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**SmartWood**

*Practical conservation through certified forestry*

Validation  
**Assessment**  
Report for:

Project Climate  
in  
Apley, Lincolnshire, UK

Report Finalized: 28<sup>th</sup> March, 2008  
Audit Dates: 3<sup>rd</sup> January, 2008  
Audit Team: Simon Jeffreys, Gus Hellier

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*Report based on Standard(s): CCB Standards 1st Edition, May 2005*

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## 1 INTRODUCTION

The purpose of this report is to document conformance with the requirements of CCBA project design validation standards by Project Climate Pty Ltd, who are the project proponents, hereafter referred to as "Company". The report presents the findings of SmartWood auditors who have evaluated company systems and performance against the applicable standard(s). Section 2 below provides the audit conclusions and any necessary follow-up actions by the company through corrective action requests.

This evaluation follows Climate, Community and Biodiversity Project Design Standards, First Edition, May 2005. These were not developed by Rainforest Alliance, but by the Climate, Community and Biodiversity Alliance, CCBA. SmartWood CCBA evaluation reports are kept confidential in the draft stage. When finalized and successfully approved, the report is posted on SmartWood's website and that of the CCBA.

The Rainforest Alliance's certification program, SmartWood, was founded in 1989 to certify responsible forestry practices and now focuses on providing a variety of certification and auditing services. In 2005, Rainforest Alliance extended our role as a forest assessor/auditor to standards and services that included verification of forest carbon projects. Rainforest Alliance has the following status with the listed climate related standards and systems:

- Chicago Climate Exchange - we are an *associate member* and an approved *verifier*
- Climate, Community & Biodiversity Alliance – we are a *member* and an approved *verifier*
- Plan Vivo – we are a *verifier*

The CCB Standards are primarily project design standards and demonstrated conformance to the standard in this audit related to the planning, development, and design of the project in the inception or start-up phase. Conformance related to systems, design, and proposed activities in the process of development by the project. The standards were not used to measure project implementation, thus conformance to the standard was not meant to evaluate any delivery of emissions reductions, community or biodiversity benefits, or other results hoped to be achieved through future performance of the project. The CCB Standards were designed to be a tool to demonstrate high-quality project design that should lead to multiple-benefits in addition to carbon sequestration and emissions reductions. Use of the standards may increase confidence in forestry carbon projects.

Dispute resolution: If SmartWood clients encounter organizations or individuals having concerns or comments about Rainforest Alliance / SmartWood and our services, these parties are strongly encouraged to contact SmartWood Headquarters directly. Formal complaints or concerns should be sent in writing.

## 2 AUDIT CONCLUSIONS

### 2.1 Summary of Conformance to CCB Standards

The Project Climate Apley validation audit found that the project proponents met the CCB Standards and the validation was approved at the "Gold" level.

CCB 'validation' is the process whereby an independent third party assesses the design of an afforestation/reforestation, forest management, or reduction of emissions from deforestation or degradation (REDD) project against all CCB Standards' criteria. CCB 'verification' is the process whereby CCB projects are evaluated each five (5) years to determine whether the project is delivering net climate, community, and biodiversity benefits. It is important to acknowledge that the standard is intended to be applied up front in the design phase, often as a

necessary assurance to catalyze financing, rather than to be used as a ‘verification’ standard that would verify and account for the carbon produced and other results achieved in the future.

The following table reports upon the validation audit and level of conformity to the required and optional criteria of the CCB Standards:

### General Section

	Conformance:		
G1. Original Conditions at Project Site	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
G2. Baseline Projections	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
G3. Project Design & Goals	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
G4. Management Capacity	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
G5. Land Tenure	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
G6. Legal Status	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
G7. Adaptive Management for Sustainability	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Optional
G8. Knowledge Dissemination	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Optional

### Climate Section

	Conformance:		
CL1. Net Positive Climate Impacts	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
CL2. Offsite Climate Impacts (“Leakage”)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
CL3. Climate Impact Monitoring	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
CL4. Adapting to Climate Change & Climate Variability	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Optional
CL5. Carbon Benefits Withheld from Regulatory Markets	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Optional

### Community Section

	Conformance:		
CM1. Net Positive Community Impacts	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
CM2. Offsite Community Impacts	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
CM3. Community Impact Monitoring	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
CM4. Capacity Building	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Optional
CM5. Best Practices in Community Involvement	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Optional

### Biodiversity Section

	Conformance:		
B1. Net Positive Biodiversity Impacts	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
B2. Offsite Biodiversity Impacts	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
B3. Biodiversity Impact Monitoring	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
B4. Native Species Use	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Optional
B5. Water & Soil Resource Enhancement	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Optional

### CCBA Validation Level Attained:

Approved	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Silver	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Gold	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

## 2.2 Auditor Recommendation

Based on Company’s conformance with CCBA requirements, the auditor makes the following recommendation:

- Validation approved:*  
No CARs issued
- Validation not approved:*  
Conformance with CAR(s) required

#### Additional comments:

The company complied with and closed out nine corrective action requests issued in the first draft of the validation audit report, which is discussed in section 2.3 below.

## 2.3 Corrective Action Requests

### 2.3.1 Corrective Action Requests (CARs)

*Note: CARs describe required actions or improvements that address COMPANY non-conformances identified during audits. CARs include defined timelines for completion. CARs issued during assessments /reassessments shall be closed prior to issuance of Validation. CARs issued during audits shall be closed within timeline or result in suspension.*

CAR #: 1/08	Reference Standard #: G4.1
Non-conformance: Major <input checked="" type="checkbox"/> Minor <input type="checkbox"/>	[description of non-conformance] It appears that the company does not have ready access to the appropriate silvicultural expertise to ensure the establishment of a fully stocked vigorous plantation.
Corrective Action Request: Company shall either demonstrate a quantifiable in-house silvicultural expertise or obtain the services of an appropriately qualified third party.	
Timeline for conformance: Prior to validation.	
Evidence to close CAR:	Silvicultural expertise has been documented in PDD 1.5, page 11, paragraph 6.
<b>CAR Status:</b>	CLOSED
Follow-up Actions (if any):	

CAR #: 2/08	Reference Standard #: G6.2
Non-conformance: Major <input checked="" type="checkbox"/> Minor <input type="checkbox"/>	[description of non-conformance] Final confirmation that an EIA is not required is yet to be received.
Corrective Action Request: Company shall forward confirmation to SmartWood of the outcome of the Forestry Commission stakeholder consultation and their decision with regard to the need for an Environmental Impact Appraisal.	
Timeline for conformance: Prior to validation	
Evidence to close CAR:	Attachment P details the Forestry Commission response. Following a 14 day public consultation and direct engagement of local stakeholders and conservation groups, they ruled that a formal EIA is not required. (See also PDD 1.5, page 12)
<b>CAR Status:</b>	CLOSED
Follow-up Actions (if any):	

CAR #: 3/08	Reference Standard #: G7.1
Non-conformance: Major <input checked="" type="checkbox"/> Minor <input type="checkbox"/>	[description of non-conformance] Silvicultural monitoring is not specified for the first five years, or establishment phase. Frequency of visits will need to be more frequent than the annual ecological monitoring proposed.
Corrective Action Request: Company shall supply evidence of a silvicultural monitoring programme.	
Timeline for conformance: Prior to validation	
Evidence to close CAR:	Company has modified the PDD document to include details of a monitoring programme. See two additional bullet points, PDD 1.5, page 13.
<b>CAR Status:</b>	CLOSED
Follow-up Actions (if any):	

CAR #: 4/08	Reference Standard #: CL1.1
Non-conformance: Major <input checked="" type="checkbox"/> Minor <input type="checkbox"/>	[description of non-conformance] The total change in carbon socks for the project site was calculated based on the area of site (9.45ha), however, as not all the site will be planted (rides and glades will also be created) this assumption need to be checked and revised as necessary.
Corrective Action Request: Project Climate shall recalculate expected changes in carbon stocks to take account of non-planted land on the project site.	
Timeline for conformance: Prior to validation	
Evidence to close CAR:	See additional final paragraphs of Attachment L. Net planting area has been adjusted appropriately; Company has removed the rides and therefore reduced total planted area to 9.065 hectares.
<b>CAR Status:</b>	CLOSED
Follow-up Actions (if any):	

CAR #: 5/08	Reference Standard #: CL1.1
Non-conformance: Major <input checked="" type="checkbox"/> Minor <input type="checkbox"/>	[description of non-conformance] The initial planting figure given by PC was 4200 trees per hectare. In the planting plan, it was stated that planting will be carried out at approx 2x2 m which would equate to 2500/ha. However, this number goes from 2500 to 4200 trees/ha, (which would add about 40% more to costs for no clear reason, it will not increase end volume).
Corrective Action Request: The initial planting density shall be revised to provide more scientific justification for their prediction and if necessary expected changes in carbon stocks shall be re-calculated accordingly.	
Timeline for conformance: Prior to validation	
Evidence to close CAR:	Company has justified this number by explaining that reducing the initial planting from 4200 to 2500 (2m x 2m) would decrease the carbon stored by the total project by around 9%. The potential market value of the associated offsets is greater than the purchase, planting and maintenance cost of the additional trees. Therefore, Company has chosen to remain at 4200 (1.54m between trees) and have corrected all references as such (Attachment O).
<b>CAR Status:</b>	CLOSED
Follow-up Actions (if any):	

CAR #: 6/08	Reference Standard #: CL1.1
Non-conformance: Major <input checked="" type="checkbox"/> Minor <input type="checkbox"/>	[description of non-conformance] Some discrepancies have been found in figures provided in Attachment N (Table 6)
Corrective Action Request: Project Climate shall ensure that data given in Attachments N (Table 6) and L are consistent	
Timeline for conformance: Prior to validation	
Evidence to close CAR:	Company has modified Tables 6 and L in Attachment N and these are now consistent.
<b>CAR Status:</b>	CLOSED
Follow-up Actions (if any):	

CAR #: 7/08	Reference Standard #: CL1.1
Non-conformance: Major <input checked="" type="checkbox"/> Minor <input type="checkbox"/>	[description of non-conformance] Total stem volume has been calculated using species specific equations from McKay 2003 and total above ground biomass has been calculated using IPCC GPG default Biomass Expansion Factor value. However IPCC GPG states that total above ground biomass should be calculated using the 'volume suitable for industrial processing'. The total stem volume figures derived from McKay 2003 are higher by a factor of more than 2 than those quoted in the UK Forestry Commission yield class tables.
Corrective Action Request: Project Climate shall provide a conservative and defensible bio-mass conversion expansion factor to calculate total above ground biomass.	
Timeline for conformance: Prior to validation	
Evidence to close CAR:	In response to the draft report the client clarified that either of the interchangeable IPCC GPG terms "the volume suitable for industrial processing" or "merchantable volume" is defined. Merchantable ("utilisable" or "saleable") volume is generally defined as the trunk less any growth anomalies (nodes around branches etc).  Forestry Commission yield class tables were historically developed with greater regard to the volume of useable timber than total volume. Created some decades ago, for some applications it is arguable that they have now been superseded (particularly when discussing living biomass). McKay 2003 is the most recent and presumed accurate UK specific study. It was conducted by the Forestry Commission and Forestry Contracting Association, for the Department of Trade and Industry. Its purpose was to measure the average stem biomass of UK trees for use as biofuel. The study was the most recent and defensible study with relation to merchantable volume of UK native species.
<b>CAR Status:</b>	CLOSED
Follow-up Actions (if any):	

