

# Restocking Strategy

## for the National Forest Estate

September 2017

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# 1. Purpose of the strategy

This strategy:

- states our commitments on restocking (section 2);
- describes the current position relating to restocking on the National Forest Estate (section 3);
- sets out a monitoring and evaluation framework by which the delivery of this strategy will be reported upon (section 4); and
- provides an action plan so that we can ensure our restocking is properly managed, and can give assurance to others that we are meeting our commitments (Annex 1).

## 2. FES's restocking commitments

- **We will always restock after felling**, unless there are overriding environmental, landscaping or legal reasons not to.
- **We will restock as quickly as possible after felling**, unless site conditions or management objectives dictate otherwise.
- **We will manage chemical usage in restocking** (insecticides and herbicides) by considering, at the site scale, what is the appropriate *Hylobius* management strategy - balancing issues of timing, insecticide and herbicide usage.
- **We will use restocking to help improve productivity, and the resilience of the estate** to climatic changes and tree health impacts.
- **We will use natural regeneration** to restock sites where this would meet the land management plan objectives and where site conditions are suitable.
- **We will seek to achieve best value in restocking.**

### Why are we making these commitments?

Investing in restocking is vital to sustain timber production from the estate, and the range of other benefits that the forests provide. Restocking is required under the UK Forestry Standard and enables FES to maintain its UK Woodland Assurance Standard certification – which means that sustainable, certified timber from the national forest estate can enter Scottish timber markets and support rural development.

Restocking is one of our most significant expenditure programmes, and we want to make sure we get the best value for this investment, ensuring that it helps us to develop the National Forest Estate for future generations. The sooner we restock, the more quickly we capture carbon, grow timber, and improve the appearance of felled sites. Rapid restocking can also minimise weed growth (and hence herbicide use) and loss of nutrients and sediment from sites, and may be needed to help improve forest structure.

The aspiration to restock quickly is tempered by the need to take sufficient time to minimise chemical usage, secure the right plants for the site, reduce browsing levels, allow heavy brush to break down and, in some places, to wait for natural regeneration to be successful. This strategy sets out actions that will help us to achieve the right balance when we make decisions about restocking.

## **How will we meet our commitments?**

To ensure that our commitments are met, a number of actions will be taken, as described in the Action Plan (Annex 1). Through this package of actions we will achieve:

- Clear leadership that ensures our plans strike the right balance between productivity, cost and other objectives;
- Good information on which to base silvicultural decisions;
- Joined up decision-making that connects decisions about felling with decisions about restocking – and takes account of the financial and operational implications of both;
- Clarity about the role of restocking in delivering our commitments on the estate;
- More rapid restocking of productive conifers to make the most of the productive potential of the site;
- Cost of restocking proportionate to the benefits expected from sites;
- A culture where staff take responsibility for achieving cost-effective outcomes;
- A reduction in the area awaiting restocking;
- Restocking that is demonstrably good value for the public purse;
- All restocking promptly fed into the programming and budgeting processes;
- Resourcing for restocking that is aligned with medium term requirements;
- High quality restocking data;
- Active strategic management of our restocking land bank.

## **3. Current position, and changes as a result of this Strategy**

### **a) Amount of felling and restocking**

The management of the national forest estate is planned through Land Management Plans. These set out our felling and restocking intentions in detail for the next 10 years – with reviews every five years to take account of changing circumstances such as tree disease. A forward look across all our Land Management Plans shows, broadly, how our current plans expect the estate to develop.

We are still in the era when we are moving away from the blanket afforestation of the post war era, and incorporating open space to meet Scottish Government land use policies and modern sustainable forestry standards. We recognise that the current management intentions set out in our plans may therefore reduce the conifer timber

production capacity of the NFE as it continues to address some of the issues created by the way we once did forestry.

