

# Forest Resilience Programme Scoping Document

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## **1 Important Note**

This document is currently draft and is likely to be developed as the Forestry Commission England (FCE) Programme Team are formed, meet and agree the way forward. The details here are provided for information and background only at this stage. As the programme moves forward, and stakeholders are engaging, this document may change and adapt.

## 2 Background

The Forest Resilience Programme has its roots in the need to consider the FCE response to Dothistroma Needle Blight (DNB). However, the project has expanded beyond this narrow remit, in part due to the complexity of likely solutions, to include other issues, most notably the impact of climate change and the need to revisit the commitments made under the Special Protected Area (SPA).

### 2.1 Dothistroma Needle Blight

The current primary timber crop in the East England Forest District (mainly in East Anglia) is Corsican Pine (CP), with around 60% of Thetford planted under CP. Plantation silviculture often utilises monocultures, there are several reasons why this approach is taken. These include:

- Drought tolerance and relatively alkaline soil conditions providing limiting factors in species choice.
- Economies of scale, also research and resources can be targeted on a narrow range of species
- Providing a consistent, fast growing, reliable product to sawmill customers, particularly in light of their niche (fencing) market.
- The introduction of the SPA which legally requires the FCE to maintain the current forest management practices.

Dothistroma Needle Blight (DNB) *Dothistroma septosporum* was first recorded in (the then) East Anglia Forest District in 1999.

DNB affects pines by infecting needles. Needles on a CP normally last between three and four years before being shed by the tree. However, needles that are infected with DNB only last one season. This reduces the amount of needle available for photosynthesis (the conversion of sunlight to energy used by the tree for growth), and hence reduces the growth rate of trees. In some cases, DNB can result in tree mortality.

The prevalence of CP through East England has meant that DNB has, and will continue to have, a significant effect on the productivity and management of forests. In many other countries, stands of DNB infected trees have been subject to applications of fungicides. However, the aerial application of copper fungicides is not currently approved in the UK.

The FCE has therefore set up a project to deal with the issue of DNB on two fronts:

- How to manage the existing stands of CP to minimise the impact (on the trees and profitability/the economics)
- Selection of DNB resistant species and management practices on new planting sites.

Further information on DNB, including details of the FCE and Forest Research project on the topic can be found here:

<http://www.forestry.gov.uk/site/forestresearch.nsf/ByUnique/INFD-6ZCKAE>

## 2.2 Climate Change

The issue of our changing climate has been well publicised over the past decade. Forestry has been one of the hot topics being discussed in relation to climate change, in part as it may offer one of the ways to mitigate climate change through carbon sequestration, and also in part due to the impact of climate change on our woodlands and wildlife habitats.

East and South East England are at the forefront of the predicted changes as a result of climate change. The region is already relatively dry, but climate change is predicted to increase periods of drought, along with rising temperatures and more extreme weather events. This will have a significant impact on species choice, which will both open up new areas of opportunity (for example, the use of species more susceptible to late frosts), as well as creating further limiting factors, such as drought tolerance.

## 2.3 Special Protection Area

Clearfell forestry peaked in 1980s and populations of specialist heathland birds such as nightjar and woodlark increased significantly in the 1990s due to the abundance of nesting habitat in the replanted areas. In order to protect this achievement, Thetford Forest was designated a SPA in 2000 with the statutory conservation objective: “to maintain the integrity of the site, subject to natural change”.

The SPA and Site of Special Scientific Interest (SSSI) objectives include a commitment to “avoid the deterioration of the habitats of qualifying features...ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive”. NE then set specific condition assessment criteria or numerical targets as convenient, measurable proxies for defining ‘favourable conditions and site integrity’.. These targets relate to the numbers of the three species present: nightjar, woodlark (forestry) and stone curlew (farmland) plus the amount of clearfell habitat.

Since 2000, the public forest estate has met the UK Woodland Assurance Standard (UKWAS) and has been certified as a sustainable forest; this means that clearfell operations have reduced from the previous high timber volumes in 1980s and 1990s. In addition, further pressure is being placed on the clearfell silvicultural system including:

- Legislation restricting the use of herbicides previously required for crop establishment in clear fell systems.
- Difficulty in establishing shade tolerant species in open conditions such as clearfells
- Introduced diseases, especially DNB.
- Adaption to a changing climate.

As a consequence, populations of the two bird species in the forest are declining with a significant likelihood that the SPA targets cannot be sustained.

The need for the review also ties in with current scientific thinking on ecosystem services. Specifically there is recognition of the wider environmental objectives encompassing more than target numbers for a limited number of species. This has particular relevance to Thetford Forest due to the SSSI designation for many rare endemic species associated with Breckland.

A new, long term strategy is therefore required to work with the ecological grain and to:

- Integrate a full range of environmental objectives.
- Meet the social and economic demands of a multifunctional site.

Design and create a future forest that is resilient to tree disease and climate change. This is likely to mean a broader range of species and silvicultural systems. However the extent and position of the future open habitat network within the forest will also be critical to achieving a forest wide ecosystem

## 3 Forest Resilience Programme

### 3.1 Overview of programme

As the response to climate change is closely linked to the response to DNB, and any change to silvicultural/forestry practice needs to be considered in the light of the conditions set by the SPA, these three issues have been combined into the Forest Resilience Programme.