CAR #: 8/08	Reference Standard #: CL2
Non-conformance: Major <input checked="" type="checkbox"/> Minor <input type="checkbox"/>	[description of non-conformance] Potential offsite leakages due to project activities have not been quantified.
Corrective Action Request: Company shall attempt to quantify potential offsite leakages due to project activities, document how any negatives are to be mitigated, reappraise the carbon calculation matrix, and report findings to SmartWood.	
Timeline for conformance: Prior to validation	
Evidence to close CAR:	The Project made a final revision to the PDD on March 27, 2008 to indicate such emissions would be accounted for and mitigated in the future. Emissions of this sort would include: transportation of saplings, transportation of man power, or felling and transportation of trees and thinning material.  In the PDD of March 2008, the Project indicated that it would retain 10% of the carbon credits for the purpose of a buffer reserve for permanence and leakage.
<b>CAR Status:</b>	CLOSED
Follow-up Actions (if any):	

CAR #: 9/08	Reference Standard #: CL2
Non-conformance: Major <input checked="" type="checkbox"/> Minor <input type="checkbox"/>	[description of non-conformance] Whilst the company has made an undertaking to use only native species of local or regional provenance, it is not known if such stock is actually available for purchase and use on the project.

Corrective Action Request: Company shall ascertain if native stock of local or regional provenance is available and advise SmartWood accordingly	
Timeline for conformance: Prior to validation	
Evidence to close CAR:	Company has provided auditor with a quotation for supply of saplings that demonstrate the availability of native stock. Certificates of local/regional provenance are also available. (See PDD 1.5, paragraph 3, page 16 and Attachment Q)
<b>CAR Status:</b>	CLOSED
Follow-up Actions (if any):	

### 2.3.2 Observations

*Note: Observations are issued for areas that the auditor sees the potential for improvement in implementing standard requirements or in the quality system; observations may lead to direct non-conformances if not addressed.*

OBS 1/08	Reference Standard & Requirement: G2.2
The without project scenario is that the land continues to be used for intensively farmed arable land. The project manager confirmed that wheat produced on the project site had previously been used for bio-ethanol production and that this would be the most likely future use in the absence of the project but this is not explicitly described in the PDD.	
Observation: The PDD should more explicitly justify that in the without project scenario cereal production would be for bio-ethanol production G2.2	

OBS 2/08	Reference Standard & Requirement: CL 4.1
It may be worth mentioning that it is predicted that in the short term, climate change may increase the growth of trees in higher latitudes due to extended growing seasons, etc.	
Observation: Company should considerate the effect of the climate changes on the growth of the trees.	

OBS 3/08	Reference Standard & Requirement: CM4.4
Project Climate has expressed interest in involving schools or other interested parties in the planting phase of the project so as to increase a sense of local ownership; how this is to be achieved is not totally apparent. Free public access will do much to fulfil this requirement. Company should position itself with respect to how local involvement is to be made during planting phase.	
Observation: Company should further explain how local involvement is to be made during planting.	

## 2.4 Actions Taken by Company Prior to Report Finalization

The company sent responses to the Corrective Action Requests to Rainforest Alliance on the 16th of February, 2008, which were reviewed for compliance by the auditors. The information provided included:

1. "Response to CCBA Validation Assessment Report Corrective Action Requests, 1.1, February 2008" - a document that summarizes the actions taken by company for the closure of each of the CARs issued in the draft report. The report indicates changes made

to the documentation and new evidence or explanations provided to justify issues raised in the CARs.

2. Amended Project Development Document (PDD) version 1.5 was also provided to the auditor team highlighting the mentioned amendments in red.

3. New and amended Attachments - amendments were made to attachments L, N and O and sent to the Auditor team, showing changes in red. New attachments P and Q were created as a response to CARs 2/08 and 9/08.

### 3 AUDIT PROCESS

#### 3.1 Audit Overview

*Note: The table below provides an overview of the audit scope. See standard checklist appendix for specific details on auditor qualifications, staff interviewed, and audit findings per facility audited.*

Location/Facility	Date(s)	Length of Audit	Auditor(s)
Lincolnshire, UK	3 Jan 08	1 day	Simon Jeffreys Gus Hellier

#### 3.2 Description of Audit Process

On the 3rd of January, 2008 a meeting and interview with Project Manager, James West, was carried out in Branston, Lincoln. All relevant documentation was reviewed against the CCBA standards and discussed with Company. A personal interview with one stakeholder representing the Forestry Commission followed the visit the field in Apley. To conclude, the preliminary findings were presented in the context of a closing meeting, and several corrections and documentation sending were agreed with the client.

#### 3.3 Documents reviewed

Project Climate Apley PDD 1 3 (draft), Project Climate Apley PDD 1.4, Project Climate Apley PDD 1.5  
ATTACHMENTS

- A. Map and details of Project land at Apley
- B. Environmental and other Searches
- C. Land Use Policies and Allocations
- D. Footpaths and Rights of Way and Watercourse
- E. Neighbourhood Information
- F. Map of the Neighbourhood
- G. English Nature – National Nature Reserves – Bardney Limewoods
- H. Heritage Trust of Lincolnshire – Limewoods
- I. History of Bardney, Lincolnshire
- J. Ecological Survey and CCBA Biodiversity Assessment
- K. IPCC GPG Chapter 3.2
- L. HGCA Bioethanol GHG calculator
- M. Tree Density, Biomass and Soil Carbon Assessments
- N. Matrix of Projected Carbon Stocks
- O. Planting Plan
- P. Results of Environmental Impact Assessment
- Q. Quotation for Supply of Saplings

#### 3.4 Stakeholder consultation process (if applicable)

The CCBA requirements for stakeholder consultation are that the project design document(s) describing how the project meets CCB criteria must be posted on the CCBA website 21 days prior to the on-site field visit. The Apley project prepared a project design note (referred throughout as "Project Design Document" (PDD), which was posted to the CCBA website on November 29, 2007.

In the comment period, no comments were submitted to the CCBA website. However, in addition to the posting of the PDD document on the CCBA website, SmartWood has contacted via email several local organisations to inform them about the project and the validation process. Almost all of the contacted stakeholders showed interest in the project and several comments were provided. The same day of the audit a personal interview was held to the Forestry Commission's local Woodland Officer who brought in the opinions and comments obtained in the FC's own stakeholders consultation. This consultation was made to measure the need of an Environmental Impact Assessment.

## Appendix A: COMPANY DETAILS

### 1 CONTACTS

#### 1.1 Primary Contact for Coordination with SmartWood

Primary Contact, Position:	James West - Project Director
Address:	Langley Abbey, Norwich, Norfolk, NR14 6DG, UK
Tel/Fax/Email:	T +44 (0)1508 480 289 / M +44 (0)7786 120 640/ F +44 (0)1508 480 826 / E: james.west@projectclimate.org

#### 1.2 Billing Contact

Contact, Position:	James West - Project Director
Address:	Langley Abbey, Norwich, Norfolk, NR14 6DG, UK
Tel/Fax/Email:	T +44 (0)1508 480 289 / M +44 (0)7786 120 640/ F +44 (0)1508 480 826 / E: james.west@projectclimate.org

### 2 SmartWood Website Customer Fact Sheet

*Note: upon Validation, the SmartWood website posts and maintains Customer Fact Sheets for companies with the information in the table below at <http://www.ra-smartwood.org/>*

Field	Text for Customer Fact Sheet	Has this Info Changed?
Contact, Title: (Sales & Marketing)	James West - Project Director	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Address:	Langley Abbey, Norwich, Norfolk, NR14 6DG, UK	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Tel/Fax/Email/Website:	T +44 (0)1508 480 289 / M +44 (0)7786 120 640 F +44 (0)1508 480 826 e: james.west@projectclimate.org www.projectclimate.org	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Products/Descriptions:		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

### 3 Validation Scope

#### 3.1 Scope Definition:

This is a carbon project design validation for an afforestation Land Use, Land Use Change and Forestry (LULUCF) project located at Apley, Lincolnshire, in the United Kingdom. The project will plant mixed native woodland species on bare agricultural ground. The scope of the validation is 9.45 hectares, of which the total planted area of 9.065 hectares. The project intends to sequester the net amount of approximately 22,119 tCO<sub>2</sub>e from the atmosphere over 100 years.

#### 3.2 Type of Legal Entity: Limited Liability Company

#### 3.3 Jurisdiction: UK

## Appendix B: STANDARD CHECKLIST CCB STANDARDS

### 1 Evaluation of Project

Project Name:	Apley Project
Contact for Validation:	James West - Project Director
Address:	Langley Abbey, Norwich, Norfolk, NR14 6DG, UK
Tel/Fax/Email:	T +44 (0)1508 480 289 / M +44 (0)7786 120 640/ F +44 (0)1508 480 826 / E: james.west@projectclimate.org / www.projectclimate.org

### 2 Evaluation Details

Auditor(s), Qualifications:	<p><b>Simon Jeffreys</b> (B.Sc. Rural Environment Studies, Msc Environmental Forestry) is the SmartWood UK Representative, responsible for consolidating and developing the SmartWood UK FSC Chain-of-Custody (CoC) and Forest Management portfolio. Simon's relationship with SmartWood began in 2001. He has an employment history as an Environmental Manager with responsibility for ISO 14001 and forest manager certification schemes. Simon has additional forest management and environmental auditing experience and has successfully completed a SmartWood lead auditor training course.</p> <p><b>Gus Hellier</b> (BSc Biology Oxford, MSc Resource Management Edinburgh) Forest Certification Manager since 2003 with responsibility for Western Europe, Scandinavia and Africa; lead inspector for FSC FM and CoC audits in the UK, Australia, the Solomon Islands, PNG, Tanzania, Portugal; development of certification procedures. Gus has previous experience in carbon sequestration, community forestry and biodiversity research in Mexico, India, Uganda, Mozambique and Indonesia.</p>
Sites Visited:	Field visit to the site in Apley, Lincolnshire, UK.
People Interviewed, Titles:	James West - Project Director

### 3 Standard Checklist

Climate, Community and Biodiversity Project Design Standards, First Edition, May 2005

#### G1. Original Conditions at Project Site - Required

##### Concept

***The original conditions at the project site before the project commences must be described. This description, along with projections (G2), will help determine the likely impacts of the project***

##### Indicators

The original conditions at the project site before the project commences must be described. This description, along with projections (G2), will help determine the likely impacts of the project:

## General Information

1) The location of the project and basic physical parameters (e.g. soil, geology, climate).