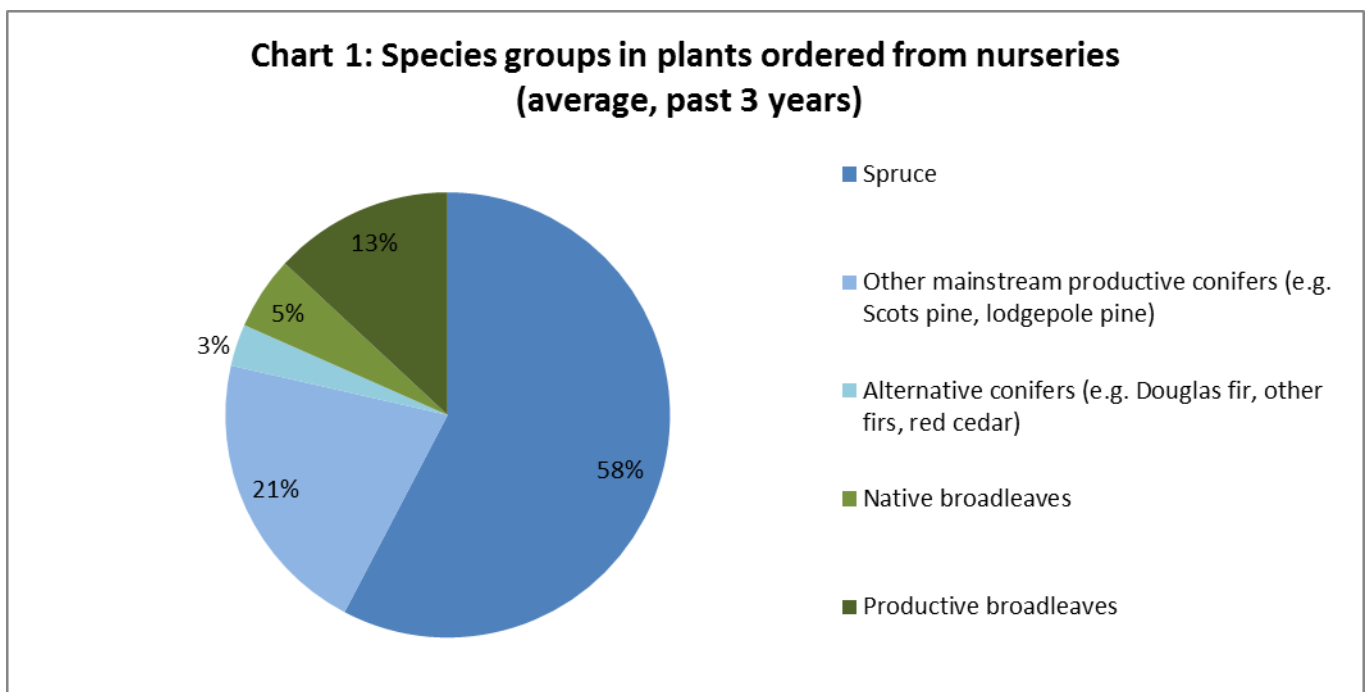
Taking this into account, over the next ten years our plans show that on average some 80% of the felled land on the NFE is to be restocked (5600 ha gross restocking out of around 7000 ha felled each year) and 20% is to be restored to open habitat, such as peatland. These are not targets; they are simply a reflection of the stage of development of the estate.

**As a result of this Strategy, we will be re-examining our plans to see whether (consistent with modern forestry practice, policy and our corporate commitments) there is further potential to restock with productive conifers.**

### b) Composition of restocking.

The National Forest Estate has a significantly higher proportion of conifer (90%) than private and other woodland (65%). Some 88% of the forest land on the estate is classified as productive in terms of timber (almost all of which is conifer). The estate currently comprises 57% Sitka spruce with the second and third most common species (Lodgepole pine and Scots pine) comprising 12% and 10% respectively.