The scope of this programme will therefore include:

- Species and management choices for restocking areas.
- Management of existing stands of DNB affected trees.
- Silvicultural practices.

The programme will be considering those areas of forest which are:

- Currently (or in the future) identified for productive woodland.
- Woodlands (on the landscape scale) where CP is the dominant species.

The outcome of the Forest Resilience programme is very broad and the final outcomes will depend heavily on the project development stages. It is probable that the programme will continue for several years before any final decisions are taken on how to enhance Forest Resilience. This may be further exacerbated should complex discussions over silvicultural practices and numerical targets under the SPA be required.

Forest Resilience is therefore being treated as a programme, developed through a series of interrelated phases and projects intended to contribute to the achievement of programme goals. Each project will have its own scope and outputs thereby creating a staged approach and ensuring gateways are passed prior to decisions being made. Detailed definition of all the projects and gateways is, at this stage, too complex to determine. These will be refined as the programme progresses. The scope and scale of these initial projects will be heavily influenced by the overarching goals and timescale of the programme.

Given the scale and potential impact of the challenges being considered, it is recognised that delivering improved Forest Resilience depends on both successfully engaging with a broad range of stakeholders and partnering with many organisations to deliver solutions. One of the key phases is, therefore, Stakeholder Partnership underlining the fact that this activity is more about harnessing the commitment and resources of stakeholders towards the delivery of a common goal than it is about simply consulting and informing, important though these are.

### 3.2 Programme Outcomes and Goals

The principal outcome of the Forest Resilience Programme is to:

*Develop forest management practices (solutions) that ensure the forest can remain sustainable for all three aspects of the triple bottom line (economic, social and environmental).*

'Solution' refers to a change or changes to current practices which will deliver against the criteria for acceptance. It encompasses small changes to operations through to wholesale change of species, planting regimes and operations.

The programme will last for several years, anticipated to be at least three (15/16, 16/17 and 17/18).

### 3.3 Programme Structure

#### 3.3.1 Challenges

Three interrelated **challenges** are to be considered simultaneously during the initial phases of the programme:

- DNB
- Climate Change
- Special Protection Area commitments.

There is scope to add other challenges following engagement with stakeholders and the gathering of evidence. The outcome of the programme will be solutions which meet the criteria established for acceptance.

#### 3.3.2 Phases

Effective **management of the programme** is essential for a programme of this scale, scope and longevity. A Programme Steering Group which provides clear leadership and a highly capable, well-resourced programme team are essential components of the management of the programme.

A successful programme, including delivery of solutions, is highly dependent on strong **engagement of stakeholders**. Through the programme, the intention is to develop strong partnerships with stakeholders in order to assist with evidence gathering, option development and eventually implementation.

The figure below shows how the programme is structured with two core phases (phase 3 and 4) with supporting programme phases built around these (phases 0, 1, 2). The two core phases will absorb the majority of time and resources.

The phases of the programme include:

- Programme definition and management, principally the establishment of a programme team, a Programme Steering Group and the adoption of this plan (Phase 0).
- Awareness building and creating the foundation for strong Stakeholder partnerships (Phase 1).
- Collection of all relevant issues for consideration (Phase 2).
- Evidence gathering (Phase 3)
- Option development, evaluation and selection (Phase 4)

Finally, **delivery**, Phase 5, which encompasses learning from the programme and underpins the entire programme. To ensure the programme is not purely an academic exercise, the viability of solutions and the ease of implementation, including costs, will be at the forefront of any evaluation of options.

A high level summary of the programme structure is presented below. This identifies the key outcomes for each phase, along with the outline projects associated.

### **3.3.2.1 Phase 0. Programme definition and management**

*Delivery of the programme demonstrates effective programme management.*

- Programme Steering Group and team (internal staff).
- Scope, scale and Terms of Reference.
- Conditions, constraints and criteria.

### **3.3.2.2 Phase 1. Awareness building**

*All relevant stakeholders are sufficiently aware of the programme to engage as appropriate.*

- Reference document to define all the issues as currently identified.
- Identify stakeholders and communicate.
- Programme Advisory Group (external stakeholders).

### **3.3.2.3 Phase 2. Issue collection**

*All relevant issues identified through internal and external engagement.*

- Stakeholder engagement.
- Collation and analysis.

### **3.3.2.4 Phase 3. Evidence gathering**

*Sufficient evidence obtained to inform robust decision making, ensure critical information not missed and irrelevant evidence avoided.*

- Define evidence required.
- Gather and collate.
- Identify gaps.
- Define further/different evidence required following long-listing and shortlisting.

### **3.3.2.5 Phase 4. Option development, evaluation & selection**

*Recommended solutions satisfy the criteria for acceptance and represent the best opportunity for improving Forest Resilience in the District.*

- Confirm criteria for acceptance.
- Long list of potential solutions.
- Evaluate solutions including stakeholder feedback.
- Recommend short list with outline delivery plans.

### **3.3.2.6 Phase 5. Delivery**

*Implementation of solutions to maximise the chances of success and disseminate the learning from the programme.*

- Implementation plans.

- Communicate decisions to stakeholders.
- Implement solutions with monitoring and feedback.
- Review programme and disseminate learning.