Findings	The site is described satisfactorily in the PDD Section G page 6 satisfactorily, and is as follows. The Project is based on a 12.12 hectare site, 8 miles east of the city of Lincoln, Lincolnshire, England. The area is predominantly lowland arable agricultural land, interspersed with pockets of broadleaved woodland and small settlements. Most land is listed as "Grade 3" agricultural land at the lower reaches of suitability for cropping, with a strong clay content. Climate is temperate.  A stream runs down the SE boundary and a public road defines the SW boundary. A recent plantation of broadleaf species has been created along the NW and NE boundaries.  The site is within a complex of ancient woodland sites collectively known as the Lincolnshire Limewoods.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

2) The types and condition of vegetation at the project site.

Findings	2.67 hectares of the project site has been planted in 2003 with native broadleaf trees and shrubs, at a low nominal density of 1100/ha with variable success, that are the subject of a grant under the UK Woodland Grant Scheme. These 2.67 hectares of woodland are excluded from all project activity and calculations of GHG savings so as to avoid additionality issues.  9.45 hectares of bare agricultural land has been left fallow, having been farmed for almost 200 years. It has not been ploughed, sowed or otherwise prepared for cropping in 2007. A swiping of weed growth has been made in the autumn of 2007. Recent cropping rotation has been: 2003 barley; 2004 oil seed rape; 2005 oil seed rape; 2006 wheat.  An Ecological Survey and CCBA Biodiversity Assessment were completed in August 2007 by Ecology Consultancy Ltd. Attachment J to the PDD. In summary, the project site was found to be species poor and dominated by typical arable weed species. The site margins were found to be of greater interest, especially a long established roadside hedge. The richer margins offer a good source of biodiversity immigration.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

## Climate Information

3) Current carbon stocks at the Project site(s), using methodologies from the Intergovernmental on Panel on Climate Change's Good Practice Guidance (IPCC GPG) or other internationally-approved methodologies (e.g. from the CDM Executive Board).

Findings	Current carbon stocks at project site are described and quantified in section G1 of the PDD and in Attachment L Baseline and Projected Carbon Stocks. The calculation of current carbon stocks is based on IPCC Good Practice Guidance. Total baseline carbon stocks are composed of carbon in living biomass, dead biomass and soils. Project climate have assumed that baseline carbon stocks in living and dead biomass are zero and has calculated soil carbon stocks at the project site to be 143 tC/ha based on a soil survey undertaken at the project site. Multiple samples from the top 30 cm of soil were taken from 5 locations across the project site using an auger and sent to the Macaulay Institute for analysis. The assumption that baseline living and dead biomass carbon stocks on project site is conservative but appropriate.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

## Community Information

- 4) A description of communities located in and around the project area, including basic socio-economic information (using appropriate methodologies such as the livelihoods framework).

Findings	No one lives within or immediately adjacent to the project area. An analysis of the immediate neighbourhood has been undertaken and the results are within Attachment E of the PDD. In summary the West Lindsey district is a scattered, rural community living in small villages depending on the agricultural economy and employment based in Lincoln.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

- 5) A description of current land use and land tenure at the project site. (See also **G5**).

Findings	The project area was purchased freehold with vacant possession on the open market in 2007 by the holding company, Land and Capital Limited, which owns Project Climate Ltd. Current land use is fallow arable land. Prior to the sale of the property the land was rotationally cropped under an arable regime.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

## Biodiversity Information

- 6) A description of current biodiversity in the project area and threats to that biodiversity, using appropriate methodologies (e.g., key species habitat analysis, connectivity analysis), substantiated where possible with appropriate reference material

Findings	An Ecological Survey and CCBA Biodiversity Assessment was completed in August 2007 by Ecology Consultancy Ltd. Attachment J to the PDD. It is acknowledged that the date of the survey work was not ideal, an early Spring survey of flora may have identified additional plants, but site inspection confirmed the site biodiversity was low deriving from many years of sustained arable farming. Habitats and vegetation are identified in the report as are fauna. An assessment of with and without project is made, with a positive outcome on the with project scenario. No threats to biodiversity have been identified. In summary the project site was found to be species poor and dominated by typical arable weed species. The site margins were found to be of greater interest, this being due to the margins being more representative of the naturally occurring flora that has survived sustained arable farming.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

- 7) A list of all IUCN Red List threatened species (which encompasses endangered and vulnerable species) and species on nationally recognized list (where applicable) found within the project boundary. (See also **B1**).

Findings	Consideration of IUCN Red List species is made in the Ecological Survey and CCBA Biodiversity Assessment (Attachment J to the PDD). None were found on site. The possible presence of the harvest mouse was acknowledged, but suitable habitat remains within the project margins and will be enhanced by tree planting. Four species that could be associated with the stream were identified (white clawed crayfish, brook lamprey, river lamprey and otter) by the ecologist, but not found on site. It was found that the project would be beneficial to these species, if present, with the cessation of agricultural fertilisers and pesticides and a more stable and permanent habitat.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

## G2. Baseline Projections

### Concept

***An analysis of projected land-use trends is necessary to predict likely on-site changes without implementation of a project. This “without-project” future land-use scenario enables comparison of the project’s likely impacts with what would otherwise have occurred.***

### Indicators

The project proponents must develop a defensible and well-documented "without-project" future land-use scenario and baseline projections.

- 1) Description of the most likely land-use scenario in the absence of the project, identifying whether the scenario assumes that existing laws or regulations would have required that project activities be undertaken anyway.<sup>1</sup>

Findings	A without project scenario has been developed and is documented within the PDD. Essentially, continuation of arable farming is the likely without project position. UK land use in this respect is a free market and not directed by laws or regulations.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 2) A projection of future carbon stock changes in the absence of the project, based on the land-use scenario described above. The timeframe for this analysis can be either the project lifetime (see G3) or the project accounting period, whichever is more appropriate<sup>2</sup>. If there is evidence that non-CO<sub>2</sub> greenhouse gas (GHG) emissions such as CH<sub>4</sub> or N<sub>2</sub>O are more than 15% of the baseline GHG fluxes at the project site (in terms of CO<sub>2</sub> equivalents), they must be estimated.

Findings	The projection of future without project carbon stock changes is described in section G2 of the PDD and in Attachments L (Baseline and Projected Carbon Stocks) and M (HGCA Bioethanol Greenhouse Gas Calculator User's Guide). The without project scenario is that the land continues to be used for intensively farmed arable land. The IPCC Good Practice Guide recommends the use of a (non-specified) peer reviewed model where it is not feasible to directly measure comparable net GHG emissions. The HGCA Bioethanol GHG Calculator has been developed by Imperial Collage London to assess emissions related to wheat production for use in the bioethanol production. The project manager confirmed that wheat produced on the project site had previously been used for bioethanol production and this would be the most likely future use in the absence of the project. However, this is not explicitly described in the PDD. Project climate have used default values given in bioethanol calculator model to estimate that net GHG emissions in the without project case would be 6.143 tCO <sub>2</sub> equivalent /ha/yr. This includes expected emissions of non-CO <sub>2</sub> GHGs, notably N <sub>2</sub> O.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS	OBS 01/08 The PDD should more explicitly justify that in the without project scenario cereal production would be for bioethanol production.		

- 3) Description of how the “without-project” scenario would affect local communities in the project area.

Findings	The without project result would yield negligible change within the community, being		
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<sup>1</sup>This is important for justifying whether the benefits being claimed by the project are truly “additional”, i.e., the climate, community, and biodiversity impacts that would not be likely to occur without the project. For example, actions implemented by the project must not be required by law, or project proponents must make a compelling case demonstrating that the pertinent laws are not being enforced. The project proponents must provide credible and well-documented analyses (poverty assessments, farming knowledge assessments, remote sensing analysis, etc) showing that without the project, improved land-use practices would be unlikely to materialize.

<sup>2</sup> In some cases, the project lifetime and the project accounting period may be different.

	the continuation of long established practice. Due to the very small scale of the project, the area involved is marginal within the agricultural economy. Employment would not be significantly altered.
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

4) Description of how the “without-project” land-use scenario would affect biodiversity in the project area.

Findings	Biodiversity would continue to be restricted by arable farming practices and there may be localised nutrient runoff or pesticide drift. Nutrient enrichment and or spray drift will progressively diminish the adjacent richer and more diverse habitats. Arable cropping is a monoculture on an annual rotation with limited continuity of habitat for species living in the locality.
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

5) Description of how the “without-project” land-use scenario would affect water and soil resources. (See also B5).

Findings	The continuing use of agricultural fertilisers and pesticides has the potential for localised run off or drift resulting in loss of diversity with the loss of low fertility species in field margins and rank growth of weed species. Water quality may be affected negatively. The use of heavy machinery and annual cultivation will not allow a natural soil structure to develop and the build up of an organic horizon.
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

### G3. Project Design & Goals - Required

#### Concept

***The project must be described in sufficient detail so that a third-party can adequately evaluate it. Projects that operate in a transparent manner enable stakeholders and outside parties to contribute more effectively to the project.***

#### Indicators

The Project proponents must:

- 1) Provide a description of the scope of the project and a summary of the major climate, community and biodiversity goals.

Findings	A comprehensive PDD has been written and is supported with numerous attachments. The primary purpose of the project is to develop carbon credits for UK businesses and individuals who wish to “voluntarily” offset their GHG emissions. “Voluntary” is defined as those who are not legally bound to do so under the Kyoto or associated national legislation. This project is to be used as a pilot for future projects throughout the UK. The project is designed to realise the following objectives: 1. Reduce GHG emissions and capture carbon to help mitigate the effects CO2 on climate change. 2. Develop community benefits through creating amenable forest in an area of historical and conservational significance. 3. Create and increase the biodiversity of indigenous and semi-indigenous species within an area of historic biodiversity, in an increasingly urbanised, developed country.
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Conformance Yes  No  N/A   
 CAR/OBS

2) Describe each major project activity (if more than one) and its relevance to achieving the project's goals.