The Shannon Index (a measure of diversity) for the estate is 1.7, lower than for Scotland as a whole (2.1)<sup>1</sup>. We are diversifying the Estate in line with the principles of

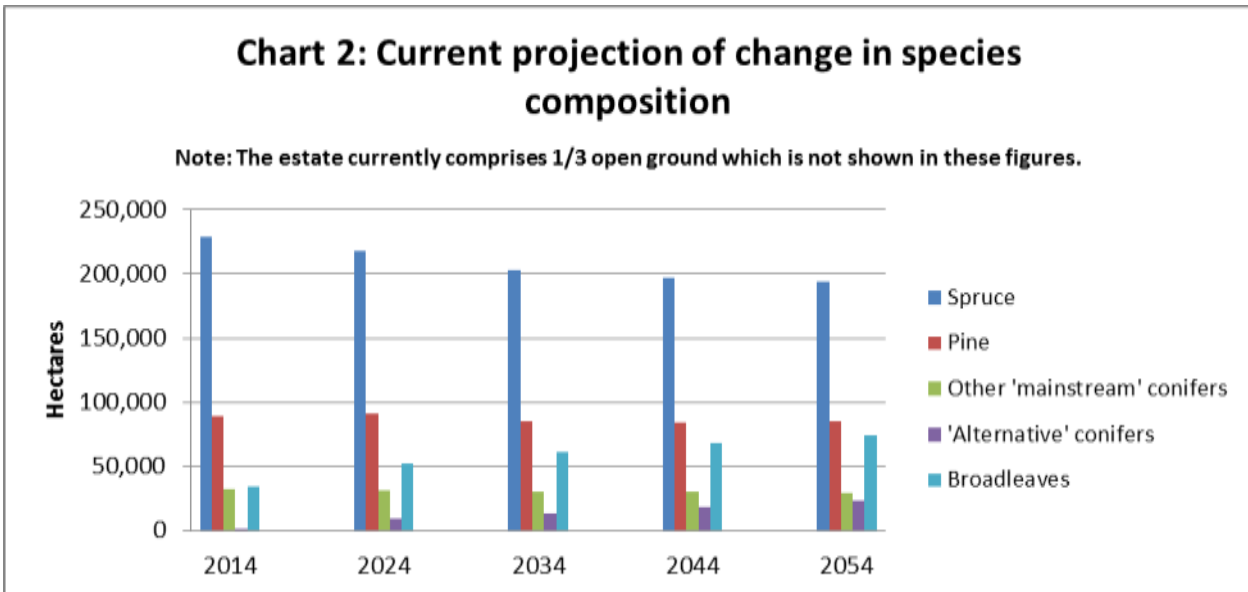


sustainable forestry, but over 80% of our planted restocking is still with productive conifer species (see Chart 1). The remainder of the planted restocking is broadleaves

<sup>1</sup> The theoretical maximum value for this indicator in Scotland is 4.4.

(of which nearly three quarters are productive broadleaves) to expand the area of broadleaves in the Estate’s woodlands from the current 8% and to help restore Ancient Woodland Sites.

We currently fell and restock less than 2% of the estate’s forests each year so any change in the estate will, by necessity, be slow. Nevertheless, our projections based on our current plans show that by the mid-2050s, taking into account both planting and natural regeneration, the composition of the estate’s woodlands will have changed, as shown in Chart 2.



These projections can be made because the future management of every part of the national forest estate is planned through [Land Management Plans](#). These plans set out felling, restocking, roading and other land management activities and are developed through a process that involves consultation with the public and stakeholders.

**As a result of this Strategy, we will be working with stakeholders to identify opportunities to increase the emphasis of our Land Management Plans on maintaining the timber production capacity of the estate.**

### c) **Timing of restocking.**

Restocking by planting may take place immediately after felling, or be delayed by up to three to five years. Delayed restocking is a tactic used by FES and a number of others in the forestry sector to minimise the use of insecticides against *Hylobius weevil*, the most significant pest of Scottish forestry, and to allow natural regeneration to occur. Minimising the use of insecticides such as Cypermethrin and Acetamiprid (Gazelle) on the National Forest Estate is in keeping with UK certification standards. Our records show that, overall, fallow periods are not leading to a corresponding increase in herbicide use.

The [Hylobius Management Support System](#) (HMSS) from Forest Research is used to help plan the date of restocking to minimise damage by this weevil. Managers are encouraged to use the system in conjunction with their professional judgement and the site objectives and conditions. For example, it may not be appropriate to use fallow periods where this would make weed growth excessive – perhaps on yield-class 20+ *Juncus*-dominated site in the west of Scotland; or where soil stabilisation is necessary – such as on steep, unstable slopes or in flood-prone areas. We are hoping in future to invest in the spatial aspects of the HMSS to enable better prediction of populations at the landscape scale and to provide better estimates of initial (year 1) pressure.



