



Restoring and
expanding
open habitats
from woods
and forests in
England:
a consultation.

March 2009

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1 Some terms and abbreviations

Term or abbreviation	Meaning
BAP	Biodiversity Action Plan.
Defra	Department for the Environment, Food and Rural Affairs.
EIA	Environmental Impact Assessment.
ETWF	Strategy for England's Trees, Woods and Forests.
EWGS	English Woodland Grant Scheme.
FC	Forestry Commission.
HAP	Habitat Action Plan.
HLS	Higher Level Stewardship.
NE	Natural England.
NPV	Net Present Value.
RDPE	Rural Development Plan for England.
SSSI	Site of Special Scientific Interest.

2 Introduction

This document sets out step five in a nine step process (Section 7) that we in Forestry Commission England (FC) are following to develop Government policy on restoring and expanding open habitats from woods and forests in England. See www.forestry.gov.uk/england-openhabitats for further details. In this document we set out our consultation on the proposed policy options.

2.1 Scope of our consultation

Scope of this consultation – We set out our proposals for a rationale to guide decisions about restoration and expansion of priority open habitats from woods and forests. We ask for your views on six elements that we judge should be in the policy, the balance of a number of key variables that will influence how we apply the policy, and three possible approaches by which we make decisions about removal of woodland or forest.

We set out the desired outcomes of the policy, the criteria that could help inform the decision on which policy option is best, and the implications for delivery mechanisms. We invite you to suggest amendments and to give us your views on which are most important, welcome, or unwelcome.

Geographical scope – England, but note the commitment to regional priorities.

Impact Assessment – Our Impact Assessment and a summary of our Equality Impact Assessment are available at www.forestry.gov.uk/england-openhabitats-consultation.

2.2 Basic information

To: National or regional organisations, local authorities and local community groups or individuals with an interest in open habitat restoration and expansion.

Body responsible for the consultation: Forestry Commission England. The process will result in development of Government policy. We have developed this document in consultation with staff in Department for the Environment, Food and Rural Affairs (Defra), Department of Energy and Climate Change (DECC) and Natural England (NE).

Duration: Starts on 12 March 2009 and ends on 5 June 2009.

Enquiries: This document is available to read and to download in portable document format (pdf) from this internet page: www.forestry.gov.uk/england-openhabitats-consultation.

We can also provide copies of this document on paper, tape, in Braille, large print and various computer formats. We can also give you information on translating it to other languages.

If you want to ask about the content or scope of this consultation, or to ask for a copy in an alternative format or language please contact:

Dominic Driver

Senior Projects Officer, Policy and Programme Group, Forestry Commission.

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0117 906 6003 | 07779 627668 | oh.consultation@forestry.gov.uk.

How to respond: Please send your answers and views to Dominic Driver (details above) by 17.00 Friday 5 June 2009.

Please complete the information about you on the form in Section 8 and include it with your answers.

We welcome your comments on any aspect of our proposals, but it would be particularly helpful if you could focus on the questions we ask both in the text and the form. These are set out in Section 9. You do not have to answer all of them. A form for you to complete is available at www.forestry.gov.uk/england-openhabitats-consultation¹.

Additional ways to become involved: We prepared this consultation with stakeholders including two workshops in 2007 / 2008. We have written to all those organisations listed in Section 10 inviting them to answer. We are also contacting representatives of local interest groups and local authorities and encouraging them to take part. We will also organise some local consultation events. These will be advertised locally and at www.forestry.gov.uk/england.

After the consultation: Unless you tell us otherwise, we will post your answers at www.forestry.gov.uk/england-openhabitats-consultation. We plan to do this during July 2009 together with a summary of responses.



We are required to release information to comply with the Environmental Information Regulations 2004 and Freedom of information Act 2000. We will not allow any unwarranted breach of confidentiality, nor will we contravene our obligations under the Data Protection Act 1998. Please note that we will not treat any confidentiality disclaimer generated by your IT system in e-mail responses as such a request.

We plan to publish the Government's response to the consultation in Summer 2009. Except for those who ask us not to, we will notify all those who replied and those on the stakeholder list when this information is available.

Compliance with the Code of Practice on Consultation: This consultation complies with the Code. We have considered the seven consultation criteria (Section 11).

Complaints: If you have any comments or complaints about the consultation process (as opposed to comments on the issues that are the subject of the consultation) please send them to:

Richard Barker | Secretariat Officer | Forestry Commission England

Great Eastern House | Tenison Road | Cambridge | CB1 2DU

01223 346025 | richard.barker@forestry.gsi.gov.uk

¹ You do not have to use the form for responses, but it would help us and we think it would help you to organise your replies if you do.

3 Background

In this section we set out the challenge that makes Government intervention worthwhile, the context for the policy, and our approach to resolving the challenge.

3.1 The challenge

The key challenge is to work out what “the right tree in the right place” means in practice for a landscape that provides environmental, social, and economic benefits for everyone now and in the future.

During the 20th Century large areas of open habitat such as heathland, moorland, wetland, bog and unimproved grassland were planted with conifers for timber production. On other open areas trees such as birch colonised due to natural regeneration. These types of open habitat are now recognised as valuable for their wildlife, landscape and cultural heritage. Many are also vulnerable and have declined over the last few hundred years. Restoring and expanding open habitats is needed to benefit wildlife such as Dorset heath, marsh butterwort, sand lizard, woodlark, black grouse, and silver studded blue butterfly. In other words, to maintain and enhance biodiversity.

The woods and forests that were planted or grew up on open habitat during the last century provide a potential resource for such restoration and expansion. However, woods and forests also provide many other benefits and many people do not like to see woods and forests being removed. In addition, open habitats are usually more costly to manage than woods and forests.

We need a clear policy to enable effective decision making about when it is right to remove or retain woods and forests on potential open habitat. This will make sure that we end up with a landscape that delivers more public benefits overall now and in the future and a process of change that is supported by most people.

3.2 Policy context

The need to maintain and enhance biodiversity is the key reason for developing this policy. A Strategy for England’s Trees, Woods and Forests (ETWF)² and the England Biodiversity Strategy³ provide the direct policy context.

ETWF: the direct reference to this policy process is in the Land and Natural Environment theme policies: “..[we will] develop a clear rationale to guide removal of inappropriate plantations and woodland where other key [Biodiversity

² Defra (2007) A Strategy for England’s Trees, Woods and Forests, <http://www.defra.gov.uk/wildlife-countryside/rddteam/forestry.htm>.

³ Defra (2006) Working with the grain of nature – taking it forward: Volume I. Full report on progress under the England Biodiversity Strategy 2006, <http://www.defra.gov.uk/wildlife-countryside/biodiversity/biostrat/index.htm>

Action Plan] habitats (e.g. lowland heathland and bog) can be restored and where the benefits of doing so outweigh the environmental and social costs”.

England Biodiversity Strategy: there are two direct references to this policy process, both in the Woodlands and forestry work programme 2006 – 2010: *“Anticipated outcome 2010: 5. A significant contribution to the restoration and re-creation targets for open ground priority habitats through removal of trees from appropriate sites.*

Key deliverables to achieve anticipated outcome: Development and implementation of a policy on ‘Restoration of Open Habitats from Forestry’, through joined up delivery measures, and a restoration strategy for the public forest estate”.

The overarching target backing these activities is to halt the loss of biodiversity by 2010.⁴

The targets deriving from this overarching target that are most directly relevant to this policy are those for restoring and expanding priority open habitats in Habitat Action Plans (HAP) (Table 1), part of the UK Biodiversity Action Plan (BAP).⁵

⁴ See European Council Gothenburg declaration 2001 http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/ec/0020 and Convention on Biological Diversity biodiversity target 2010 <http://www.cbd.int/2010-target/>.

⁵ <http://www.ukbap.org.uk/default.aspx>.

Table 1: Open habitat Habitat Action Plan targets for England relevant to a policy on restoration and expansion of open habitats from woods and forests in England.⁶

Open habitat.	Maintenance – total area of habitat to be maintained (ha).	Achieve condition by 2015, – habitat in unfavourable condition to be brought into favourable condition (as defined) (ha).	Restoration by 2015 – where it has been partly lost, recovering the vegetation pertaining to that habitat (as defined) (ha).	Expansion by 2015 – habitat to be created from established land-uses other than that habitat (ha).
Lowland meadows	7,282	6,078	481	256 from improved grassland or arable.
Upland hay meadows	870	830	48	72 from improved grassland or arable.
Lowland calcareous grassland	38,687	32,036	726	8,426 from improved grassland or arable.
Lowland dry acid grassland	20,142	17, 295	285	276 from improved grassland or arable.
Purple moor grass and rush pasture	21,554	19,195	128	151 from improved grassland or arable.
Upland heathland (moor)	220,000	To be confirmed	No target	No target
Lowland raised bogs	11,200	7,466	1,000	No target
Blanket bog	240,000	To be confirmed	No target	No target
Fens	11,200	7,466	1,500 ⁷	No target
Reedbed	5,200	4,680	No target	1,900 ⁸
Lowland heathland	58,000	47,000 ⁹		6,100 ¹⁰

⁶ Figures from Defra (2006) Working with the grain of nature – taking it forward.

⁷ Target is to initiate the restoration.

⁸ Targets land of low nature conservation interest. Some of this may be wet woodland.

3.3 Our approach to the challenge

We are following a cycle for effective policy making. This involves focussing on desired changes ('outcomes'), working out early on how we will measure success, and using evidence to decide which policy might work best. We have taken an open approach involving stakeholders and publishing the intermediate steps at www.forestry.gov.uk/england-openhabitats. In delivering this approach we are following the nine-step process presented in Section 7. This consultation is Step 5.

⁹ For lowland heathland, the HAP targets combine "achieving condition" and "restoration" under the "achieve condition" target because there is little distinction between operations for condition and restoration. Many of these operations will involve clearance of regenerating woodland.

¹⁰ Reported as 7,600 in "Working with the grain of nature" but 6,100 is the correct figure for England alone.

4 Evidence

In this section we set out our analysis of the evidence about the impact of the change that the policy will direct. First we set out the nature and possible magnitude of that change.

4.1 The nature of the change

Restoring and expanding open habitats from woods and forests will involve some element of deforestation. This will be from largely closed-canopy woodland to open habitat with a scattering of trees at about 5-15% canopy cover. The woodlands that might be removed will tend to be non-native conifers or relatively young mainly native woodland planted or grown up on former open habitat during the 20th century. It may result in mosaics of woodland and open habitat. Site by site it will rarely result in the removal of all the woodland. Under current practice, projects involve removal of between 100% and 7% of the woodland on site. The average initial proposal is for 71% to be removed. Currently, projects eventually remove 51% of the woodland on average.