Findings The 9.45 hectare project site will be planted with a variety of two year old native species of trees in the autumn/winter of 2008/9 (dependant on voluntary offset sales). A detailed Operational Plan has been created by Ecology Consultancy Ltd (Attachment O).  
 The stated objectives of the Planting Plan are:  
 1. Maximum carbon sequestration (maximizing forested area, large deciduous trees)  
 2. Maximising biodiversity  
 3. Replicating the local flora and fauna (i.e. Hardy Gang Wood).  
 Oak and ash, the principal species to be planted on the project site, are both long-lived trees and capable of sequestering considerable amounts of carbon over their life time. They are also typical dominants in semi-natural ancient woodlands in the vicinity.  
 Other species are included in smaller quantities to add diversity and provide a seed source for subsequent natural colonisation and spread. Shrubs will be mainly planted along the margins to provide a diverse edge habitat, though hazel and hawthorn will be intermixed with the canopy trees at low density to contribute to the understory.

Conformance Yes  No  N/A   
 CAR/OBS

3) Provide a map identifying the project location, where the major project activities will occur, and geo-referenced boundaries of the project site(s).

Findings Attachment A of the PDD contains a reproduced Ordnance Survey map and shows location Grid References

Conformance Yes  No  N/A   
 CAR/OBS

4) Provide a timeframe for the project's duration and the rationale used for determining the project lifetime. If the accounting period for carbon credits differs from the project lifetime, explain.

Findings The growth cycle of the key species being used (Quercus Robur and Fraxinus Excelsior) dictates a 100 year project lifecycle. This is echoed in the accounting model for measuring actual carbon stocks. The spreadsheet within Attachment L shows the Carbon Calculation Matrix.

Conformance Yes  No  N/A   
 CAR/OBS

5) Identify likely risks to climate, community and biodiversity benefits during the project lifetime. Outline measures that the project plans to undertake to mitigate these risks.

Findings In the initial establishment phase there is a possibility of arson attack or accidental fire. Public access is not going to be encouraged in these early years so as to limit this risk. A commitment to replanting in the event of fire is given in the PDD.  
 The failure of management to establish a fully stocked and vigorous woodland is a possibility if there is insufficient silvicultural input from the management team. Successful establishment of the woodland is central to sequestering carbon. This concern was expressed at audit and is more fully addressed in G4 below and is the subject of a CAR.  
 In the medium term there is the possibility of various recreational uses of the established woodland. Excessive use of the wood could be limiting or detrimental to biodiversity. Appreciable recreational user miles could be incurred resulting in carbon generation which could impact on overall sequestration. These issues will need to be considered through the monitoring programme at that time and possible revision of the Carbon Calculation Matrix.

Other risks to the fulfilment of the project are broader issues arising from possible future climate; this is out of the direct control of the project. Consideration of the possible impacts of climate change has been detailed in the PDD. Climate change studies suggest that an increase in global warming of more than 4°C may result in the death of forests that are unable to adapt to higher temperatures or changing rainfall patterns. The species of trees to be planted at the Project site are not currently close to their limits of viability in this location. Theoretically they can therefore survive moderate amounts of climate change. The Project plan involves replacing dead trees as required to achieve optimal density once the woodland is mature. This may include replacing any trees that die because of climate change with a different species that is adapted to the changed conditions. Changing global climate could create a food shortage that necessitates major changes to the worldwide pattern of agriculture. It is possible that the UK may need to be farmed more intensively than present in response to such changes. A worldwide food shortage could result in significantly higher food prices, which would make it economically advantageous to return the project site to agriculture. PC undertakes that it would not return the Project site to agriculture voluntarily unless it purchases an equivalent number of carbon credits to cancel those sold. If international measures to limit climate change fail and rising temperatures melt the polar ice caps, rising sea levels could flood much of Lincolnshire. Given the extremity of this event, PC is unable to establish a contingency plan as circumstances are too uncertain and the UK Government would probably dictate counter measures.

Conformance Yes  No  N/A   
 CAR/OBS As in G4 below.

6) Document and defend how local stakeholders have been or will be defined.

Findings Local stakeholders are defined as those with a social, political or conservation interest in the projects activities and resultant woodland. As the project will only be possible through the initial sales of voluntary offsets, local stakeholders may also be defined as those who a financial interest. However, their interests will be represented by PC unless otherwise agreed.

The Bardney Limewoods area, including the project site and adjacent Hardy Gang Wood, is already subject to a number of stakeholders:

The Forestry Commission (government funded body) manage a number of local woodlands (including Hardy Gang Wood) and provide grants for local land owners to plant woodland and hedgerow. The 2.67 hectares of project site planted in 2003, whilst outside the scope of the project, remains funded by the Forestry commission. The FC has undertaken stakeholder consultation with regard to the acceptability of the proposed planting. The results of this consultation have been reported back to the company and the auditors.

The Woodland Trust (a national registered charity) own, promote and expand a number of woodlands within the Bardney Limewoods area.

Natural England (government body) manages 384 hectares of Bardney Ancient Limewoods as a National Nature Reserve.

Lincolnshire Wildlife Trust (charitable body) promotes increase in biodiversity throughout the county of Lincolnshire.

It is hoped that the younger local community (Schools, Colleges, Youth Groups, Scouts etc) can also be embraced as stakeholders. The interests of local stakeholders will be defended through consultation and involvement in the project where feasible.

Conformance Yes  No  N/A   
 CAR/OBS

7) Demonstrate transparency by: making all project documentation publicly accessible at, or near, the project site; only withholding information when the need for confidentiality is clearly justified; informing local stakeholders how they can access the project documentation; and by making key project documents available in local or regional languages, where applicable.

Findings All project documentation has been stated to be publicly available, subject only to

	preserving intellectual property rights in this competitive and evolving field. The Project Development Document is available through the CCBA and Project Climate websites. There has been open consultation with stakeholders; verbally, by letter and email. Proposed onsite signage will further guide visitors to these resources.
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

## G4. Management Capacity - Required

### Concept

*The success of a Project depends upon the competent of the implementing management team.*

### Indicators

The project proponents must:

- 1) Document the management team's experience implementing land management projects. If relevant experience is lacking, the proponents must demonstrate how other organizations will be partnered with to support the project.

Findings	The company is formed from a number of UK land based agricultural enterprises with access to staff from across these companies. Ecological expertise has been sourced from a consultancy. An employee has been engaged to manage the whole project. There is no immediately apparent in-house, or consultant based, silvicultural expertise available for this project. This is a key area of knowledge in which it seems there was a deficiency. In the PDD of February 16, 2008 the project explains silvicultural expertise it will obtain.
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> CAR 01/08 issued in the 1st draft report of January 28, 2008 was closed by actions taken by the project proponents, i.e., silvicultural expertise was identified, in the revised PDD of February 2008.

- 2) Demonstrate that management capacity is appropriate to the scale of the project.

Findings	A project manager has been appointed and considerable resources have been applied in preparing the PDD. The project itself is small with less than 10 hectares to be afforested. However, it is very much the case that this is aspiring to be a replicable pilot scheme.
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

- 3) Document key technical skills that will be required to successfully implement the project and identify members of the management team or project partners who possess the appropriate skills.

Findings	Key members of the Group's management team are: <ul style="list-style-type: none"> <li>· Christopher Townsend (Managing Director)</li> <li>· James West (Project Climate Project Director). Extensive sales, marketing and project management experience in various business sectors.</li> <li>· John Stroud F.C.A. (Company Secretary). Responsible for all L&amp;CL group financial, legal and administrative matters</li> <li>· Carl Warren (Farm Manager). Extensive agricultural knowledge.</li> </ul> In relation to this small pilot project, the L&CL group's land management experience is evident from its significant farming interests. The group has access to various external consultants and advisors: <ul style="list-style-type: none"> <li>· Barry Nicholson (Consultant Ecologist). Employed by Ecology Consultancy Ltd.</li> <li>· Joe Magrath (Consultant Agronomist). Employed by Frontier AG</li> </ul>
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	<ul style="list-style-type: none"> <li>· Richard Macmullen (FWAG – Farming &amp; Wildlife Advisory Group)</li> <li>· Baker Tilly (Accountants and Tax Advisors)</li> <li>· Sprake &amp; Kingsley (Solicitors)</li> </ul> <p>The L&amp;CL group therefore has the necessary farming technical, ecological, scientific, commercial, legal and financial expertise to manage this Project. An undertaking has been made to the effect that, "Any additional expertise or advice will be sought from the commercial market or academic organisations"</p>
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

4) Document the financial health of the implementing organization(s).

Findings	<p>All the companies involved in this project are Limited Companies registered in the UK, and as such the company details can be seen on the Companies House, London website. As the venture is new there are not yet accounts filed. Project Climate was registered 10 August 2007, and Land and Capital (Forestry) 8 January 2007. A request was made post audit for a financial summary to be supplied.</p> <p>Land &amp; Capital Group Ltd's financial summary was sent on the 24<sup>th</sup> of March, 2008. As subsidiary companies, Project Climate and Land &amp; Capital Forestry have only incurred debt and have negligible assets. All capital investment, and thus financial security, is currently provided by Land &amp; Capital Ltd.</p>
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

## G5. Land Tenure - Required

### Concept

***There should be no significant land tenure disputes in the project area, or the project should fundamentally help to resolve these tenure issues.***

### Indicators

Based on information about current land tenure provided in **G3**, the project proponents must:

1) Guarantee that the project will not encroach uninvited on private property, community property, or government property.

Findings	<p>The project site was purchased on the open market freehold with vacant possession in 2007. There is no reason to suppose that the company will encroach on other land holdings. Land ownership is well regulated and governed by established law in the UK.</p> <p>An undertaking not to encroach is made on page 12 of the PDD.</p>
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

2) Guarantee that the project does not require the relocation of people, or any relocation is 100% voluntary and fundamentally helps resolve land tenure problems in the area.

Findings	There are neither people resident on the site nor any rights to permanent occupation
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

3) Describe potential "in-migration" of people from surrounding areas, if relevant, and explain how the project will respond.

Findings	Not applicable in the context of this project.
Conformance CAR/OBS	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>

## G6. Legal Status - Required

### Concept

The project must be based on a solid legal framework (e.g., appropriate contracts are likely to be in place) and the project must seek to satisfy applicable planning and regulatory requirements.

During the project design phase, the project proponents should communicate early on with relevant local, regional and national authorities and allow adequate time to earn necessary approvals. The project design should be flexible to accommodate potential modifications that may arise to secure regulatory approval.

### Indicators

The project proponents must:

- 1) Guarantee that no laws will be broken by the project.

Findings	An undertaking to comply with legislation is made on page 12 of the PDD within section G6 Legal Status.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

- 2) Document that the project has, or expects to secure, approval from the appropriate authorities.

Findings	The Forestry Commission (FC) requires a period of consultation with stakeholders to ascertain whether an Environmental Impact Assessment (EIA) is required for a planting scheme outside of the controls of the Woodland Grant Scheme. This consultation has been undertaken and David White of the FC reported back directly to the auditors that this process is nearly complete, apart from one consultee yet to respond, and that he is confident of a favourable outcome. Another recent scheme of 70 ha in the locality did not require an EIA. After the field audit, Project Climate checked with Forestry Commission and received a letter indicating that an EIA was not required, which was sent to Rainforest Alliance.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
	CAR 02/08 issued in the 1st draft report of January 28, 2008 was closed by actions taken by the project proponents, i.e., Forestry Commission letter of February 4, 2008 indicating that an EIA is not required for the project.		