Chart 3 shows the length of time that sites destined to grow softwood timber wait to be restocked; the average wait is currently about 3-4 years. Sitka spruce sites tend to be restocked slightly more quickly than other conifers and broadleaves.

**As a result of this Strategy we will be looking for opportunities to undertake our conifer restocking more quickly.**

#### **d) Amount of land awaiting restocking.**

The amount of land awaiting restocking is particularly high at the moment because of the record amount of felling that has taken place in recent years, including extensive areas to control tree diseases, plus the introduction of delayed restocking. On the National Forest Estate there is currently 32,415 ha of land awaiting restocking by planting– a figure that is monitored as a Key Performance Indicator for FES. There is, in addition, 4,816 ha awaiting natural regeneration, giving a total of 37,231 ha of land awaiting restocking. This is not a backlog; all of it is in one stage or another of the restocking process – such as undergoing ground preparation, fallow awaiting *Hylobius* populations to decline, or awaiting natural regeneration. Data checks are carried out to

ensure that we are aware of (and dealing with) any sites that remain at a status of 'felled' for more than five years.

**The area of land awaiting restocking by planting has been introduced as a Key Performance Indicator for FES.**

**e) Restocking programmes.**

We are currently felling an average of 7000 hectares of forest each year. Our forward look shows that, in the next ten years, around 80% (5600 ha per year) of this needs to be restocked to return it to woodland.

In 2016/17 5399 ha (net) of planted restocking was undertaken on the National Forest Estate, and we expect that to rise to 5643 ha in 17/18. When these net planting figures are converted to gross to adjust for integral open space such as rides and glades (see Annex 2), this equates to 6209 ha of felled ground restocked in 2016/17 and 6490 ha in 2017/18 through planting. This will be supplemented by around 490 ha of land being restocked by natural regeneration (425 ha net). We are also seeking to restock up to 500 ha through a 'combined harvesting and restocking trial'. In 2017/18 this means that we intend to restock nearly 7500 ha of felled land.

This package of restocking, combined with a gradual shift to felling less area to achieve the same volume (as we complete the felling of major areas of diseased trees), will allow us, over time, to reduce the area of land awaiting restocking. We expect to have to maintain restocking at this high level for the next 3-5 years.

**f) Budgetary and economic considerations.**

Restocking is one of FES's most significant expenditure programmes. Investment in restocking on the National Forest Estate has grown from £12M in 2012/13, to a forecast £18M in the current year (2016/17) – and this is supported by more than £5M (net) worth of deer management per year (as described in our [deer management strategy](#)).

For plantations destined to produce timber, over the whole rotation the cost of restocking is a significant determinant of the economic viability of our forest management. As part of our commitment to sustaining at least 3 million cubic metres of softwood timber production we are looking to extend rotation lengths in areas where volume increment can be sustained. In doing this we will reduce the frequency of restocking.

We are also improving our decision-making processes to ensure that the investment we make is proportionate to the outputs we expect from the final crop. For example, we do not wish to invest in achieving full, even spacing of improved stock for plantations that are intended to produce biomass.



## **g) Restocking quality.**

Sites which have been restocked are surveyed to check that they meet the required standards.

Those intended for softwood timber production are expected to achieve the required standards of 2700 stems per hectare at year 1 and 2500 stems per hectare at year 5. The results (which are shown by District in Annex 3) show that, by year 5 on their planted restocking sites all Districts had achieved more than 2500 stems per hectare, but in some cases this was only achieved by including 'extra trees' – those planted closer than 1.5m spacing, and infilling natural regeneration (which may or may not make a useful contribution to the final crop).

The results of these surveys are reported to Districts every year as part of a process of continuing improvement.

Sites restocked by natural regeneration are monitored through a specific natural regeneration survey, and are monitored until successful restocking is achieved (or, if it is clear that successful restocking will not be achieved naturally, the site is transferred into the planted restocking programme).