We have assumed the policy operates over a timescale of 10 to 15 years, to match the timescale of ETWF. The total area of woodland on former open habitat is about 130,000ha (Section 12). It is conceivable that over a longer timescale, say 100 years, this amount of woodland could be removed. However, over the policy timescale we calculate that there could be between 5,600 and 30,000ha of removal of woodland or forest; 370 to 3,000ha per year (see Table 2).¹¹

The new landscapes will be managed mainly for biodiversity with some for private sporting in the uplands.

Table 2: Conceivable scale and rate of woodland removal in a policy on restoration of open habitats from woods and forests in England.

Level	Scale (ha)	Rate (ha per year) over 10 - 15 years.	Comments
Higher	30,000	3,000	Based on HAP targets.
Middle	16,500	1,100	Based on avoiding net deforestation (see below).
Current	7,500	500	Current practice: no national policy.
Lower	5,600	370	Based on SSSI condition and 49% woodland retention per project.

¹¹ These ranges reflect conceivable levels of intervention for the purposes of evidence gathering. They do not necessarily reflect reasonable policy options.

The average cost of the initial work to restore or expand open habitats, including tree-felling and initial work, such as, clearing branches, fencing and ground preparation is £1,164 per ha. This includes income from selling the timber.

After the initial work, the open habitats will cost more to manage than the woodland or forest from which they were restored. A typical cost is £200 per ha per year, but it could range from £800 to £60 per ha per year depending on economies of scale, habitat, and management. For assessing total costs we have assumed the average additional net cost of management is £124 per ha per year. The total cost of management goes up each year as more open habitat is restored.

Combining the net cost of the initial works, the net additional cost of management and adding in administration costs of 20% of the cost of initial works gives a range of costs over the policy timescale of £9 million (lower scenario), £27 million (middle scenario), and £61 million (higher scenario) Net Present Value (NPV) (Table 3).

It is likely that 60 – 70% of this will be a cost to Government (public funding) with most of the rest coming from non-governmental organisations.

Table 3: Costs of scenarios for policy on open habitats (£ million).

Scenario	Annual net cost of converting ¹² wood or forest to open habitat.	Total cost of conversion (NPV)	Annual net additional cost of managing open habitat.	Total additional cost of management (NPV)	Total admin. costs (20% of operational costs of conversion) (NPV)	Total costs (NPV)
Higher	3.5	30	0.37	25	6.1	61
Middle	1.3	15	0.14	10	3.1	27
Lower	0.43	5.0	0.046	3.5	1.0	9

Question 1: Does your aspiration for the scale of the policy fit within our calculated range of 5,600 to 30,000 ha of restoration or expansion of open habitats from woodland or forest over 10 to 15 years? This is 370 to 3,000 ha each year. What level of intervention would you prefer and how is this justified?

Note: we have put the questions in the text to give you the context. We have repeated them on the form in Section 9. Please use this form for your answers.

¹² In this table, we have used “converting” as shorthand for “restoring and expanding”.

4.2 The evidence about the potential impact of change

We identified 16 factors to take into account when developing this policy. These arose from all the Government's objectives for England's woods and forests. We collated the evidence about the potential impact of restoring and expanding open habitats from woods and forests on these factors. This is discussed in detail in Forestry Commission (2008) '*Restoration of open habitats from woods and forests in England: developing Government policy: evidence*'¹³ (the 'evidence paper') and summarised in Table 4. Our analysis was reviewed at a stakeholder workshop on 26th September 2008.¹⁴ Note that we have updated our economic analysis of some of the impacts since the evidence paper was written. See the Impact Analysis at www.forestry.gov.uk/england-openhabitats-consultation for more on the economic analysis.

Table 4: Likely impact of removing woods and forests to restore and expand open habitats from woods and forests.

ETWF theme	Factor	Likely impact	Comments
A sustainable resource	Financial viability of land management.	Negative	Woods and forests on average cost less to manage than open habitats. The net cost of managing open habitats ranges from £60 to £800 per hectare with an average of about £200ha per year. Preventing tree growth is the main cost. The net additional cost of management could be between £3.5 and £24 million over 15 years (NPV).
	Avoiding net deforestation in England.	Negative or little impact	The area of woodland or forest in England has been expanding for about 100 years. If the rate of woodland or forest removal goes above a threshold, the area could start to decrease. Our current calculation of this threshold is 1,100ha per year.

¹³ www.forestry.gov.uk/england-openhabitats

¹⁴ See <http://www.forestry.gov.uk/website/oldsite.nsf/byunique/INFD-7K9CPA> for a report.

ETWF theme	Factor	Likely impact	Comments
Climate change	Ecological communities able to cope with threats, particularly climate change, so that biodiversity is maintained or enhanced.	Positive	<p>Likely to help the development of ecological communities that can cope with threats, climate change being the main threat. This should help reduce loss of biodiversity. Having a lot of variation in the landscape appears to be helpful as does developing large areas of semi-natural habitat. Therefore, mosaics of woodland and open habitat appear useful.</p> <p>The value of the biodiversity benefits is likely to be significant. However, we do not yet have a robust method for calculating this value.</p>
	Carbon balance.	Negative	<p>There is a reduction in long-term (100 years) average carbon store of 168 tonnes of carbon dioxide equivalent per hectare of woodland removed (tCO₂e/ha-1).</p> <p>There is a reduction in the long-term potential for reducing carbon emissions through substituting wood for higher carbon products of 289tCO₂e/ha-1.¹⁵</p> <p>The total negative impact on carbon balance is therefore 457tCO₂ha-1.</p> <p>Under the possible range of woodland removal, the contribution of England's woods and forests to reducing carbon emissions could be reduced by between 1% and 3%. This is a maximum negative impact on England's total carbon emissions of 0.1%. The cost of the impact is £0.65 million to £5.3 million NPV over the policy timescale.</p>
Natural environment	Positive trends in populations of open habitat species.	Positive	See 'Ecological communities' factor above.

¹⁵ Based on an assumption that all the wood is mixed with coal for power generation ('co-firing'). The calculations are discussed in more detail below.

ETWF theme	Factor	Likely impact	Comments
	Quality of life and landscape.	Little impact	There could be significant changes in the landscape. However, these changes are unlikely to take the landscape across thresholds whereby there are significant impacts on quality of life. However, if the process is handled badly, or if the resulting landscapes are poorly designed there could be significant negative impacts. Conversely, there could be opportunities to make improvements in the landscape. Therefore, it is important that landscape guidelines are followed.
	Learning about landscape history.	Little impact	A historic landscape will be restored. However, historic environment policy does not demand recreation of a particular type of landscape. Provided appropriate interpretation is used, people will be able to learn how history has shaped the landscape whether or not woodland is removed.
	Preservation of historic environment.	Positive or negative	Potential to improve the setting and access to the historic environment. Potential to damage heritage features through inappropriate operations or subsequent management. It is important that guidelines are followed.
	Commitments on native and, or, ancient woodland.	Little impact	There is a clear policy framework protecting ancient and native woodland. Restoration of open habitats from well-established native woodland is difficult so they are unlikely to be targeted anyway.

ETWF theme	Factor	Likely impact	Comments
	Desired trends in woodland biodiversity not compromised.	Little impact	The woodlands most likely to be targeted tend to be the less biodiverse. However, policy will need to be flexible to respond to local conditions. There is a particular issue with wet woodlands being targeted for removal to restore fen or reedbed. We can resolve this through guidance. There will be a presumption against removal of ancient woodland or more recent but mature native woodland.
	Water quality and yield maintained.	Little national impact, local impacts vary	On a national or regional scale there is little impact. Local impacts vary, but should be low if good practice is followed.
	Soil condition maintained.	Little impact.	If good practice is followed.
	Air, light and noise pollution abated.	Little impact	Trees have significant local role as visual screens, but whole woodland blocks are not required. Such screens can be easily accommodated in open habitat projects.
Quality of life	Positive engagement by local and other users.	Negative or little impact	Without high quality local engagement local users can feel that they have no say in changes to their local landscape. This can result in reduced benefits to those people. It can also result in opposition from the local community to projects to remove woodland. Therefore, high quality local engagement in decisions about the initial proposals is important. If you have this type of process there can be a positive impact if the proposals can meet local aspirations.

ETWF theme	Factor	Likely impact	Comments
	Access and recreation.	Little impact	While the landscape may change significantly it is unlikely to change across thresholds where access patterns are significantly changed. There could be an exception where heathland restoration results in more conflict between the needs of recreational users and the needs of ground nesting birds.
Business and markets	Timber sector activity.	Negative	<p>There will be little impact on hardwood timber production. Softwood timber production could be reduced on a regional scale by between 1 and 8%.</p> <p>The cost of this reduction could be between £3.3 million and £18 million (NPV) over the timescale of the policy. We do not fully understand the relationship between the reduction in timber production and timber sector business activity. We are working to fill this gap.</p>

5 What we want the policy to do

In this section we set out the desired outcomes of the policy and how we propose to measure success.

5.1 Desired outcomes

Taking account of the policy context and the evidence on impact, we have determined the following desired outcomes for the policy.

- **Ecological communities able to cope with threats:** Ecological communities including open habitat species that cope with threats so that biodiversity is not lost.¹⁶ There are several threats such as development, pollution, and non-native invasive species, but the main threat is climate change. This is the key desired outcome that might lead us to support the removal of woodland or forest to restore or expand open habitat.
- **Financial viability:** Landscapes do not require frequent injections of external resources to fund remedial works and that any long-term call on public funding, such as agri-environment grants, is within manageable limits.
- **Keeping to Government commitments on woodland cover:** The UK Government is able to show that England fulfils its international commitments to sustainable forest management, especially maintaining net woodland cover.
- **Positive engagement by local and other users:** People's positive engagement in the landscape they use, particularly their local landscape, is maintained or enhanced.
- **Carbon balance:** Woods and forests continue to make an appropriate contribution to the UK Government's commitments for reducing carbon emissions.
- **Timber sector activity:** Any reduction in timber production has little impact on confidence in the harvested wood products producing and processing sectors and economic activity in the sector is not significantly reduced.
- **Woodland biodiversity:** Any improvement in trends in key species¹⁷ associated with native and non-native woodland habitats is not compromised.

¹⁶ In previous steps we have identified 'positive trends in populations of open habitat species' as a desired outcome. We are now proposing this as one of the indicators of the 'resilient ecological communities outcome'.