## G7. Adaptive Management for Sustainability - 1 Point, Optional

### Concept

Adaptive management is a formal, systematic, and rigorous approach to learning from the outcomes of management actions, accommodating change and improving management. It involves synthesizing existing knowledge, exploring alternative actions and making forecasts about their outcomes.<sup>3</sup>

Adaptive management is based upon the premise that ecosystems and social systems are complex and inherently unpredictable. Adaptive management views land management actions as learning opportunities and as potential experiments for systematically testing assumptions and identifying adjustments that could benefit the project. It enables a project to evolve to meet changing or unanticipated needs, and can help ensure that the project realizes its goals over the long term.

<sup>3</sup> The definition of Adaptive Management and several of the indicators were based on Nyberg (1999). *An Introductory Guide to Adaptive Management*.

## Indicators

The project proponents must:

- 1) Demonstrate how management actions and monitoring programs are designed to generate reliable feedback that is used to improve project outcomes.

Findings	<p>The Apley freehold is owned by group company L&amp;C (F)L. All project activity is owned by PC. Annual director's report and accounts for each company will be filed with Companies House. Project status will therefore be a matter of public record. The Directors' report comments on trading and business activity and will include a review of progress in complying with the Project Plan and attaining the Project Goals.</p> <p>The Project site will be inspected and photographed annually by Company's consultant ecologist or other appropriately qualified individual. The results of this annual survey will be documented and discussed by the management team in one of their monthly management meetings. Where applicable photographs will be displayed on the Project Climate website</p> <p>The initial 100-year project term will be divided into a series of accounting periods. The first such period is the five years ending 2012. In addition to the normal annual survey, assessments will be made of resident fauna, flora and soil conditions. These results will be compared with the baseline site conditions and corrective actions will be initiated as required. The first accounting date was chosen because the current Kyoto emissions reduction target is for the period 2008/12. The UK Government is planning various initiatives to mitigate the impact of climate change and the Project plan may need to be adapted to reflect a changing legislative environment. The Project will be audited at the end of this initial five-year accounting period to calculate physical carbon stocks. It is planned that subsequent accounting periods will continue at 5 years intervals. However, this may vary if required to by the forthcoming DEFRA "voluntary code of best practice for carbon offsetting" or other emerging regulation or best practice.</p> <p>Silvicultural monitoring was not specified for the first five years or establishment phase in the original PDD. Frequency of visits would need to be more frequent than the annual ecological monitoring proposed, so the company revised the PDD of February 16, 2008 to indicate quarterly silvicultural inspections.</p>
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> CAR 03/08 issued in the 1st draft report of January 28, 2008 was closed by actions taken by the project proponents, i.e., details of a silvicultural monitoring program, in the revised PDD of February 2008. Also see closed CAR 1/08.

- 2) Have a management plan for documenting decisions, actions and outcomes and sharing this information with others within the project team, so experience is passed on rather than being lost when individuals leave the project.

Findings	<p>Annual director's report and accounts for each company will be filed with Companies House. Project status will therefore be a matter of public record. The Directors' report comments on trading and business activity and will include a review of progress in complying with the Project Plan and attaining the Project Goals.</p> <p>The Project site will be inspected and photographed annually by our consultant ecologist or other appropriately qualified individual. The results of this annual survey will be documented and discussed by the management team in one of their monthly management meetings.</p> <p>The initial 100-year project term will be divided into a series of accounting periods. The first such period is the five years ending 2012. In addition to the normal annual survey, assessments will be made of resident fauna, flora and soil conditions. These results will be compared with the baseline site conditions and corrective actions will be initiated as required. The project will be audited at the end of this initial five-year accounting period to calculate physical carbon stocks. It is planned that subsequent accounting periods will continue at 5 years intervals.</p>
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

- 3) Demonstrate how the project design is sufficiently flexible to accommodate potential changes and that the project has a defined process in place to adjust project activities as needed.

Findings	A process of documented annual review is proposed and particular reference made to the need for flexibility is made in section G7 of the PDD. Equally this project is set up with the intention of being a pilot project to inform and educate the proponents to allow development of many further projects.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

- 4) Demonstrate an early commitment to the long-term sustainability of project benefits once initial project funding expires. Potential activities may include: designing a new project that builds on initial project outcomes; securing payments for ecosystem services; promoting micro-enterprise; and establishing alliances with organizations or companies to continue sustainable land management.

Findings	The project is principally funded by the sale of offsets before any initiation of the planting. The land has been bought freehold and is held by one other proponents companies. There is no dependency upon grant aid or other third party funding.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

## G8. Knowledge Dissemination - 1 Point, Optional

### Concept

***Field-based knowledge can be of value to other projects. If actively disseminated, this information can accelerate the adoption of innovative practices that bring benefits both globally and locally.***

### Indicators

The project proponents must:

- 1) Describe how they will document the relevant or applicable lessons learned.

Findings	All projects will be monitored and reported in the annual accounts filed with Companies House. PC is establishing a website that will be used to disseminate knowledge as well as being a marketing tool for PC projects. Information contained on the website will include, but may not be limited to: <ul style="list-style-type: none"> <li>· Flora, fauna and soil surveys</li> <li>· Matters of general interest (eg scientific, endangered species) arising from the assessments and audits conducted at the end of each accounting period</li> <li>· Photographs and status of all PC projects</li> </ul> Signage is to be erected on the Project site informing the public that the afforestation is part of a GHG emissions reduction project. The certifying authority is to be acknowledged on this signage as a way of promoting public awareness.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

- 2) Describe how they will disseminate this information in order to encourage replication of successful practices. Examples include: undertaking and disseminating research that has wide-reaching applications; holding training workshops for community members from other locales; promoting “farmer to farmer” knowledge-transfer activities; linking to regional databases; and working with interested academic, corporate, governmental or non-governmental organizations to replicate successful project activities.

Findings	Should any matter of major scientific interest arise from project activities (eg significant variations in the amount of carbon sequestered from the accepted baseline) that have a general application to project design consideration will be given to publishing a paper in		
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the scientific literature.

In addition to the voluntary code of best practice for the provision of carbon offsetting to UK customers, the UK Government is developing an agricultural market trading scheme for reducing emissions (DEFRA paper RCCF 06/09) so it is likely that some form of official reporting will be established to ensure appropriate dissemination of knowledge. PC commits to complying with any voluntary code of best practice established by DEFRA or the UK Government in this respect.

It is hoped to involve local schools in the site monitoring by establishing the monitoring programme as a school science project. This will help teach the children about climate change and will help the local community take ownership of the Project.

Discussions have also occurred with Dr Brian Reid (University of East Anglia Senior Lecturer) about using this project as the basis of a postgraduate thesis.

Conformance  
CAR/OBS

Yes

No

N/A

## CL1. Net Positive Climate Impacts - Required

### Concept

***The project must generate net positive impacts on atmospheric concentrations of greenhouse gases (GHGs) within the project boundaries and over the project lifetime.***

### Indicators

The project proponents must:

- 1) Use the methodologies of the Intergovernmental Panel on Climate Change's Good Practice Guidance (IPCC GPG) to estimate the net change in carbon stocks due to the project activities. The net change is equal to carbon stock changes *with* the project minus carbon stock changes *without* the project (the latter having been estimated in **G2**). Alternatively, any methodology approved by the CDM Executive Board may be used. This estimate must be based on clearly defined and defensible assumptions about how project activities will alter carbon stocks and non-CO<sub>2</sub> GHG emissions over the duration of the project or the project accounting period.

### Findings

Expected net changes in carbon stocks are estimated in section CL1 of the PDD and in Attachment L. The calculations are based on IPCC GPG on how to estimate changes in carbon stocks. The net change over the project lifetime (100 years) is derived from avoided emissions due to cessation of agriculture and the accumulation of carbon in living, dead and soil biomass due to the planting and growth of trees on site and therefore takes account of expected with and without project changes. Expected changes in carbon pool on site have been based on data taken from an adjacent area of woodland last harvested around 80 years ago, default values from IPCC GPG and biomass equations from the scientific literature.

Tree density, DBH and height have been estimated using data collected from an area of adjacent woodland. Total stem volume has been calculated using species specific equations from McKay 2003 and total above ground biomass has been calculated using IPCC GPG default Biomass Expansion Factor value. However IPCC GPG states that total above ground biomass should be calculated using the 'volume suitable for industrial processing'. The total stem volume figures derived from McKay 2003 are higher than those quoted in the UK Forestry Commission yield class tables, however the project described in the PDD of February 2008, its rationale for selecting the McKay study as the most recent, accurate, and relevant for the UK, which Rainforest Alliance accepts.

Soil carbon is assumed to increase from its current level (143tC/ha) to that found within adjacent woodland (208 tC/ha) in a linear fashion over the 100 year period.

Dead organic matter carbon is assumed to increase from 0 to a maximum of 16tC/ha (default value from IPCC GPG) over the first 60 years and then remain constant.

The increase in living biomass carbon is based on the assumption that trees on site will grow to 35cm DBH and 22m height (the means from surveys in the adjacent woodland) over the 100 year period. The increase in carbon associated with tree growth is calculated using biomass expansion factors and root: shoot ratios taken from literature. The proposed thinning regime and corresponding reduction in stem number (from 4200 to 575, the later being the mean stem density in the adjacent woodland) is taken into account in this calculation.

During the audit, discussions with the project manager indicated that the initial planting density may be revised so this assumption may also need to be revised. The initial planting figure given was 4200 trees per hectare. However, in the original planting plan, it was stated that planting will be carried out at approx 2x2 m, which would equate to 2500/ha. The project submitted a revised PDD and planting plan indicating that the spacing density would be 4200 trees per hectare at a distance of 1.45m each.

The total change in carbon socks for the project site was calculated based on the area of site (9.45ha), however, as not all the site will be planted (rides and glades will also be created) this assumption need to be checked and revised as necessary. In the complimentary attachments to the revised PDD the area had been recalculated at 9.065 ha to be planted.

The total net climate benefit over the project lifecycle is expected to be 22,119 tCO<sub>2</sub>e, as recalculated based on the revised area.

Conformance  
CAR/OBS

Yes  No  N/A

CAR 04/08 issued in the 1st draft report of January 28, 2008 was closed by actions taken by the project proponents, i.e., adjustment of net planting area, in the revised PDD of February 2008.

CAR 05/08 issued in the 1st draft report of January 28, 2008 was closed by actions taken by the project proponents, i.e., defining clearly the planting density, in the revised PDD of February 2008.