## 4. Monitoring and evaluation

A range of metrics associated with restocking are monitored and will be reported upon annually:

Metric	Value at April 2016	Value at April 2017	Target for 2018 (if applicable)
<b>Area of land awaiting restocking by planting (Key Performance Indicator for FES)</b>	35,995 ha	32,415 ha	Tbc
Area of land awaiting natural regeneration	Included in above figure	4,816 ha	n/a
Area of restocking in preceding year which was conifer ( <i>from BMR</i> )	4485 ha	4605 ha	n/a
Area of restocking in preceding year which was broadleaf ( <i>from BMR</i> )	1085 ha	1065 ha	n/a
Ratio of current restocking rate to net area awaiting restocking by planting (net = 0.85xgross area)	5.5	4.8	Continuing reduction
Tree species diversity (Shannon Index) ( <i>derived from Sub-Compartment Database</i> )	1.7	Tbc	n/a
Achievement of target stocking density in quality timber crops at Yr 5 ( <i>from SDA report</i> )	Not available	Figure in development	Avg. 2500/ha
Percentage of leading shoots damaged by browsing on Yr 1 restocks ( <i>from SDA report</i> )	19%	12%	Max 10%
Proportion of restock programme achieved against the agreed programme ( <i>from BMR</i> )	95%	98%	100%
Unit cost of stand replacement (restocking/regen) ( <i>from BMR</i> )	£2,721/ha	£2,929/ha	£2795/ha
Use of key chemicals in restocking ( <i>Pesticide Records</i> ):			n/a
<ul style="list-style-type: none"> <li>• <math>\alpha</math>-cypermethrin (insecticide - treated trees)</li> </ul>	416 l	358 l	
<ul style="list-style-type: none"> <li>• Cypermethrin (insecticide - top up spray)</li> </ul>	2214 l	0 l	
<ul style="list-style-type: none"> <li>• Acetamiprid</li> </ul>	0.5 kg	273 kg	
<ul style="list-style-type: none"> <li>• Glyphosate (herbicide) - figures include rhododendron</li> </ul>	3367 l	3405 l	

## **5. Ownership and review of this strategy**

This strategy was informed by a report from the Restocking Working Group, led by Matt Young and involving Neil Proctor, Andy Kennedy, Colin Hossack, Gareth Waters, Dunstan Cribb, Neil McInnes and James Fletcher.

The Senior Responsible Owner of this Strategy is the FES Head of Land Management, Trefor Owen. Implementation of the Action Plan is overseen by Jo Ellis, Head of Planning and Environment and Bruce Sewell, Forest Management Officer.

This document will be reviewed on an annual basis, and an annual report will be provided on the values of each metric and the progress with the Action Plan.

A summary of the business processes involved in the delivery of restocking is provided at Annex 4 and this acts as an internal reference guide for staff in FES.

# Annex 1: Action Plan

## A. Strategic decisions about restocking

The decisions we make about felling and restocking in Land Management Plans set the direction for the estate of the future, and so leadership and strategic direction in this area is vital. We are also working on tools and guidance to better evaluate the consequences of our restocking decisions. This will help us make clear and informed decisions about how best to develop NFE woodlands to meet our objectives.

**The outcomes we are seeking from this part of the Action Plan are:**

- **Clear leadership that ensures our plans strike the right balance between productivity, cost and other objectives;**
- **Good information on which to base silvicultural decisions;**
- **Joined up decision-making that connects decisions about felling with decisions about restocking – and takes account of the financial and operational implications of both.**
- **Clarity about the role of restocking in delivering our commitments on the estate.**

Ref	Action	Who will lead this?	By when?	Outputs
1.	In their local leadership roles, District Managers will ensure that restocking and other land management proposals (such as the creation of open ground) contained within Land Management Plans: <ul style="list-style-type: none"> <li>• take appropriate opportunities to increase (or avoid decreasing) the emphasis on productive conifers on the estate,</li> <li>• are financially acceptable (including opportunity costs), and</li> <li>• are otherwise consistent with national and district corporate commitments.</li> </ul>	FDMs	Ongoing	FDMs recognising their key leadership role in relation to Land Management Planning.
2.	We will use our proposed Spatial Plan for the National Forest Estate to provide strategic direction for restocking.	Alison Grant	Autumn 2017	National Spatial Plan
3.	In order to help Planners to match species appropriately to sites, we will provide Districts with the results of a national Ecological Site Classification exercise, and provide support to use these results.	Matt Young	Summer 2017	Data in a format which can be used in Planning.