¹⁷ By 'key' we mean 'species of conservation concern'. Under section 41 of the Natural Environment and Rural Communities Act, the Secretary of State must, as respects England, publish a list of the living organisms and types of habitat which in the Secretary of State's opinion are of principal importance for the purpose of conserving biodiversity.

Question 2: Have we developed a reasonable list of desired outcomes of the policy? Do you wish to suggest any amendments?

5.2 Measuring the success of the policy

To test whether this policy is successful ('evaluation') we have identified indicators for each outcome. The proposals are summarised in Table 5.

Table 5: Proposed indicators for evaluation of a policy on restoration and expansion of open habitats from woods and forests in England.

Outcome	Indicators
Ecological communities able to cope with threats.	Rate and area of restoration and expansion of open habitats from woods and forests.
	Trends in populations of UKBAP species associated with open habitats.
	Trends in open habitats that can be restored from woods and forests.
	Patch size: Mean patch size of restored open habitats and number of open habitats restored from woods and forests above a threshold patch size.
	If feasible, an indicator combining patch size and connectivity.
Financial viability	Net cost of managing land following restoration or expansion.
	Percentage of open habitats restored from woodland and forestry with Higher Level Stewardship or other equivalent resourced management plan in place.
Keeping to Government commitments on woodland cover	Net change in woodland cover.
Positive engagement by local and other users	The number of Environmental Impact Assessments (EIA) for deforestation associated with restoration of open habitats where local concerns are identified as an issue at scoping stage.
	The number of EIAs which are referred upward for resolution.
	If feasible, an indicator based on the number and attitude to restoration of community woodland groups working on restored or potential open habitat.
Carbon balance	Percentage of projects that adopt low emissions techniques during restoration.
	Change in long-term average carbon store.
	Change in fossil fuel and product substitution benefits.

Outcome	Indicators
Timber sector activity	Change in production forecast due to policy at regional and national levels.
	If feasible, an indicator from the survey of business confidence.
Woodland biodiversity	Loss of established native woodland due to restoration or expansion of open habitats.

Question 3: Have we developed a reasonable set of indicators for evaluation? Do you wish to suggest any amendments to this indicator list?

6 Policy proposals

We are proposing six elements that should be present in the policy, three key variables, the balance of which will determine the final policy and three different approaches to applying policy.

6.1 Elements present in the policy

The elements that we propose should be present in the policy are:

1. We will treat woodland and open habitats as potentially mutually beneficial habitats.
2. A presumption against removal of 'mature native woodland'.
3. We will expect practitioners¹⁸ to help local users to take part in developing the initial proposals.
4. We will promote mechanisms for setting priorities for woodland removal or retention at a regional level.
5. We will apply a framework for evaluating individual projects.
6. To avoid net deforestation in England we will resist going over a threshold rate of woodland removal due to restoring and expanding open habitats.

6.1.1 We will treat woodland and open habitats as potentially mutually beneficial

There is a tendency for some people to view woodland and forest growing on potential open habitat and restored open habitat as mutually exclusive. This leads to perceived pressures for landscape scale deforestation, or that woodland retention represents failure. It can also lead to inappropriate management, for example, creating abrupt transitions between woodland and open habitat. We believe that in many situations the two land-uses can be mutually beneficial.

- Retaining woodland can help reduce the potentially negative impact of woodland removal, for example, on water quality and yield, landscape, air, noise and light pollution and woodland biodiversity.
- The transition between forest and woodland can be an important habitat for many species if it is appropriately managed – avoiding abrupt transitions.
- The woodland or forest can provide ecological space for species associated with open habitats such as the woodlark and nightjar. Some plant species associated with open habitat do well in forest rides. Some bees and wasps require complex landscapes with a variety of habitats.

¹⁸ People or organisations (including FC) wishing to restore or expand open habitats from woods or forests.

- Developing varied landscapes with mosaics of woodland and open space should help develop ecological communities better able to cope with climate change.
- Economic activity associated with forestry can offset some of the costs of open habitat management.
- Forestry skills are relevant to open habitat management, for example, a rigorous approach to reducing costs and maximising income, planning land management in the long-term and managing tree growth.

We will therefore look for evidence that practitioners are taking account of the potential for retained and, or, associated woodland or forest to help deliver the desired outcomes. We may ask practitioners to reconsider proposals where this evidence is lacking. Even so, there may be cases where large-scale woodland removal is still appropriate.

Question 4: Do you agree that woodland and open habitats are potentially mutually beneficial? Is promotion of this idea helpful in gaining support for open habitat restoration and expansion from woodland?

6.1.2 A presumption against removal of 'mature native woodland'

Our analysis of the evidence shows that there is likely to be little impact on woodland biodiversity because in practice ancient woodland and mature native woodland are unlikely to be targeted for removal (see page 33 of the evidence paper). The conservation of ancient woodland has a well-developed policy framework, Keepers of Time.¹⁹ However, it is possible that more recent but still relatively biodiverse native woodland may be targeted for removal. Woodland biodiversity is most closely associated with mature native woodland. We therefore judge it necessary to include a presumption against removal of mature native woodland. We will also reaffirm the commitment to avoiding loss of ancient woodland.

Question 5: Do you agree with the principle that there should be a presumption against removal of ancient and 'mature native woodland'?

The draft definition of 'mature native woodland' we propose to use for this policy is:

- all ancient woodland sites regardless of the age of the current trees and their native or semi-natural status on the site;
- sites currently composed of native broadleaves that have been wooded for at least 80 years; and

¹⁹ <http://www.forestry.gov.uk/forestry/inf-d-6h3fvs>.

- sites where the current native broadleaved crop is at least 80 years old (pre-Second World War) and has been closed canopy (>70%) for at least the last 20 years.

Unless there are exceptional circumstances, we will normally refuse proposals which include removal of mature native woodland.

Question 6: What do you think of our proposed outline definition of “mature native woodland”?

Wet woodland: Wet woodland is a potential resource for restoring and expanding reedbed and fen. However, it is also a priority habitat under the woodland HAP. There is evidence that wet woodland becomes interesting for woodland biodiversity more quickly than other types of woodland on potential open habitat. In partnership with others we are working out how best to make decisions about removing or retaining wet woodland on sites where there is potential to restore or expand reedbed or fen.

6.1.3 We will expect practitioners to help local users to participate in development of the initial proposals

There are a number of open habitat restoration and expansion projects that have generated significant local opposition. On the other hand, good local participation can improve both the initial success and long term ease of management of restoration or expansion projects.

Participation is not simply about consulting on minor modifications to already developed proposals or about giving information to the local community in order to try and persuade them the proposals are justified. Instead, practitioners should help the local community to take part in the decision making about the initial proposals. Those proposals should be modified to fit with local aspirations.

We will however take a reasonable and balanced approach. There may be situations where there is no significant local community interest, for example, for isolated upland blocks.

We recognise that such local engagement can take time. However, getting it wrong can result in significant additional costs in managing local opposition. Therefore we believe that proposals for removal of woodland or forest to restore or expand open habitat should normally involve local people and other users of the site.

There are various options for how we apply this element.

1. We could insist on evidence of high quality engagement before we consider proposals.
2. We could adopt a softer approach and encourage high quality engagement to reduce problems later.
3. We could require initial stakeholder analysis and a commitment to proceed accordingly.

4. We could contribute to helping practitioners deliver this element of policy, for example, develop guidance and commit funding.

Our Equality Impact Assessment²⁰ indicates that there is little potential for differential negative impact on equality groups. However, there is evidence that some groups may tend to be less well represented in local engagement than the general population, particularly people from black and minority ethnic groups and young people. We will develop mechanisms to monitor involvement of people from black and minority ethnic groups and young people in local engagement and review the situation as part of review of the overall policy.

Question 7: Do you agree that local participation in decision making is helpful? What is your preferred option for how we should apply this?

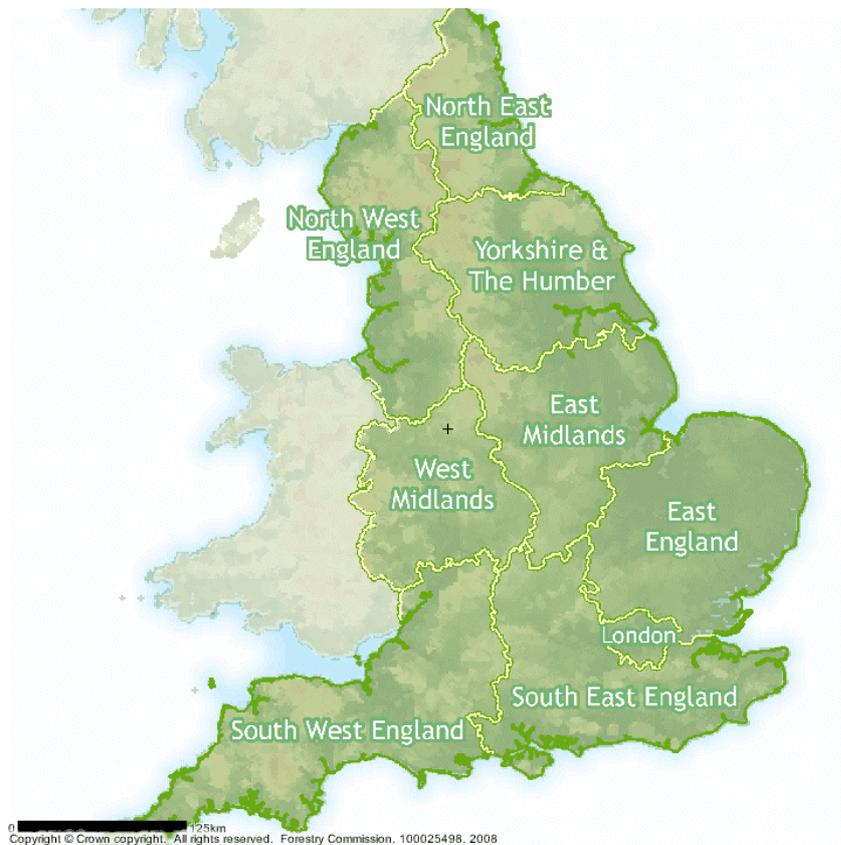
6.1.4 We will promote mechanisms for prioritising woodland removal at a regional level

Our aim is to produce a national policy which allows for local priorities. For example, in an area where there is very little woodland, any loss could have a significant negative impact on access and recreation. We believe the appropriate scale for this local setting of priorities is the FC region (Figure 1). The regional mechanisms will be developed by partnerships. FC and NE are likely to play a leading role in each, but neither is necessarily the lead partner in each region. Often they will be based on current mechanisms such as the Regional Forestry Frameworks (RFF) and Regional Spatial Strategies. Other groupings may be appropriate, for example, national parks. Some regional mechanisms already exist, for example, Heathland Opportunity Mapping in East Anglia and the generic Environmental Statement for a Dorset heathland project.

