
NRA	National Rivers Authority (now part of the Environment Agency)
PO	Project Officer
RAMSAR	Designation for internationally important wildfowl sites
RDR	Rural Development Regulations
RoW	Right of Way
RSC	Regional Service Centres (MAFF offices)
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SAM	Scheduled Monument
SMR	Sites and Monuments Register
SNCI	Site of Nature Conservation Interest
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
WGS	Woodland Grant Scheme
WHS	World Heritage Site
WT	Wildlife Trust