Ref	Action	Who will lead this?	By when?	Outputs
4.	To support the implementation of FCS policy guidance ' <a href="#">Deciding future management options for afforested deep peatland</a> ' business guidance on the steps to take to reach the decision on whether or not to restock will be provided.	Ian McKee	Summer 2017	Business guidance on restocking on peatland.
5.	Through our Resilience Programme we will develop a decision making framework to help us make decisions about species choice, recognising the importance of maintaining productivity but also the need to prepare for a changing climate and threats of pests and diseases. We will involve stakeholders including Confor and UKFPA in the development of this framework.	Alan Gale	Autumn 2017	A framework for decision making.
6.	To promote joined-up, long-term thinking which recognises cost implications, a method will be developed for the financial appraisal of the main income and expenditure associated with implementing Land Management Plans (where restocking is a major item).	Chris Little	Initial version autumn 2017	Methodology for financial appraisal of Land Management Plans
7.	Since windthrow introduces cost into both harvesting and restocking operations, we will provide support to help those planning felling and thinning to minimise its occurrence.	Alan Gale	Ongoing	All Districts using Forest GALES in decision making.
8.	We will seek to increase the proportion of our timber production that comes from thinning and low-impact silviculture (where replanting is not required) – but we will do this in a planned way so as to maintain and increase stability and avoid future windthrow.	Planning Managers in collaboration with AOMs	Ongoing	Thinning included in Marketing Strategy.

## B. Tactical decisions about restocking

The strategic decisions about restocking made in Land Management Plans need to be soundly grounded in reality, and subsequently refined and tested at the 'Work Planning' stage. When a broad range of staff get involved and take ownership of the proposals at both the Land Management Planning stage, and subsequently at the Work Plan stage, a better and more cost-effective outcome can be achieved. We need to create a culture where this way of working is the norm.

**The outcomes we are seeking from this part of the Action Plan are:**

- **More rapid restocking of productive conifers to make the most of the productive potential of the site;**
- **Cost of restocking proportionate to the benefits expected from sites;**
- **A culture where staff take responsibility for achieving cost-effective outcomes;**
- **A reduction in the area awaiting restocking.**

Ref	Action	Who will lead this?	By when?	Outputs
9.	In their local leadership roles, District Managers will ensure that all relevant staff recognise their role in developing and challenging restocking proposals both at the Land Management Planning stage, and in developing Work Plans.	FDMS	Ongoing	FDMS recognising their key leadership role in relation to Land Management Planning.
10.	We will make more use of 'hot planting' (restocking within a year of felling) of productive conifers in situations where the <i>Hylobius</i> Management Support System (HMSS) suggests the risks of damage are manageable.	AOMs	From 2017/18 planting season.	A shorter time between felling and restocking for productive conifers.
11.	We will ensure that those involved in making decisions about the timing of restocking understand how the HMSS should be used in support of these decisions, and will invite private sector forest management representatives to join us in seminars etc.	Dunstan Cribb	Summer 2017	HMSS technical training and support package delivered.
12.	We will continue to fund the development of the HMSS in conjunction with other public and private sector forest managers to enable more focus on predicting high infestation levels, to inform choices about felling and restocking.	Bruce Sewell	Summer 2017	Improved HMSS
13.	We will review the Integrated Pest Management Strategy to ensure that we are targeting chemical use on the estate appropriately.	Dunstan Cribb	Winter 2017	Updated IPMS
14.	We will direct Planning Managers to review Work Plans for areas already	Alison Grant	Spring 2018	Assurance that Work Plans