Question 8: Do you agree that prioritisation at a regional level is appropriate for this policy?

²⁰ See www.forestry.gov.uk/england-openhabitat-consultation.

Figure 1: Forestry Commission regions.



6.1.5 We will apply a framework for evaluation to projects

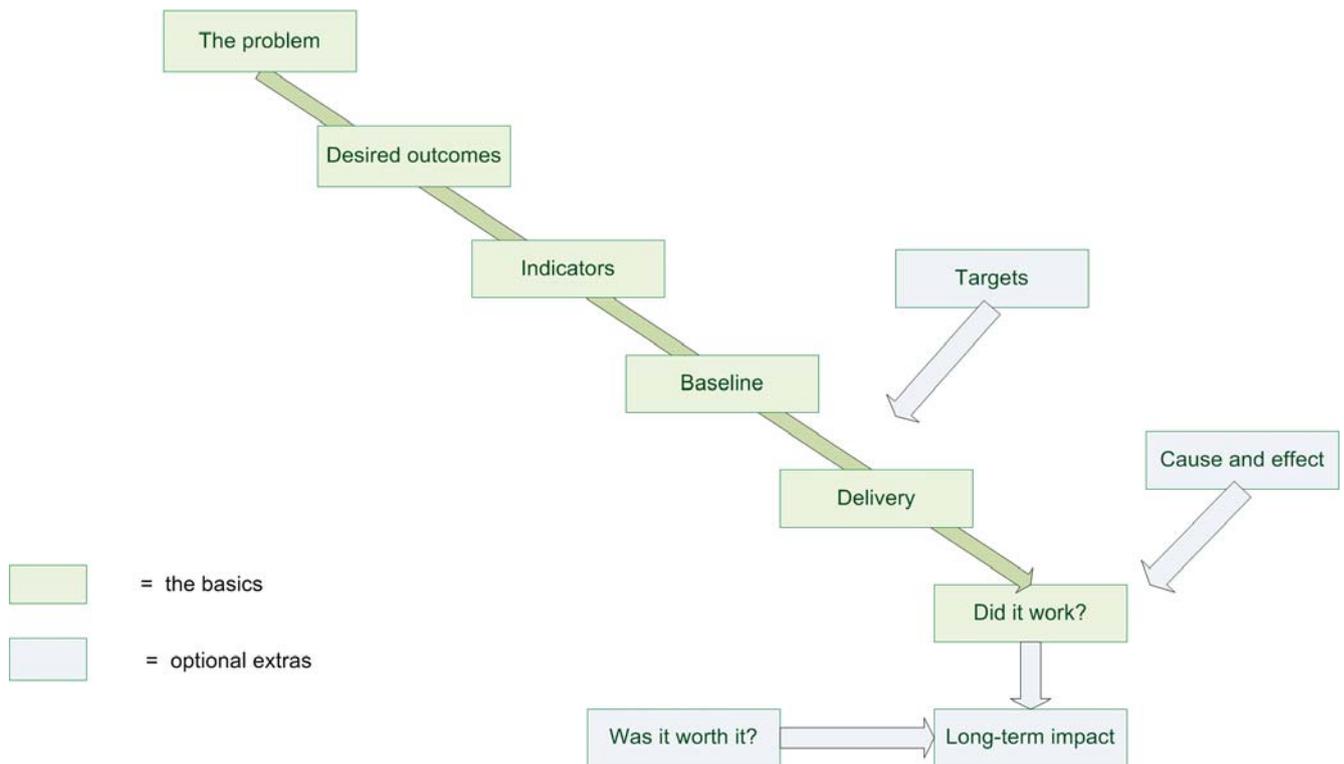
We believe it is helpful to apply a framework for evaluation (see Figure 2) to individual projects. Practitioners will need to identify the desired changes (outcomes), indicators of that change, and the current baseline. They will then need to measure the change in the indicators after they have applied the intervention. The results will be collated at a national level to assess the success of the policy. As we build evidence on which approaches are successful we will feed this back into decisions on when woodland or forest removal is an appropriate response.

There are various options for how we apply this proposal.

1. We could seek to impose the framework.
2. We could insist on using the framework as a condition of funding.
3. We could simply encourage use of the framework.
4. We could contribute to helping practitioners deliver this element of policy, for example, develop guidance²¹ and offer funding.

²¹ For an example of the kind of resource that could be developed see <http://www.forestry.gov.uk/forestry/INFD-7DJF9C> .

Figure 2: A framework for evaluation.



Question 9: Do you agree with this framework for evaluation? What is your preferred option for how we should apply this element?

Question 10: How much and what kind of support do you think we should give to practitioners to help them evaluate their projects using this framework?

6.1.6 To avoid net deforestation in England we will try not to go over a threshold rate of woodland removal due to restoring and expanding open habitats

The UK Government has international commitments to avoid deforestation associated mainly with supporting international efforts to combat climate change. High standards of woodland management²² and patterns of net increase in woodland area for the past 80 years in the UK appear to help the UK Government's credibility in international negotiation on climate change and

²² e.g.: in 2001 the UK became the first country in the world to have all its state forests certified. See WWF's Gift to the World at http://www.panda.org/about_wwf/how_we_work/gifts_to_the_earth/browse_by/index.cfm?gift_id=363&ignorehidden=1 .

forestry. Woodland cover in England has risen from an all time low of 5% (680,000 ha) early in the 20th Century to the current figure of a little under 9% (1.1 million ha), but is still one of the lowest in Europe.

The definition of woodland or forest in the UK agreed under the Kyoto protocol is:

- a minimum area of 0.1 hectares;
- a minimum width of 20 metres;
- tree crown cover of at least 20 per cent, or the potential to achieve it; and
- a minimum height of 2 metres, or the potential to achieve it.

Therefore, open habitat restoration that results in changes in tree cover that go below these thresholds over an area of more than 0.1ha and 20 metres minimum width will register as deforestation.

We could reach net deforestation if the rate of woodland removal approaches the rate of expansion of woodland. We calculate that this could be the case if the clearance for open habitat restoration were to approach or exceed 1,100 ha each year (see page 14 of the evidence paper for detail).

We could use this threshold in various ways.

- We could review losses and gains of woodland according to national inventory reporting and adjust the threshold rate of removal accordingly.
- We could allow projects on a first come first served or priority basis up to the threshold.
- We could adjust the timing of woodland removal to keep overall rate of woodland loss below the threshold.
- We could 'net off' known woodland creation projects against known woodland removal for open habitats.
- We could require planting of an equivalent area of woodland to compensate for the loss (see Section 6.3.4 for discussion of the role of compensatory planting).
- We could apply the threshold on a regional as well as a national basis.

Question 11: Do you agree with the principle of an England scale threshold rate of woodland removal? What is your preferred mechanism by which such a threshold could be applied to policy?

Question 12: Do you consider that the proposed threshold is about right, too high or too low?

6.2 Key variables

We have identified three key variables relevant to this policy.

1. What is the balance between achieving biodiversity objectives and reducing carbon emissions?
2. Should we be managing open habitats to keep them in 'favourable condition' or should we adopt a more dynamic approach to land management?
3. What level of woodland removal for restoration or expansion of open habitats could avoid a significant negative impact on the timber industry?

The location of the appropriate balance along each variable will influence policy.

6.2.1 What is the balance between achieving biodiversity objectives and the need to reduce green house gas emissions?

Restoring or expanding open habitats from woods and forests will help achieve biodiversity objectives but could reduce the ability of England's woods and forests to reduce the amount of greenhouse gases in the atmosphere. In this section we explore this issue.

Achieving biodiversity objectives: A key reason for restoring and expanding open habitats from woods and forests is to achieve biodiversity objectives. The overarching objective is to halt the decline in biodiversity by 2010. There is evidence that restoring and expanding open habitat will help develop resilient ecological communities able to cope with threats, and that this will help reduce the decline in biodiversity (see page 26 of the evidence paper). There are several threats such as development, pollution, and invasive species, but climate change is the most severe. The general picture on biodiversity is of recovery in many groups of species but continued decline in specialists and continued vulnerability across the board.²³ There is also evidence that benefits to biodiversity can have high values, e.g.: see Braat, L and ten Brink, P (ed's) (2008) *The Cost of Policy Inaction: The case of not meeting the 2010 biodiversity target*.

However, there is great uncertainty over the magnitude of the net benefit from a given amount and type of open habitat restoration or expansion. A commitment to a framework for evaluation should gradually fill this evidence gap. Meanwhile we have to decide what level of restoration or expansion to aim at until the evidence gap is filled.

Question 13: Is there a way, in the short term, we can better estimate the contribution to biodiversity objectives from different levels of restoration or expansion of open habitats?

²³ Natural England (2008) State of the Natural Environment.

Reducing greenhouse gas emissions: To calculate the impact on greenhouse gas balance we have taken three elements into account (see page 20 of the evidence paper).

1. The process of restoring or expanding open habitats can result in carbon emissions.
2. Removal of woods and forests to restore open habitats results in a one-off reduction in the long-term average carbon store on the site.
3. Removal of woods and forests reduces the opportunity for timber to be used as a substitute for higher carbon materials or fuel.

Emissions during restoration or expansion: The difference in carbon emissions during management operations in woodland or forests compared to open habitats after restoration is considered negligible. However, the way in which restoration is performed could have an impact on carbon emissions. These could be minimised by:

- not disposing of arisings (such as, brash and bracken) by burning;
- felling of trees when they are economically mature to maximise product substitution;
- minimising soil disturbance; and
- not removing stumps from the ground.

Question 14: Do you agree that management practices to minimise carbon emissions during restoration or expansion of open habitats should be adopted? Do you agree with the outline practices presented? How could we best ensure that such practices are adopted?

Long-term average carbon store: Growing trees remove and store carbon dioxide from the atmosphere thus helping to reduce the rate of climate change. The open habitat developed when woods or forests are removed absorbs less carbon because there are fewer trees growing on the land. We calculate the reduction in long-term average carbon store as 168tons of carbon dioxide equivalent per hectare of woodland removed (tCO₂e per ha)²⁴ taking into account only above ground biomass.