CAR 06/08 issued in the 1st draft report of January 28, 2008 was closed by actions taken by the project proponents, i.e., modified tables 6 and L in attachment N so they are consistent, in the revised PDD of February 2008.

CAR 07/08 issued in the 1st draft report of January 28, 2008 was closed by actions taken by the project proponents, i.e., rationale for use of biomass factors of McKay 2003 as the most recent, reliable, and presumably accurate study, in the revised PDD of February 2008..

- 2) Factor in the non-CO<sub>2</sub> gases CH<sub>4</sub> and N<sub>2</sub>O to the net change calculations (above) if they are likely to account for more than 15% (in terms of CO<sub>2</sub> equivalents) of the project's overall GHG impact.

Findings

Reductions in with project non-CO<sub>2</sub> GHGs have been taken into account in comparison with likely without project emissions associated with intensive agricultural productions (See G2.2). Planting of trees on the project site is not likely to lead to significant emissions of non-CO<sub>2</sub> GHGs in the project scenario.

Conformance  
CAR/OBS

Yes  No  N/A

- 3) Demonstrate that the net climate impact of the project (including changes in carbon stocks, and non-CO<sub>2</sub> gases where appropriate) will give a positive result in terms of overall GHG benefits delivered.

Findings

Reduction in expected without project emissions of CO<sub>2</sub> and non-CO<sub>2</sub> GHGS and increases in expected with project carbon stocks will give a positive result in terms of overall GHG benefits delivered. This is expected to be 22,119 tCO<sub>2</sub>e over the project lifecycle, based on the revised area.

Conformance  
CAR/OBS

Yes  No  N/A

## CL2. Offsite Climate Impacts (“Leakage”) - Required

### Concept

**The project proponents must quantify and mitigate likely negative offsite climate impacts; namely, decreased carbon stocks or increased emissions of non-CO<sub>2</sub> GHGs outside the project boundary, resulting from project activities (referred to as “leakage” in climate change policy).**

### Indicators

The project proponents must:

- 1) Estimate potential offsite decreases in carbon stocks (increases in emissions or decreases in sequestration) due to project activities.

Findings	<p>The Project is a self-contained private initiative and will not cause a corresponding reduction in tree planting elsewhere. The UK Government has established the Woodland Grant Scheme to promote new woodlands. The Project would be entitled to claim a grant under this scheme but it has not done so to ensure that this project is Additional. If it had claimed a grant it could have resulted in less woodland subsequently being planted elsewhere in England.</p> <p>Offsite leakages have been considered and found broadly to be immaterial and not readily measurable. The audit team opined that an attempt is needed to, at least, list offsite leakages arising from woodland establishment, these might include tree nursery transplant production, tree shelters (probably an oil based product), herbicide applications, inter row mowing and any other establishment activities. The Project made a final revision to the PDD on March 27, 2008 to indicate such emissions would be accounted for and mitigated in the future. Emissions of this sort would include: 1. transportation of saplings, transportation of man power, or felling and transportation of trees and thinning material.</p> <p>It is not clear if the end use of the thinning material is accounted for. If thinnings are used as biofuel then no offset could be claimed on this volume.</p> <p>One element of leakage, not considered in the original PDD was that as this project will take land out of agricultural production, at a time when biofuels crops may draw more land into production, there is the concern other land may go into agriculture. Despite that it is a very small amount, it should be discussed. In response to the first draft of the audit, the project responded with the explanation that UK agricultural land is registered and that new agricultural land cannot simply be created in response to this removal. It would not be possible for this small project to quantify and predict where and how this potential displacement will manifest in the global agricultural trade.</p> <p>In the original PDD, there was no indication of how the project will account for permanence or the leakage just discussed. This is usually handled by keeping some of the carbon in reserve or buffer – and not for sale. Or through a discounting or insurance – to cover the problem that credits sold may someday need to be returned if there is loss of credits or leakage from the project. In the PDD of March 2008, the Project indicated that it would retain 10% of the carbon credits for the purpose of a buffer reserve for permanence and leakage.</p>
Conformance	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
CAR/OBS	CAR 08/08 issued in the 1st draft report of January 28, 2008 was closed by actions taken by the project proponents, i.e., description that offsite emissions will be quantified and mitigated as possible, and that 10% of the credits will be held in reserve, in the revised PDD of March 2008.

- 2) Document how negative offsite impacts resulting from project activities will be mitigated, and estimate the extent to which such impacts will be reduced.

Findings	This was addressed in the revised PDD of March 2008 as mentioned above.
Conformance	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
CAR/OBS	

- 3) Subtract any likely project-related unmitigated negative offsite climate impacts from the climate benefits being claimed by the project. The total net effect, equal to the net increase in onsite carbon stocks (calculated in the third indicator in **CL1**) minus negative offsite climate impacts, must be positive.

Findings	This was addressed in the revised PDD of March 2008 as mentioned above.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

### CL3. Climate Impact Monitoring - Required

#### Concept

***Before a project begins, the project proponents must have an initial monitoring plan in place to quantify and document changes in project-related carbon pools, and non-CO<sub>2</sub> GHG emissions if appropriate, (within and outside the project boundaries). The monitoring plan should state which measurements will be taken and which sampling strategy will be used.***

***Since developing a full carbon-monitoring plan can be costly, it is accepted that some of the plan details may not be fully defined at the design stage, when projects are being evaluated by the CCB Standards. This will be especially true for small-scale projects.***

#### Indicators

The project proponents must:

- 1) Have an initial plan for how they will select carbon pools and non-CO<sub>2</sub> GHGs to be monitored, and the frequency of monitoring. Potential pools include aboveground biomass, litter, dead wood, belowground biomass and soil carbon. Pools to monitor must include any pools expected to decrease as a result of project activities. Relevant non-CO<sub>2</sub> gases must be monitored if they account for more than 15% of the project's net climate impact expressed in terms of CO<sub>2</sub> equivalents.

Findings	<p>PC has noted that although the CCB Standard envisages that an initial monitoring plan will be established, it is accepted that developing a full carbon-monitoring plan can be costly and may not be fully defined at the design stage. It highlights that this may be especially true for small projects, such as at Apley.</p> <p>The Project site will be visually inspected and photographed annually.</p> <p>In accordance with the Operational Plan, trees will be thinned at the intervals specified. The figures quoted are projections of that required to achieve a final optimal biomass. Growth, maturity and density will be taken into account at each thinning and adjustments made as such. Any resultant dead biomass will be used as bio fuel or timber.</p> <p>It is envisaged that the accounting period will be every 5 years, beginning in 2012. Each of the four pools used in the project estimate will be assessed. Measurements will include, but not be limited to:</p> <ul style="list-style-type: none"> <li>· Sampling tree species, density and numbers</li> <li>· Sampling tree height and d.b.h. (diameter at breast height)</li> <li>· Sampling of Dead Organic Matter (Litter)</li> <li>· Sampling of Soil Carbon</li> </ul> <p>The scale of sampling will be determined at the time of accounting, with relation to the growth stage of the project, IPCC GPG, best practise and gaining acceptable accuracy. It will not be possible to assess non-CO<sub>2</sub> GHG savings as they have resulted from the cessation of agricultural activity. However, this is an area of significant scientific research.</p> <p>Should the estimates, methodology or farming practise change, PC will seek to update and modify its projections as applicable.</p>
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Conformance Yes  No  N/A   
 CAR/OBS

## CL4. Adapting to Climate Change and Climate Variability - Required

### Concept

*Projects designed to anticipate and adapt to probable impacts of climate change and climate variability are more likely to sustain the benefits generated by the project over the long term.*

### Indicators

The project proponents must:

- 1) Identify likely regional climate change and climate variability impacts, using available studies.

Findings	<p>Climate change studies suggest that an increase in global warming of more than 4°C may result in the death of forests that are unable to adapt to higher temperatures or changing rainfall patterns. Other studies suggest that global warming could affect ocean currents. The UK is warmer than normal for its latitude because of the Gulf Stream. If the Gulf Stream is diverted or weakened global warming could actually result in lower UK temperatures.</p> <p>Changing global climate could create a food shortage that necessitates major changes to the worldwide pattern of agriculture. It is possible that the UK may need to be farmed more intensively than present in response to such changes. A worldwide food shortage could result in significantly higher food prices, which would make it economically advantageous to return the project site to agriculture.</p> <p>If international measures to limit climate change fail and rising temperatures melt the polar ice caps, rising sea levels could flood much of Lincolnshire.</p>
Conformance CAR/OBS	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/></p> <p>OBS 02/08: It is also predicted that in the short term, climate change may increase the growth of trees in higher latitudes due to extended growing seasons, etc..</p>

- 2) Demonstrate that the project has anticipated such potential impacts and that appropriate measures will be taken to minimize these negative impacts.

Findings	<p>The species of trees to be planted at the Project site are not currently close to their limits of viability in this location. Theoretically they can therefore survive moderate amounts of climate change. The Project plan involves replacing dead trees as required to achieve optimal density once the woodland is mature. This may include replacing any trees that die because of climate change with a different species that is adapted to the changed conditions.</p> <p>PC undertakes that it would not return the Project site to agriculture voluntarily unless it purchases an equivalent number of carbon credits to cancel those sold.</p> <p>Given the extremity of a major sea level change event, PC is unable to establish a contingency plan as circumstances are too uncertain and the UK Government would probably dictate counter measures.</p>
Conformance CAR/OBS	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/></p>

## CL5. Carbon Benefits Withheld from Regulatory Markets - 1 Point, Optional

### Concept

**When some carbon benefits generated by a project are not sold to satisfy regulatory requirements, additional mitigation action will be required elsewhere to meet these requirements. Therefore, withholding a portion of the project's carbon benefits from being used in capped markets will result in greater overall climate change mitigation.**

**Moreover, projects that do not sell all their carbon benefits in regulated regimes have the opportunity to experiment with climate change mitigation activities other than the ones eligible under these regimes (such as avoided deforestation, which is not currently creditable under the Clean Development Mechanism). Such experimentation may generate new knowledge that is of value to carbon rule makers and other project developers.**

**Indicators**

The project proponents must:

1. Not sell at least 10% of the total carbon benefits generated by the project<sup>4</sup> into regulated GHG markets (e.g., CDM, New South Wales GHG Abatement Scheme, Oregon Standard). Projects can sell these carbon benefits in a voluntary market or retire them.