Substitution: Restoration results in a loss of potential for harvested wood products to substitute for higher carbon materials such as oil for fuel, or concrete and steel for construction. We believe that we should take account of loss of potential to reduce emissions due to substitution changes as well as long-term average carbon storage. The evidence on the size of this impact is uncertain. Forest Research has a project to develop accurate figures, the Forest Carbon Review²⁵. In the meantime, for illustration, if we assume that all the wood is mixed with coal for power generation ('co-firing') the loss of potential to

²⁴ Average weighted for area of woodland or forest on potential open habitats, This includes an assumption of little impact for carbon in peatland soils, see evidence paper for detailed discussion.

²⁵ <http://www.forestresearch.gov.uk/website/forestresearch.nsf/ByUnique/INFD-62XH5R>

reduce carbon emissions is 289tCO₂e per ha over and above the reduction in long-term average carbon store.

We can therefore conclude that the total negative impact on carbon balance is 457tCO₂e per ha on average over 100 years. Under the range of interventions in Table 2 the contribution of England's woods and forests to reducing carbon emissions could be reduced by 0.026MtCO₂ per year to 0.14MtCO₂ per year. This is between 1% and 3% of the total rate of sequestration by woods and forests in England of 4MtCO₂e per year. The maximum reduction is therefore 0.1% of total carbon emissions for England. The cost of this impact over 15 years is between £0.65 million and £5.3 million NPV.²⁶

This is a relatively minor level of impact. However, the impact of forestry is comparable to the potential contribution of other sectors.

The figures for the impact on carbon balance are subject to review and we are working to upgrade them. We will use the most accurate figures available at each stage of the policy process.

Question 15: Do you agree that it is appropriate to include impact on long-term average carbon store *and* loss of potential to substitute timber for higher carbon materials and fuel in the calculations on carbon balance?

There is another significant role for trees to play in addressing climate change, and that is to help in communication. Most people believe trees, woods and forests play a positive role in combating climate change²⁷. Permanent woodland removal could make it harder to communicate positive messages about combating climate change.

We believe that it is important to get the right balance between removing woods and forests to help achieve biodiversity objectives and keeping woods and forests to help reduce carbon emissions. If the balance were towards biodiversity objectives, we would be more likely to approve removal of woodland and forest. If the balance were towards reducing carbon emissions we would be more likely to seek evidence that options other than woodland removal had been considered. We would also be more likely to require planting of new woodland to compensate for the loss of woodland.

Question 16: Where do you think the appropriate balance lies between achieving biodiversity objectives and the need to reduce carbon emissions? What processes might help to make this judgement?

²⁶ Calculated using Defra guidance: <http://www.defra.gov.uk/Environment/climatechange/research/carboncost/index.htm>

²⁷ Public Option of Forestry survey 2007, <http://www.forestry.gov.uk/forestry/INFD-5ZYL9W>.

6.2.2 Should we be managing open habitats to keep them in 'favourable condition' or should we adopt a more dynamic approach to land management?

For SSSIs the standard by which habitat management is judged is determined by the criteria and targets set under the Common Standards Monitoring approach to defining favourable condition²⁸. For open habitats this means a scattering of native trees at no more than 10% canopy cover (25% exceptionally on lowland heathland). Other targets relate to the desired composition of the vegetation, for example, the extent of heather on heathland or sphagnum cover on bogs. Where restoration proposals are on a SSSI we would expect the success of restoration to be judged against the Common Standards.

However, we believe it is right to consider whether the Common Standards Monitoring approach should also be applied to proposals for restoration and expansion of open habitats outside of SSSIs. Would a more flexible and dynamic approach make it easier to deliver desired outcomes?

For example, the response to climate change is a response to uncertainty which means that having a variety of habitats is important. Shifting mosaics of woodland and open space may be better than more static expanses of open habitat. A more dynamic approach to land management may enable site managers to reduce some of the long-term costs of maintaining the habitat. For example, trees could be allowed to regenerate on a proportion of the site while another portion is maintained as open habitat. These trees could then be harvested in, say, 20-years and the products sold to generate income to continue with management. Provided the scale of management is large enough there should be room to accommodate the needs of key species and other users of the site. That this can work in some situations is illustrated by the fact that, for example, woodlark and nightjar thrive in forestry plantations managed on a clear-fell rotation, several 'heathland' plants do well along forest rides, and some wasps require complex landscapes with various types of habitat.

We know that this will not work everywhere. Allowing open habitat to return towards woodland could worsen the rate of encroachment by trees because there could be more seed-fall. Also, for rarer plants in particular, grazing is a key management tool, which may be more difficult to manage in shifting mosaics. In addition, many priority plant species are slow to colonise new habitat. Permanent suitable habitat is required.

However, we believe that this concept is worth developing further. Some studies have suggested that levels of about 30% cover of a habitat in a landscape allow for reasonable connectivity for species that use that landscape.²⁹ This implies that a habitat of about 30% permanent woodland, 30% permanent open habitat and 30% temporary open space or woodland might deliver desired

²⁸ <http://www.jncc.gov.uk/page-2217>

²⁹ Dawson D (1994) *Are Habitat Corridors Conduits for Animals and Plants in a Fragmented Landscape? A Review of the Scientific Evidence* ERR 94 English Nature.

outcomes. We also need to consider the minimum areas of habitat necessary. For example, guidance in HAPs on minimum viable area for biodiversity range from 2ha for grassland habitats to 30ha for lowland heathland. If these criteria were combined then it might lead to the creation of mosaics of habitat with about a third open habitat, a third woodland, and third shifting between open habitat and woodland at a scale of at least 6ha for grassland biodiversity and 90ha for heathland biodiversity. Figure 3 illustrates what this might look like on the ground.

Figure 3: Woodland on potential heathland, after restoration to 'favourable condition', and after restoration to a mosaic.



Woodland on potential heathland



Heathland restored from woodland managed towards 'favourable condition'.



Heathland – woodland mix developed from woodland managed as a shifting mosaic



Under a dynamic approach site managers would start by defining success according to desired outcomes based on those identified in this policy. They would then manage the land to deliver those outcomes rather than being constrained to fixed vegetation types in particular areas. Indicators of those outcomes could still include extent and condition of particular habitats or species. However, the targets used would not necessarily be definitions of favourable condition based on vegetation type and, while the extent of open habitats would be maintained, it would over time move around the landscape.

Question 17: Outside SSSIs, do you agree that a more dynamic attitude to land management could deliver equivalent or greater gains for open habitats and species than one where success for all sites is based on assessments of condition as applied to SSSIs?

Question 18: If so, how might such an approach be developed? Is there scope for modifying the conservation objectives on some SSSIs to incorporate a similar approach? If not, do you consider that the endpoint for all restoration proposals should be judged against favourable condition as defined for SSSI habitats?

6.2.3 What level of woodland removal due to restoring or expanding open habitats could avoid a significant negative impact on the timber industry?

Woodland removal for restoration or expansion of open habitat could eventually have an impact on the timber producing and primary processing sector, because the amount of timber and other harvested wood products will be reduced.

Hardwood: There are about 45,200ha of native woodland on potential open habitat. However, the nature of this woodland means that little of it is likely to be delivering timber to the market, so the likely impact on the timber sector of its removal is insignificant. However, the impact of loss of hardwood production on the woodfuel sector may be more significant (see below).

Softwood: There are about 86,700ha of conifer plantations on potential open habitats in England. Due to high transport costs the timber market is regionalised. FC divides its timber production from the FC Public Forest Estate into three marketing zones: Northern (North of the Humber/Mersey), Central (West and East Midlands) and Southern (the rest). We analysed the impact on softwood production according to these zones.³⁰

We estimate the reduction in softwood production under the scenarios in Table 2 could range from 1% to 7% in the Southern zone, 1% to 8% in the Central zone, and 1% to 4% in the Northern zone. This equates to a reduction England-wide of between 1% and 6% (see page 47 of the evidence paper).

³⁰ Including all types of land ownership not just the Public Forest Estate.

Woodfuel: Our Woodfuel Strategy for England³¹ aims to bring an additional two million tonnes of wood into the market each year by 2020. We are focusing our efforts on the potential resource in undermanaged English woodlands, generally native woodland. These currently deliver about 25% of their net annual increment to the market. Using the assumptions on scale and rate in Table 2 gives potential reduction on wood products that could be relevant to the Woodfuel Strategy of between 0.3% and 1.4%. Locally the impact might be more significant. The economics of woodfuel supply is dependent on transport distances. Therefore, removing a potential source of woodfuel close to a potential market might make it harder to develop a woodfuel business in that area.

Impact on businesses: The contribution to England's Gross Domestic Product (GDP) of production, primary and secondary processing of English grown timber is estimated at £2.1 billion or 0.1% of England's GDP employing 64,000 Full Time Equivalents (FTE) ³². Of this, 40% is contributed by businesses significantly exposed to changes in English timber production. These are defined as businesses where more than 50% of their wood material is grown in England. We can therefore calculate that the potential reduction in timber supply across England could reduce forestry's contribution to GDP of between £3.3 million and £18 million (NPV). This is 0.0002% to 0.001 of England's GDP. The reduction could result in the loss of 300 to 1,500 FTEs. While the impact is small in national terms, many of the businesses are in rural areas where their contribution to local employment may be disproportionate.

These are hypothetical maximum figures only because the relationship between product supply, competition, business confidence, investment and ultimately on jobs is complex.

- Significant reduction in timber supply will not happen until beyond the investment horizon for sawmills of 10 to 15 years (when thinning of the next crop is due to start).
- Softwood timber availability in England is set to rise by 10% between 2007 and 2021 after which it will fall.
- The timber sector has a large number of small to medium sized companies. The smaller sawmills may rely on local sources of timber. Clearance in a particular location may have a disproportionate impact in the local area.
- The impact on jobs will vary depending on activity. For example, people in maintenance will probably have work opportunities on open habitat, harvesting contractors may have an increase of work while restoration is taking place.
- Other forces may swamp any impact due to restoration of open habitats, for example, the impact of Red Band Needle Blight on pine production and the international economic downturn.

³¹ <http://www.forestry.gov.uk/england-woodfuel>

³² Jaakko Pöyry Consulting (2006) Woodland and forest sector in England, England Forest Industries Partnership, www.efip.org.uk/

- Much of the annual increment of timber in England is not harvested, 40% of softwood and 75% of hardwood.³³

We are working to improve our understanding of the potential impact of timber production changes on economic activity. We will present the results as the policy process progresses and take any new information into account.

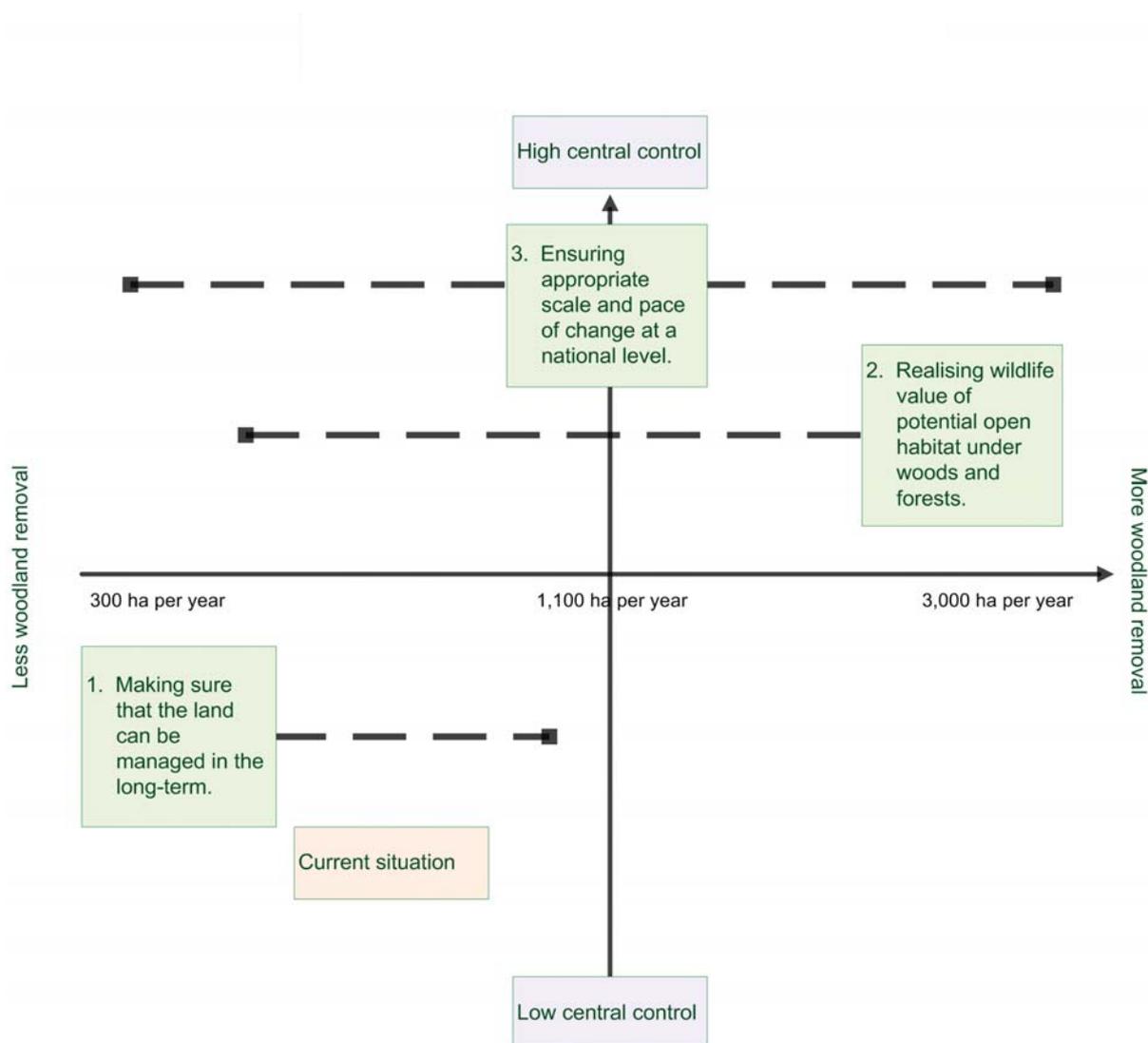
Question 19: Can you provide any information on the likely links between any reduction in timber production and economic activity in the timber sector?

³³ Note this may increase the potential impact because the reduction in timber availability may come from the woodland that is currently harvested.

6.3 Different approaches to applying policy

We have identified three different approaches to applying policy (see Figure 4). These seem to us to be coherent types of approach but are not mutually exclusive. Elements of each may appear in the final policy.

Figure 4 Different approaches to applying policy on restoration and expansion of open habitats from woods and forests.



6.3.1 Making sure that the land can be managed in the long-term

If Government adopted this approach it would make the following kind of policy statement:

“Removal of some woods and forests is necessary to restore and expand priority open habitats, which in turn is important for maintaining and enhancing wildlife. However, much of the open habitat is proving costly to manage and without

appropriate management it could fail to deliver desired outcomes. We will therefore prioritise the quality of management of existing open habitat. This means that we will support the removal of woodland or forest to restore or expand open habitats only where it is making the management of existing open habitat easier, for example, developing a viable grazing unit."

This option prioritises concern about the increased costs of land management caused by removal of woods and forests, most of which is covered by an increased call on Government funding. The cost of managing open habitat restored under the range of interventions in Table 2 will be between £3.5 million and £24 million NPV over the timescale of the policy. The dominant source of funding for long-term maintenance is Higher Level Stewardship (HLS) within the Environmental Stewardship Grants administered through the Rural Development Programme for England (RDPE). HLS agreements are made for a ten-year period and funding of £200 per ha each year is typically available for open habitat maintenance. The maximum HLS budget is likely to be £200 million each year, but the English portion of the UKBAP will cost £430 million each year of which about £324 million each year is deliverable via Environmental Stewardship. The current budget is therefore not enough to fully address all the scheme objectives.³⁴

This approach is likely to result in the least amount of open habitat being restored or expanded. It would however result in an increase in the size of selected open habitats which could then be easier to manage in the long-term.

6.3.2 Realising the wildlife value of potential open habitat under woods and forests

If Government adopted this approach it would make the following kind of policy statement:

"Former open habitats under non-native plantations and native woodland established in the 20th Century retain significant wildlife potential. We will promote management of the woods and forests on these former open habitats in order to realise this wildlife value and/or to maintain its potential. This may include removal of woods and forests to restore or expand the open habitat."

This approach is likely to result in more woodland or forest being removed. If the potential negative impact on reducing carbon emissions were weighted more heavily than helping achieve biodiversity objectives, the amount of woodland removal would be reduced. In this case, we would look for other methods of realising the wildlife value, for example, ride widening, thinning and leaving clearfells open for longer. Alternatively, compensatory planting may be required (see section 6.3.4).

³⁴ Defra – Natural England (2008) Environmental Stewardship Review of Progress.

6.3.3 Ensuring appropriate scale and pace of change at a national level

If Government adopted this approach it would make the following kind of policy statement:

“Removal of some woods and forests is necessary to restore and expand priority open habitats, which in turn is important for maintaining and enhancing wildlife. However, too much woodland removal too fast could also have negative impacts on the ability of woods and forests to reduce carbon emissions and on economic activity in the timber producing and processing sector in England. It could also cause net deforestation in England. These negative impacts can be avoided if the rate and scale of woodland removal is kept within appropriate national limits. We will allow woodland removal until the scale and rate begins to approach these limits. We will review these limits at appropriate intervals.”

We have collated the following information on these limits:

- The limit to avoid net deforestation is 1,100ha per year.
- We are consulting in this document on the balance between reducing carbon emissions and meeting biodiversity objectives.
- We have some evidence on the potential reduction in timber availability. We have little evidence on the link between timber availability and economic activity in the sector. We are consulting in this document on ways of filling this evidence gap.

This option is likely to result in an intermediate amount of woodland or forest being removed. If the potential increase in carbon dioxide is weighted more heavily than helping achieve our biodiversity objectives, the amount of woodland removed will be reduced. Alternatively, compensatory planting might be required (see section 6.3.4).

Question 20: Which of the three approaches by which we make decisions about woodland removal is your preferred option? Can you see any alternative types of approach based either on a combination of these approaches or on new ideas?

6.3.4 The role of compensatory planting.

One mechanism to reduce some of the potential negative impacts from woodland removal is woodland expansion to compensate for woodland loss ('compensatory planting'). This could cause a significant additional cost to Government although it could also help to deliver a range of other Government objectives, for example, the woodland HAP, green infrastructure, access and recreation. Funding for broadleaf woodland creation under the English Woodland Grant Scheme (EWGS) ranges from £1,800 to £4,000 per ha depending on location and type of planting. Funding for conifer planting is £1,200 per ha. Farm Woodland Payments of between £60 and £300 per ha may also be available to compensate for loss of income due to planting on agricultural land. There could also be the additional problem of both the woodland removal and the woodland expansion requiring separate Environmental Impact Assessment. There is no guarantee that the woodland expansion would be approved.

There are various ways in which we could apply policy.

- We could look for ways of imposing a condition of compensatory woodland expansion as part of accepting woodland removal.
- We could adopt a softer approach and encourage the inclusion of woodland expansion.
- We could insist on formal commitments to plant compensatory woodland or just informal 'twinning' of woodland removal projects with woodland creation projects.
- We could look for compensatory planting close to the woodland that is being lost or accept planting some way removed, for example, somewhere else in England.
- We could look for planting that replaces like for like (such as conifer plantations with conifer plantations) or focus on replacing with native woodland.

Depending on policy, there could be an additional burden on practitioners. The basic grant rates are about 70% of the actual cost of woodland creation.

Question 21: What is the appropriate role of compensatory planting in this policy?

6.4 Factors to consider when deciding which policy is likely to work best

We need to understand the questions we should ask when deciding which policy option is best. These will help inform the decision on the Government's preferred policy. See Table 6 for proposed questions.

Table 6: Questions we should ask to help inform the decision on which policy is likely to work best (not in order of weight)

Outcome	Question
Ecological communities able to cope with threats.	Will more open habitat be developed?
	Does policy promote increased patch size, connectivity, diversity and management for processes that will benefit key species?
	What is the contribution to open habitat HAP targets?
Long-term viability	To what extent will long-term delivery of public benefit rely on long-term public funding?
	Does policy give practitioners flexibility to choose cost effective land management options?
Burden	What is the additional cost to Government or practitioners of implementing the policy and any changes in delivery mechanisms?
	What is the additional long-term cost to Government of maintaining the new landscapes that policy will engender?
Woodland cover	Can Government influence the rate of woodland removal and creation to avoid net deforestation in England?
Local engagement	Does policy promote high quality local participation in decision making?
Carbon balance	Is the negative impact on carbon balance within publicly acceptable limits?
	Will good practice to minimise emissions during woodland removal be encouraged?
Timber sector activity	Can Government predict any reduction in the timber forecast to within reasonable accuracy?
	Is the reduction in timber production within limits unlikely to have a significant impact on timber sector confidence?
Woodland biodiversity	Will practitioners be allowed flexibility to take account of specific woodland biodiversity requirements?
	Will loss of mature native woodland be avoided?
Good practice	Will policy encourage practitioners to follow good practice on landscape, historic environment, soils, and water while restoring or expanding open habitats?