Findings	The Apley plan is to sell all estimated carbon benefits in the unregulated voluntary market to generate sufficient cash flow to fund the project. Should it be possible in future to sell such credits in a regulated voluntary or expanded certified market, 10% will be withheld.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

**CM1. Net Positive Community Impacts - Required**

**Concept**

**The project must generate net positive impacts on the social and economic wellbeing of communities within the project boundaries and within the project lifetime. In addition, local communities and other stakeholders should be engaged early on so that the project design can be revised based on their input. Finally, projects should ensure that stakeholders can express concerns and grievances to project proponents and that these concerns are responded to in a timely manner.**

**Indicators**

The project proponents must:

- 1) Use appropriate methodologies (e.g. the livelihoods framework) to estimate the net benefits to communities resulting from planned project activities. A credible estimate of net benefits must include changes in community wellbeing given project activities. This estimate must be based on clearly defined and defensible assumptions about how project activities will alter social and economic wellbeing over the duration of the project. The “with project” scenario must then be compared with the baseline scenario of social and economic wellbeing in the absence of the project (completed in **G2**). The difference (i.e., the net community benefit) must be positive.

Findings	Given the small scale of the project it is difficult to quantify impacts other than on a very localised scale. The PDD considers at some length, in section CM1, the possible benefits and finds no discernable project negatives. Essentially, conversion of a marginal arable field to native broadleaf woodland, in an area of note for surviving woodlands, with increased public access is correctly assessed to be a positive outcome.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

<sup>4</sup> Total carbon benefits generated by the project can include those coming from activities that are currently not eligible for crediting under existing regulatory regimes (e.g., avoided deforestation).

- 2) Document local stakeholder participation in the project's planning. If the project occurs in an area with significant local stakeholders, the project must engage a diversity of stakeholders, including appropriate sub-groups, underrepresented groups and women living in the project vicinity. Stakeholders in the project's area of influence must have an opportunity before the project design is finalized, to raise concerns about potential negative impacts, express desired outcomes and provide input on the project design. Project developers must document stakeholder dialogues and indicate if and how the project proposal was revised based on such input.<sup>5</sup>

## Findings

Local stakeholders have been defined in the PDD as those with a social, political or conservation interest in the projects activities and resultant woodland.

The Bardney Limewoods area, including the project site and adjacent Hardy Gang Wood, is already subject to a number of stakeholders:

The Forestry Commission (government funded body) manages a number of local woodlands (including Hardy Gang Wood) and provides grants for local land owners to plant woodland and hedgerow. The 2.67 hectares of project site planted in 2003, whilst outside the scope of the project, remains funded by the Forestry commission. Project Climate met on site with David White of the Forestry Commission on 28th June 2007, to ask for advice and guidance and an application for the EIA was submitted.

The Woodland Trust (a national registered charity) own, promote and expand a number of pockets of local woodland within the Bardney Limewoods area. the woodland Trust contacted Project Climate interested in the project.

Natural England (government body) manages 384 hectares of Bardney Ancient Limewoods as a national Nature Reserve. No interest shown to Project Climate initial contact.

Lincolnshire Wildlife Trust (charitable body) promotes increase in biodiversity throughout the county of Lincolnshire. No interest shown to Project Climate initial contact.

Other potential stakeholders, such as local schools, will be approached once the project is established. The interests of local stakeholders will be defended through consultation and involvement in the project where feasible.

All project documentation will be publicly available. This Product Development Document will be available through the CCBA's and Project Climate websites. Onsite signage will further guide visitors to these resources.

David White, Forestry Commission's Lincolnshire Woodland Officer, was interviewed by the Auditor Team at the audit and brought in the results of the Forestry Commission's own consultation process. This consultation has been made by the FC in order to measure the need for an EIA. Although the consultation period was already over at the time of the interview, (end on the 28/12/07), a few more days had been given to allow Natural England to report back. David suggested that the EIA is unlikely to be required, but formal communication from the FC is expected to be received as stated in CAR 2/08.

David White contacted Natural England, Lincs County Council Trees & Woodland officer, Limewoods project and Lincs CC Archeology dept and provided the following feedback:

He let the Auditor team know that part of site was previously wooded and cleared for agriculture relatively recently. He also pointed out that no planting should be made within 5m of hedge and indicated his agreement with the species choice but suggested that a bit more alder and cherry would be desirable. The importance of planting material from local provenance was highlighted.

<sup>5</sup> In cases where it is unclear whether a project will be implemented or not, it is acceptable to start with a preliminary community consultation, provided there are plans for a full engagement once the project is funded. (Such a cautious approach is warranted when there is evidence that raising community expectations prematurely could lead to frustration).

It was commented that small leaved lime genetics are under investigation, and that no planting of such species should be undertaken now. This information had been already provided to Project Climate at a prior stage and this species removed from the list.

From an archaeological point of view, a small degraded mound off site is the reason why a metal detector survey is suggested. The contact given is Adam Daubney (0044 (0) 1522552361 Lincs Portable Antiquities Officer). Project Climate, the day following the audit, sent evidence of first communication with the contact.

To conclude, David White expressed FC's favourable opinion on planting more woods in the area. He also recommended allowing no less open ground than that proposed, and ideally more or concentrated into bigger area.

As a result of the SmartWood's own consultation two favourable comments have been received. One coming from the Lincoln City Council and the second from the Lincolnshire Wildlife Trust, where *the planting of native trees and shrubs to expand and link remaining ancient limewoods is seen as a high priority in the Lincolnshire Biodiversity Action Plan and has the support of the Lincolnshire Wildlife Trust.*

Conformance  
CAR/OBS

Yes  No  N/A

- 3) Formalize a clear process for handling unresolved conflicts and grievances that arise during project planning and implementation. The project design must include a process for hearing, responding to and resolving community grievances within a reasonable time period. This grievance process must be publicized to local stakeholders. Project management must attempt to resolve all reasonable grievances raised, and provide a written response to grievances within 30 days. Grievances and project responses must be documented.

Findings

No grievances have arisen during the planning phase of the project, positive and sometimes constructive feedback has been received during stakeholder interaction. Local knowledge of the audit team confirms this situation as wholly normal. The early feedback from stakeholders is being acted upon positively. An invitation to metal detectors to carry out a site survey prior to planting has been issued following that suggestion from the County Archeologist.

PC has made an undertaking (PDD section CM1) to respond to, document and review any stakeholder comments or complaints.

Conformance  
CAR/OBS

Yes  No  N/A

## CM2. Offsite Community Impacts - Required

### Concept

***The project proponents must quantify and mitigate likely negative social and economic offsite impacts; namely, the decreased social and economic wellbeing of communities or people living outside the project boundary, resulting from project activities.***

### Indicators

The project proponents must:

- 1) Identify potential negative offsite community impacts that the project is likely to cause.

Findings

No negative impacts are anticipated.

Conformance

Yes  No  N/A

CAR/OBS

- 2) Describe how the project plans to mitigate these negative offsite social and economic impacts.

Findings

Not applicable.

Conformance

Yes  No  N/A

CAR/OBS

- 3) Evaluate likely unmitigated negative offsite social and economic impacts against the social and economic benefits of the project within the project boundaries. Justify and demonstrate that the net social and economic effect of the project is positive.

Findings	No negative impacts are anticipated and there are clear potential positive impacts arising from a small native woodland with public access as compared to an arable field towards the margins of agriculture. As the woodland matures there may be opportunities for supporting small scale local employment.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

### CM3. Community Impact Monitoring - Required

**Concept**

*The project proponents must have an initial monitoring plan to quantify and document changes in social and economic wellbeing resulting from the project activities (within and outside the project boundaries). The monitoring plan should indicate which measurements will likely be taken and which sampling strategy will be used to determine how the project affects social and economic wellbeing.*

*Since developing a full community-monitoring plan can be costly, it is accepted that some of the plan details may not be fully defined at the design stage, when projects are being evaluated by the CCB Standards. This will especially be true for small-scale projects.*

**Indicators**

The project proponents must:

- 1) Have an initial plan for how they will select community variables to be monitored, and the frequency of monitoring. Potential variables include income, health, roads, schools, food security, education and inequality. Community variables at risk of being negatively impacted by project activities should be monitored.

Findings	The PDD identifies employment and site usage as being two variables that are measurable and of local significance. Over time the wood might be used as an educational resource, this will be recorded within the standard annual reports. No negative impacts have been identified.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

### CM4. Capacity Building - 1 Point, Optional

**Concept**

*Projects that include a significant capacity-building (training, skill building, etc) component are more likely to sustain the positive outcomes generated by the project and have them replicated elsewhere. The project proponents must include a plan to provide orientation and training for the project's employees and relevant community members with an eye to building locally relevant skills and knowledge over time.*

**Indicators**

The project proponents must show that capacity building is:

1) Structured to accommodate the needs of communities, not only of the project;

Findings	The size of this project is a significant limiting factor to enable any meaningful local capacity building. There are longer established woods of a much greater size already in the locality. However, the greater significance of the project is on a larger scale in that it is a pilot scheme. If this model of afforestation via sale of offsets can be demonstrated to work then there is the potential to reproduce the model across the UK.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

2) Targeted to a wide range of groups, not just elites;

Findings	Public access is to be granted post early establishment to all reasonable users without discrimination. Biodiversity gains are for the good of the whole population.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

3) Targeted to women to increase their participation; and

Findings	Women in UK society have equal rights defined and protected by law. Positive discrimination is not considered desirable. In the context of school visits it is thought likely that women will be well represented		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

4) Aimed to increase community participation in project implementation.

Findings	Project Climate has expressed interest in involving schools or other interested parties in the planting phase of the project so as to increase a sense of local ownership; how this is to be achieved is not totally apparent. Free public access will do much to fulfil this requirement. Company should position itself with respect to how local involvement is to be made during planting phase.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
	OBS 3/08 Company should further explain how local involvement is to be made during planting as it is now is not totally apparent.		

Project Climate has expressed interest in involving schools or other interested parties in the planting phase of the project so as to increase a sense of local ownership; how this is to be achieved is not totally apparent. Free public access will do much to fulfil this requirement.

## CM5. Best Practices in Community Involvement - 1 Point, Optional

### Concept

**Projects that use best practices for community involvement are more likely to benefit communities. Best practices include: respect for local customs, local stakeholder employment, worker rights and worker safety.**

### Indicators

Project proponents must:

1) Demonstrate that the project was developed with a strong knowledge of local customs and that, where relevant, project activities are compatible with local customs.

Findings	PC is a UK company, staffed with UK nationals and as such it is well placed to reflect local practice. Native woodland creation (such as this project) adjacent to and linking		
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Conformance CAR/OBS	ancient woodlands is a declared goal of the Forestry Commission's Jigsaw project. It has the support, but no funding, from the FC.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
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- 2) Show that local stakeholders will fill all employment positions (including management) if the job requirements are met. Project proponents must explain how stakeholders will be selected for positions and where relevant, must indicate how traditionally underrepresented stakeholders and women, will be given a fair chance to fill positions for which they can be trained.