Question 22: Have we developed a reasonable set of questions for informing the decision on which policy is best? Do you wish to suggest any changes to the list of questions? Are any more important than others?

6.5 Implications for delivery mechanisms

Policy could have implications for several delivery mechanisms available to Government. The most relevant are:

- Public funding –English Woodland Grant Scheme (EWGS) and Higher Level Stewardship (HLS).
- Adapting the way legislation is implemented – felling licences, Environmental Impact Assessment (EIA), management of land with statutory conservation designation, and mapping of Open Country under Countryside and Rights of Way Act (CROW).
- Publicly owned land – Forestry Commission Public Forest Estate, Defence Estates.
- Codes of practice and standards.
- Research and evidence.

Several policy options that we are consulting on in this document are interrelated so the implications for delivery mechanisms are complex. Nevertheless, we summarise the more significant implications below, most of the changes would be led by Forestry Commission (FC) or Natural England (NE).

6.5.1 Public funding

Both the EWGS (FC) and HLS (NE) are constrained by rules governing the Rural Development Programme for England (RDPE) 2007 - 2013, for example, EWGS cannot fund deforestation. FC and NE have prioritised the grants both geographically and by objective. Both grants will be reviewed in 2013. In the meantime, HLS will remain the main grant to support long-term maintenance of open habitat with grants available over a 10-year timescale.

We may need to further integrate the two funding sources. For example, we might need to work on the ease of handover from EWGS supported woodland to HLS supported open habitat. If a more dynamic approach to land management were adopted there may need to be changes to the standards and targets applied under HLS and EWGS.

The commitment to local participation and evaluation may lead us to develop funding packages to support these activities. EWGS provides funding of £300 per assessment to work out stakeholder interests.

The evidence on the challenges of managing restored open habitat in the long-term (see discussions on 'long-term viability') may lead us to assess the likelihood of HLS being available before we decide whether to approve woodland removal.

A prominent role for compensatory planting implies a greater call on EWGS for woodland creation. The current focus is on supporting woodland management.

6.5.2 Adapting the way legislation is implemented

Under the Government's Regulatory Reform agenda we are committed to reducing the burdens arising from our regulations. Our approach to this is set out in our Simplification Plan published annually.³⁵ At present, we believe policy does not imply changes to the way legislation is implemented that would require new statute.

Felling licences: With certain exceptions, a licence to fell growing trees is required from the FC. In many cases a licence will be needed if more than five cubic metres is to be felled in a calendar quarter. This is likely to include all open habitat restoration or expansion from woodland. In reaching our decision on a felling licence application we will take into account the public benefits arising from the proposed after-use of the land. We may be able to clarify the circumstances in which felling licences would be granted and the nature of conditions that could be attached.

EIA: We have to consider whether deforestation projects (and certain other projects including afforestation) are likely, by virtue of their nature, size or location to have significant effects on the environment, i.e. are a 'relevant project'.³⁶ If we think a project is relevant then the practitioner will have to prepare an Environmental Statement and will require our consent before starting work. Open habitat restoration projects will sometimes be deemed 'relevant'. EIA for afforestation will be relevant to open habitat policy if it includes compensatory planting.

This policy is unlikely to result in any regulatory changes to EIAs, which are required in England under European Council Directives that the UK Government is legally required to implement. However, we may be able to clarify the circumstances in which we would require an EIA and the kind of questions that we should consider. The evidence gathered during development of this policy and through an evaluation framework may also be relevant to each EIA.

The commitments on a threshold rate of deforestation may mean that we will require practitioners to report on when the felling has been carried out.

Land with statutory conservation designations: NE is the competent authority for ensuring compliance with legislation on management of land with statutory conservation designations. Policy may lead NE to further clarify or amend some elements of this, for example, condition status on SSSI, appropriate assessment for Special Areas of Conservation.

³⁵ <http://www.forestresearch.gov.uk/forestry/inf-d-6gaega>.

³⁶ Environmental Impact Assessment (Forestry) (England and Wales) Regulations 1999 – Statutory Instrument 1999/2228.

CRoW: CRoW³⁷ places a duty on NE to map all land *'which appears to consist wholly or predominantly of mountain, moor, heath or down, or is registered common land'* as Open Country. People can walk freely on mapped areas of Open Country without the need to stick to paths. Woodland or forest is not normally mapped as Open Country but can be voluntarily dedicated as open access land in perpetuity under CRoW. NE will review the maps of Open Country by 2015.

Open habitat restored or expanded from woodland or forest could be mapped as Open Country during the next review. There is evidence that this could be a disincentive to some owners to undertake projects. If dedicated woodland were removed to restore or expand open habitat there would be no change in the access status although the land may be mapped as Open Country. Changes to the mapping methodology³⁸ are unlikely as a result of this policy. However, owners may need further clarification on the implications of open habitat restoration for access management under CRoW.

6.5.3 Publicly owned land

FC Public Forest Estate: The largest portion of potential and actual open habitat on public land is on the FC Public Forest Estate. We have undertaken a significant amount of open habitat restoration and expansion³⁹. We will produce a strategy for restoring and expanding open habitat on the FC Public Forest Estate in line with this policy. The wider study on the future long-term role of the estate announced in November 2008⁴⁰ will also set the context for the restoration strategy. In the meantime, we are surveying the potential open habitat on the estate. This is to inform both this policy and the implications of the policy options for the estate as a whole, for example, on the net cost of land management. A report is planned for Spring 2009. A commitment to compensatory planting might have implications for whether we acquire land for planting for the FC Public Forest Estate.

Defence Estates: Defence Estates also manages a significant amount of woodland and open habitat. It uses 'Integrated Land Management Plans' to balance the objectives of military training (the primary objective) with nature conservation, historic environment, public access and other issues. In recent years they have done a lot of work to remove plantations and invading scrub to restore and improve the condition of open habitat SSSIs, where it was compatible with military training. They consider all opportunities to undertake habitat restoration case by case. However, any further woodland removal on the estate might compromise military training and compensatory planting may be required.

³⁷ Countryside and Rights of Way Act 2000.

³⁸

<http://www.openaccess.gov.uk/S4/html/LWWCM/Section4/GeneralContent/Mapping/MapMeth.html>.

³⁹ For example, see Spencer, J and Haworth, R (2005) Heathland on the Forestry Commission estate in England, <http://www.forestry.gov.uk/england-heathland>.

⁴⁰ <http://www.forestry.gov.uk/forestry/infd-7jchjm>.

6.5.4 Codes of practice and standards

Several elements of policy may lead us to develop new codes of practice, such as, on integrating woodland and open habitat, and on dynamic land management. Policy may also have implications for some elements of the UK Forestry Standard, which is currently being updated. Note, the standard is Great Britain (GB) wide, changes would be led by FC GB.

The evaluation framework is likely to lead us to require or encourage (depending on policy) practitioners to undertake baseline measurement, subsequent monitoring and to report to a central mechanism for collating evidence.

6.5.5 Research and evidence

The major gaps in evidence that may require further research are:

- The magnitude and exact nature of the net benefits of open habitat restoration and expansion for wildlife.
- The links between changes in timber production and economic activity in the forestry sector.
- Direct studies of changes in use and non-use value of land due to restoration or expansion of open habitat.
- How to deliver desired outcomes through restoration and expansion of open habitats from woodland and subsequent management of open habitats. This might include integrating woodland and open habitats and dynamic land management.
- Survey of condition of open habitats recently restored or expanded from woods or forests.

The evaluation framework should enable us to further develop the evidence, but it is likely to show a need for further research to test cause and effect.

Question 23: Have we missed any major implications for delivery mechanisms? Would any be particularly welcome or unwelcome to you?

6.6 Next steps

The next step is to publish a report on the responses to this consultation and use the information gained to submit a set of options to Ministers. If you send us a response to this consultation we will keep you informed of our progress unless you have told us that you do not want to hear from us again.

7 Annex 1: Summary of policy development process

See www.forestry.gov.uk/england-openhabitats for further details.

No.	Step	Mechanism	Timescale – update January 2009
1.	Fit progress to date into a policy cycle.	Forestry Commission (FC) to use work to date.	June 2008.
2.	Work out implications for delivery mechanisms and collate evidence.	FC to set out summary of evidence.	August – September 2008.
3.	Plan evaluation.	Including stakeholder workshop.	Sept – Oct 2008 Workshop 26 Sept: reviewed evidence, ranked outcomes, developed criteria.
4.	Appraise options.		
5.	Consult.	Formal public consultation.	Launch March 2009, finish June 2009.
6.	Make a decision.	Options paper to be submitted to Ministers by FC.	Summer 2009.
7.	Produce policy document.	FC to draft.	Summer 2009.
8.	Set up delivery mechanisms.	Depends on policy decision but will include a strategy for the FC estate.	Depends on policy decision.
9.	Launch policy.	Launch at an outdoor event. ⁴¹	Depends on policy decision.

⁴¹ Strategy for FC Estate to follow in 2009/10.

8 Annex 2: Information on you

Please complete the details below and return it with your response. This will help us handle your response appropriately. You can find Word and on-line versions of this form at www.forestry.gov.uk/england-openhabitats-consultation.

Title and name:			
Position and organisation (if any):			
Address (inc. postcode):			
E-mail:			
Telephone:			
Question or information			Please tick
1.	a) Are you responding as an individual? (Go to Question (Q) 2)		
	b) Are you responding on behalf of a group or organisation? (Go to Q4 then Q5)		
2.	As an individual are you happy that your response will be made available to the public on our website? If you say 'No' please go to Q5, we will keep your response private. ⁴² If you say 'Yes', please go to Q3 then Q5.	Yes	No
3.	Where you have not asked for your replies to be kept private we will make your replies available on our website as follows:	Please tick	
	Yes, make my response, name and contact details available.		
	Yes, make my response available, but not my name and contact details.		
	Yes, make my response and name available, but not my contact details.		
4.	Groups and organisations. The name and address of your group or organisation will be available to the public on our website. Are you content for us to publish your response? If you say 'No' we will keep your response private.	Yes	No
5.	Sharing responses and future engagement We will share your response with other Government policy teams who may be addressing the issues you discuss. They may wish to contact you again but will need your permission. Are you content for us or other Government policy teams to contact you again about your consultation response?		
	If you say 'No' are you content for us to keep you up to date on progress with this policy? If 'No' thank you for helping us, you will not hear from us again about this process.		
When you have completed this form, please send it together with your response to: oh.consultation@forestry.gsi.gov.uk by 17.00hrs on 5 June 2009.			
Dom Driver, 620 Bristol Business Park, Coldharbour Lane, Bristol, BS16 1EJ. Fax: 0117 931 2859			

⁴² We are required to release information to comply with the Environmental Information Regulations 2004 and Freedom of Information Act 2000. We will not allow any unwarranted breach of confidentiality, nor will we contravene our obligations under the Data Protection Act 1998. Please note that any confidentiality disclaimer generated by your IT system in e-mail responses will not be treated as such a request.

9 Annex 3: Questions from our consultation

Restoring and expanding open habitats from woods and forests in England.

Comments on any aspect of the consultation are welcome, but we are particularly interested in your responses to the questions below. You do not have to answer all the questions for your response to be valuable to us. You can find a Word and on-line version of this form for your responses at www.forestry.gov.uk/england-openhabitats-consultation.

No	Question.
The nature of the change	
1.	Does your aspiration for the scale of the policy fit within our calculated range of 5,600 to 30,000 ha of restoration or expansion of open habitats from woodland or forest over 10 to 15 years? This is 370 to 3,000 ha each year. What level of intervention would you prefer and how is this justified?
Desired outcomes	
2.	Have we developed a reasonable list of desired outcomes of the policy? Do you wish to suggest any amendments?
Measuring the success of the policy	
3.	Have we developed a reasonable set of indicators for evaluation? Do you wish to suggest any amendments to this indicator list?
Policy proposals	
Elements present in the policy	
We will treat woodland and open habitats as potentially mutually beneficial	
4.	Do you agree that woodland and open habitats are potentially mutually beneficial? Is promotion of this idea helpful in gaining support for open habitat restoration and expansion from woodland?
A presumption against removal of 'mature native woodland'	
5.	Do you agree with the principle that there should be a presumption against removal of ancient and 'mature native woodland'?

No	Question.
6.	What do you think of our proposed outline definition of 'mature native woodland'?
We will expect practitioners to help local users to participate in development of the initial proposals	
7.	Do you agree that local participation in decision making is helpful? What is your preferred option for how we should apply this element?
We will promote mechanisms for prioritising woodland removal at a regional level	
8.	Do you agree that prioritisation at a regional level is appropriate for this policy?
We will apply a framework for evaluation to projects	
9.	Do you agree with this framework for evaluation? What is your preferred option for how we should apply this element?
10.	How much and what kind of support do you think we should give to practitioners to help them evaluate their projects using this framework?
To avoid net deforestation in England we will try not to go over a threshold rate of woodland removal due to restoring and expanding open habitats.	
11.	Do you agree with the principle of an England scale threshold rate of woodland removal? What is your preferred mechanism by which such a threshold could be applied to policy?
12.	Do you consider that the proposed threshold is about right, too high or too low?

No	Question.
Key variables	
What is the balance between achieving biodiversity objectives and the need to reduce green house gas emissions?	
13.	Is there a way, in the short term, we can better estimate the contribution to biodiversity objectives from different levels of restoration or expansion of open habitats?
14.	Do you agree that management practices to minimise carbon emissions during restoration or expansion of open habitats should be adopted? Do you agree with the outline practices presented? How could we best ensure that such practices are adopted?
15.	Do you agree that it is appropriate to include impact on long-term average carbon store <i>and</i> loss of potential to substitute timber for higher carbon materials and fuel in the calculations on carbon balance?
16.	Where do you think the appropriate balance lies between achieving biodiversity objectives and the need to reduce carbon emissions? What processes might help to make this judgement?
Should we be managing open habitats to keep them in 'favourable condition' or should we adopt a more dynamic approach to land management?	
17.	Outside SSSIs, do you agree that a more dynamic attitude to land management could deliver equivalent or greater gains for open habitats and species than one where success for all sites is based on assessments of condition as applied to SSSIs?
18.	If so, how might such an approach be developed? Is there scope for modifying the conservation objectives on some SSSIs to incorporate a similar approach? If not, do you consider that the endpoint for all restoration proposals should be judged against favourable condition as defined for SSSI habitats?
What level of woodland removal due to restoring or expanding open habitats could avoid a significant negative impact on the timber industry?	
19.	Can you provide any information on the likely links between any reduction in timber production and economic activity in the timber sector?

No	Question.
Different approaches to applying policy	
20.	Which of the three approaches by which we make decisions about woodland removal is your preferred option? Can you see any alternative types of approach based either on a combination of these approaches or on new ideas?
The role of compensatory planting.	
21.	What is the appropriate role of compensatory planting in this policy?
Factors to consider when deciding which policy is likely to work best	
22.	Have we developed a reasonable set of questions for informing the decision on which policy is best? Do you wish to suggest any changes to the list of questions? Are any more important than others?
Implications for delivery mechanisms	
23.	Have we missed any major implications for delivery mechanisms? Would any be particularly welcome or unwelcome to you?
Other comments	
We welcome your input on any other aspect of this consultation.	

Please include the “information about you” form with your response.⁴³

Please send your completed forms to:

[Dominic Driver](#)

Senior Projects Officer | Policy and Programme Group | Forestry Commission England

620 Bristol Business Park | Coldharbour Lane | Bristol | BS16 1EJ

0117 906 6003 | 07779 627668 | oh.consultation@forestry.gsi.gov.uk

Fax: 0117 931 2859

By 17.00hrs, Friday 5 June 2009.

⁴³ See www.forestry.gov.uk/england-openhabitats-consultation for a copy.

10 Annex 4: Stakeholder organisations

Here we list the organisations which we have invited to take part in the consultation on Government policy on restoring and expanding open habitats from woods and forests in England.

Organisations outside Government.

- Association of Local Government Ecologists
- Bat Conservation Trust
- British Trust for Ornithology
- Buglife
- Butterfly Conservation Trust
- Central Council of Physical Recreation
- Confederation of Forest Industries
- Country Land and Business Association
- Countryside Recreation Network
- England Woodland Biodiversity Group
- English Forest Industries Partnership
- Herpetological Conservation Trust
- Institute of Chartered Foresters
- Local authorities
- Local groups.
- National Association of Areas of Outstanding Natural Beauty
- National Park Authorities.
- National Trust
- Open Spaces Society
- Plantlife International
- Regional Biodiversity Co-ordinators
- Royal Society for the Protection of Birds (RSPB)
- Small Woods Association
- The Wildlife Trusts
- The Woodland Trust
- Tree Council
- UK Forest Products Association

Key organisations within Government or Government agencies.

- Department for Environment Food and Rural Affairs
- Department of Energy and Climate Change

- Defence Estates (Ministry of Defence)
- English Heritage
- Environment Agency
- Forest Research
- Forestry Commission (Great Britain)
- Forestry Commission – especially Regional Directors and Forest Management Directors.
- Natural England

11 Annex 5: Code of practice on consultation: the seven criteria

1. When to consult

Formal consultation should take place at a stage when there is scope to influence the policy outcome.

2. Duration of consultation exercises

Consultations should normally last for at least 12 weeks with consideration given to longer timescales where feasible and sensible.

3. Clarity of scope and impact

Consultation documents should be clear about the consultation process, what is being proposed, the scope to influence and the expected costs and benefits of the proposals.

4. Accessibility of consultation exercises

Consultation exercises should be designed to be accessible to, and clearly targeted at, those people the exercise is intended to reach.

5. The burden of consultation

Keeping the burden of consultation to a minimum is essential if consultations are to be effective and if consultees' buy-in to the process is to be obtained.

6. Responsiveness of consultation exercises

Consultation responses should be analysed carefully and clear feedback should be provided to participants following the consultation.

7. Capacity to consult

Officials running consultations should seek guidance in how to run an effective consultation exercise and share what they have learned from the experience.

12 Annex 6: Woodland or forest on potential UK Habitat Action Plan open habitats in England⁴⁴

Habitat Action Plan	Potential habitat under plantation.		Potential habitat under native woodland		Spatial distribution within England Northern – North of Humber & Mersey. Central – East and West Midlands. Southern – rest.
	Area (ha)	Typically managed for timber.	Area (ha)	Typically natural regeneration, little management, general yield class (GYC) 4. ⁴⁵	
Lowland meadows	0	n/a	0		n/a
Upland hay meadows	0	n/a	0		n/a
Lowland calcareous grassland	0	n/a	c.20,000	Scrub.	Mainly southern or central. ⁴⁶
Lowland dry acid grassland	c.300	Scots pine GYC 8	c.3,000	Mixed regeneration mainly birch with some Scots pine.	Mainly southern or central.
Purple moor grass and rush pasture	c. 300	Douglas fir and Sitka spruce, GYC 18.	c. 200	Scrub / secondary native woodland	Plantation mainly south west, native woodland in all parts.
Upland heathland (moor)	c.20,000	Sitka spruce GYC 10	0	n/a	Mainly northern.

⁴⁴ Figures from discussions with national and regional staff and various studies such as the RSPB's Heathland Extent and Potential (HEaP) project.

⁴⁵ General Yield Class (GYC) is a measure of timber productivity. It is the number of m³ of timber by which a stand grows per ha per year. Some conifers can reach YC22, many hardwoods can achieve just YC4 or 6.

⁴⁶ We estimate that 66% of the grassland resource is in southern England.

	Potential habitat under plantation.		Potential habitat under native woodland		
Lowland raised bogs	c.500	Sitka / Norway spruce, Lodgepole pine GYC 8	0	n/a	Mainly northern.
Blanket bog	c.5,000	Sitka / Norway spruce, Lodgepole pine GYC 8	0	n/a	Mainly northern.
Fens	c 600	Scots pine GYC 6 and poplar, GYC 14.	1,000	Wet woodland	Wet woodland in East England, plantation in northern England.
Reedbed	0	n/a	1,000	Wet woodland	East.
Lowland heathland	c.60,000	Scots pine GYC 12. ⁴⁷ .	c.20,000	Mixed regeneration mainly birch with some Scots pine.	Mainly southern or central. ⁴⁸
TOTAL	86,700		45,200		

⁴⁷ Much is currently Corsican pine at yield class 14 but guidelines for responding to red band needle blight make an assumption of Scots pine at yield class 12 more realistic.

⁴⁸ We estimate that 75% of the lowland heathland resource is in southern England.

13 Annex 7 – Document accessibility

This document is available to read and to download in portable document format (Adobe pdf) from the following internet page: www.forestry.gov.uk/england-openhabitats-consultation.

We can also provide it on paper, tape, CD, in Braille, large print and various computer formats. We can also give you information on translations to other languages.

For enquiries about the content or scope of this consultation or to request a copy in an alternative format or language please contact:

Dominic Driver

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