Findings	It is the intention of PC to seek to use existing employees from within their existing agriculturally based businesses wherever feasible. To this extent workers could be conceived as being "local" to the east of England, but this is not really in the true spirit and meaning of local. The small size of the project does not lend itself to supporting any permanent positions. It is possible that local labour may be used to carry out maintenance works during the establishment phase.
Conformance CAR/OBS	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Not required for validation.

- 3) Show that the project will inform workers about their rights, and that the project complies with international rules on worker rights.

Findings	UK workers rights are clearly defined in UK and European law. There is no reason to suppose any workers would not be fully aware of their rights. There is no evidence to suggest PC is not compliant in this regard.
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

- 4) Comprehensively assess situations and occupations that pose a substantial risk to worker safety. A plan must be in place to inform workers of risks and to explain how to minimize such risks. Where worker safety cannot be guaranteed, project proponents must show how the risks will be minimized using best work practices.

Findings	Worker, and indeed public, health and safety is strictly defined in law and upheld by government agencies. There is a legal requirement for appropriate risk assessment, a process that requires hazard and risk reduction and management. No highly hazardous operations are envisaged during the establishment phase. Once harvesting begins at around year 20 hazards and risks will need to be assessed according to the method adopted and the technology available.
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

## B1. Net Positive Biodiversity Impacts - Required

### Concept

***The project must generate net positive impacts on biodiversity within the project boundaries and within the project lifetime, measured against the baseline conditions.***

***Projects should have no negative effects on species included in the IUCN Red List of threatened species (which encompasses endangered and vulnerable species) or species on a nationally recognized list (where applicable). Invasive species must not be planted by the project.***

**Genetically Modified Organisms (GMOs), as a relatively new form of technology, raise a host of ethical, scientific and socio-economic issues. Some GMO attributes may result in invasive genes or species. In the future, certain GMOs may be proven safe. However, given the currently unresolved issues surrounding GMOs, projects cannot use genetically modified organisms to generate carbon credits.**

**Indicators**

The project proponents must:

- 1) Use appropriate methodologies (e.g., key species habitat analysis, connectivity analysis) to estimate changes in biodiversity as a result of the project. This estimate must be based on clearly defined and defensible assumptions. The “with project” scenario should then be compared with the baseline “without project” biodiversity scenario completed in **G2**. The difference (i.e., the net biodiversity benefit) must be positive.

Findings	A baseline ecological study was carried out in August 2007 by Ecology Consultancy, PDD Attachment J. The condition of the Project Site has been assessed and recorded in August 2007, when the site was fallow after sustained arable cropping. The species found at this time are compared with the species anticipated following establishment of broadleaf planting; there is a clear positive scenario for biodiversity with woodland creation.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

- 2) Describe possible adverse effects of non-native species on the area’s environment, including impacts on native species and disease introduction or facilitation. If these impacts have a substantial bearing on biodiversity or other environmental outcomes, the project proponents must justify the necessity of using non-native species over native species.

Findings	Only native species are proposed for the woodland planting scheme so this section is essentially not applicable.  One native species that is not being planted, following stakeholder discussions, is the small leaved lime due to the possibility of hybridisation with the adjacent Hardy Gang Wood (an Ancient Semi Natural Woodland) in which there is small leaved lime that may be specific to this site.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

- 3) Identify all IUCN Red List threatened species and species deemed threatened on nationally recognized lists that may be found within the project boundary. Project proponents must document how project activities will not be detrimental in any way to these species.

Findings	Consideration of IUCN Red List species is made in the Ecological Survey and CCBA Biodiversity Assessment (Attachment J to the PDD). None were found on site.  The possible presence of the harvest mouse was acknowledged, but suitable habitat remains within the project margins and will be enhanced by tree planting.  Four species that could be associated with the stream were identified (white clawed crayfish, brook lamprey, river lamprey and otter) by the ecologist, but not found on site. It was found that the project would be beneficial to these species, if present, with the cessation of agricultural fertilisers and pesticides and a more stable and permanent habitat.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

- 4) Identify all species to be used by the project and show that no known invasive species will be used.

Findings	Only native trees and shrubs are to be planted, none of which are invasive. It was particularly requested by the Forestry Commission that small leaved lime was not to be planted at present. This was agreed by PC. It is for the avoidance of any possible hybridisation of different strains of lime, which are believed to vary with woodland		
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	location.		
	Trees		
	· Pedunculate oak <i>Quercus robur</i> 57%		
	· Ash <i>Fraxinus excelsior</i> 38%		
	· Silver birch <i>Betula pendula</i> <1%		
	· Wild cherry <i>Prunus avium</i> <1%		
	· Field maple <i>Acer campestre</i> <1%		
	· Crab apple <i>Malus sylvestris</i> <1%		
	Shrubs		
	· Hawthorn <i>Crataegus monogyna</i> <1%		
	· Hazel <i>Corylus avellana</i> <1%		
	· Spindle <i>Euonymus europaea</i> <1%		
	· Dogwood <i>Cornus sanguinea</i> <1%		
	Stakeholder feedback asked for marginally more Cherry to be planted and a small percentage of Alder <i>Alnus glutinosa</i> so the final percentages may change.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

5) Guarantee that no genetically modified organisms will be used to generate carbon credits.

Findings	No native broadleaf trees and shrubs derived from genetic modification are currently available in the UK. PC has undertaken (PDD section B1) not to use GMOs until sanctioned by CCBA or changed circumstances.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

## B2. Offsite Biodiversity Impacts - Required

### Concept

***The project proponents must quantify and mitigate likely negative offsite biodiversity impacts; namely, decreased biodiversity outside the project boundary resulting from project activities.***

### Indicators

The project proponents must:

1) Identify potential negative offsite biodiversity impacts that the project is likely to cause.

Findings	The PDD considers, and dismisses, only one negative impact namely the inward migration of adjacent wildlife species that might diminish local populations. As the project area is effectively enhancing available habitat this is not relevant. Other possible impacts include: the possible hybridisation of any planted small leaved lime with those growing in the adjacent Hardy Gang Wood (an Ancient Semi Natural Woodland) in which there is small leaved lime that may be specific to this site the shading out of the natural watercourse and aquatic habitat reduction the uncontrolled spread of undesirable ruderal species, particularly ragwort the loss of open ground for butterfly habitat the shading out of the notable, old roadside hedgerow.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

2) Describe how the project plans to mitigate these negative offsite biodiversity impacts.

Findings	The project Planting Plan (Attachment O) addresses the need for open ground adjacent to the watercourse and the establishment of woodland rides and a central glade. A ride is shown alongside part of the roadside hedge and good practice should not involve planting closer than 5 metres to an existing hedge, if only for access for ongoing maintenance. Control of ruderals is addressed within the planting plan through appropriate use of herbicides and cutting, this issue is also covered in G7.1. There is to be no use of small leaved lime.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

3) Evaluate likely unmitigated negative offsite biodiversity impacts against the biodiversity benefits of the project within the project boundaries. Justify and demonstrate that the net effect of the project on biodiversity is positive.

Findings	There should be no unmitigated negative offsite biodiversity impacts.		
Conformance CAR/OBS	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>

### B3. Biodiversity Impact Monitoring - Required

#### Concept

***The project proponents must have an initial monitoring plan to quantify and document the changes in biodiversity resulting from the project activities (within and outside the project boundaries). The monitoring plan should state which measurements will likely be taken and which sampling strategy used.***

***Since developing a full biodiversity-monitoring plan can be costly, it is accepted that some of the plan details may not be fully defined at the design stage, when projects are being evaluated by the CCB Standards. This will especially be true for small-scale projects.***

#### Indicators

The project proponents must:

- 1) Have an initial plan for how they will select biodiversity variables to be monitored, and the frequency of monitoring. Potential variables include species abundance and diversity, landscape connectivity, forest fragmentation, habitat area and diversity, etc. Biodiversity variables at risk of being negatively impacted by project activities should be monitored.

Findings	The initial monitoring plan is to conduct an annual visit to survey biodiversity. The survey will be conducted on approximately the same day each year to ensure comparability. Time will be spent observing birds and other wildlife. Notes will be taken flora species, droppings, game trails and other indicators.  Photographs will be taken and the whole Project site inspected. Biodiversity trends will become apparent by comparing annual data, as will any changes arising from global warming. Confirmation will be made that all neighbouring fields are being farmed, noting the crops.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

## B4. Native Species Use - 1 Point, Optional

### Concept

***In most cases, species that are native to a region will have a higher biodiversity benefit than non-native species. In other cases, non-native species can be more effective than native species for rehabilitating degraded areas or providing fast growing biomass, timber, fruits and other beneficial products. For instance a project may need to use non-native species on severely degraded land to achieve ecological restoration before native species can be reintroduced.***

### Indicators

The project proponents must:

- Show that the project will only use species that are native to the region.

Or

- Justify that any non-native species used by the project are superior to native species for generating concrete biodiversity benefits (e.g., for rehabilitating degraded areas unlikely to support natives, or for producing fuel wood that reduces logging pressure on intact ecosystems)

Findings	Native species are to be used in the woodland planting as specified within Attachment O of the PDD, and are to be of local or regional provenance.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS	CAR 09/08 issued in the 1st draft report of January 28, 2008 was closed by actions taken by the project proponents, quotation for supply of saplings that demonstrate the availability of native stock and certificates of local/regional provenance, in the revised PDD of February 2008.		

## B5. Water and Soil Resource Enhancement - 1 Point, Optional

### Concept

***Climate change and other factors may stress and degrade water and soil resources at the project site over time. Projects should enhance the quality and quantity of water and soil resources.***

### Indicators

The project proponents must:

- 1) Identify project activities that are likely to enhance water and soil resources

Findings	Intensive agriculture and the application of fertilisers (baseline scenario) tends to generate run off of nitrates into watercourses. The project site is adjacent to a watercourse (Attachment D) and flowing stream. The latter includes a range of biodiversity including fish. Cessation of intensive farming (Project scenario) will halt localised nitrate contamination and ameliorate water quality.  Following decades of intensive farming the project site soil has low levels of organic matter and natural nutrients. The growing cycle of deciduous trees and shrubs will enhance the organic levels within the soil through freely available organic matter. This will enhance natural soil fertility. Associated soil fauna will also develop as an undisturbed soil profile evolves.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

- 2) Credibly demonstrate that these activities are likely to improve water and soil resource compared to the baseline, using justifiable assumptions about cause and effect, and relevant studies.

Findings	Removal of a potential pollutant, nitrate runoff, will clearly benefit local water quality as
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Conformance  
CAR/OBS

will the cessation of cultivation and possible associated siltation.

Soil sampling was carried out on the Project Site and the adjacent ancient woodland site and an independent analysis made by the Macaulay Institute as recorded within Attachment N. Soil carbon levels are approximately one third higher in the old woodland site than the arable land.

Yes

No

N/A