	<p>felled to identify areas where LMP objectives could still be achieved through:</p> <ul style="list-style-type: none"> <li>• a switch to (more) productive conifers</li> <li>• restocking with productive conifers instead of creating open space.</li> </ul>			have been reviewed.
15.	We will ensure that Work Plans reflect the Land Management Plan objectives and set clear, appropriate specifications for the coupe to ensure that delivery inputs are proportionate to the expected outcome. We will develop and trial improvements to Work Plans so that the objectives for the site are clearly detailed and inform the operational delivery and the surveys that follow.	Robert Clamp and Dunstan Cribb	2018	Amended and supported work planning process linked to monitoring and reporting (below)
16.	We will ensure that appropriate survey methodologies are in place to monitor and report on the full range of restocking objectives. In doing this we will make sure that the survey effort is proportionate to the category, and that we are making best use of information from related surveys (such as deer surveys or plot density surveys) to avoid duplication of effort.	Julie Gardiner	Once improvements finalised (see above)	Survey methodologies
17.	In order to promote a culture where staff use resources wisely, managers will report on and encourage discussion about the outcomes of monitoring all restocking objectives (currently the organisational focus is on reporting the results of 'uniform restocking' surveys [OGB4] and this can give the impression that this – potentially the most costly specification of restocking – is the only acceptable standard).	Bruce Sewell, AOMs	Annual reporting process.	Report reflects more than just 'uniform restocking' results.

## C. Delivery of restocking

There are opportunities to improve the way that we restock while reducing costs – by targeting alternative and lower-cost methods to situations where this is appropriate, and by trying alternative approaches.

**The outcomes we are seeking from this part of the Action Plan are:**

- **Restocking that is demonstrably good value for the public purse.**

Ref	Action	Who will lead this?	By when?	Outputs
18.	We will capture evidence and implement learning from the 'integrated harvesting and restocking' trials (where there will be an emphasis on rapid restocking).	Mick Bottomley	Autumn 2017	500 ha of sites offered as combined harvesting contracts.
19.	We will collect, extract and store sufficient improved Sitka spruce seed from our Sitka spruce orchards to secure plant production to meet our current and future planting programmes, and assess the need and opportunities for improving and/or establishing new seed orchards.	Dunstan Cribb	Ongoing	Secure Sitka spruce seed supply for current and future programmes
20.	We will train and support planning and delivery staff to use natural regeneration as a restocking method, (including utilising beneficial regeneration where a proportion of the site still needs to be planted) where site conditions allow and where this meets the coupe's management objectives.	Dunstan Cribb	Ongoing	Natural regeneration workshops.
21.	We will integrate activities to manage natural regeneration with other restocking activities as we consider future funding allocations.	Land Management Leadership Team	Summer 2017	Natural regen management in Key Programmes spreadsheet
22.	Where appropriate we will encourage greater use of scarifiers, brash raking and continuous mounders as a lower cost ground preparation method, both to reduce costs and to reduce the possibility of slips, trips and falls on these sites.	Dunstan Cribb	Summer 2017	Final report of the review into ground preparation, followed by implementation.
23.	We will encourage more integrated consideration of harvesting and restocking to ensure that the condition of the harvested site is suitable for cost-effective restocking.	Mick Bottomley	Ongoing	Reduced cost of ground preparation.



## D. Budgeting for restocking

We will ensure that appropriate feedback mechanisms are in place to promptly identify all areas requiring restocking and to prevent a mismatch between the amount of restocking required, the rate of restocking carried out, and the budget available for the work.

**The outcomes we are seeking from this part of the Action Plan are:**

- **All restocking promptly fed into the programing and budgeting processes.**
- **Resourcing for restocking that is aligned with medium term requirements.**

Ref	Action	Who will lead this?	By when?	Outputs
24.	We will provide feedback to Area Operations Managers and Planning Managers about the amount of land awaiting restocking, and projections for the amount of land that will need to be restocked in future (if harvesting takes place as planned), so that they can monitor and if necessary adjust the rates of restocking in their areas.	James Fletcher	Annually in Spring	Restocking programme aligned with need.
25.	Operations teams will work with the FM Officer to make provision within their Forest Management budgets for managing natural regeneration, and for respacing after establishment; initial changes to COGNOS [FES financial software] will be made to ensure that this is part of the mainstream budgeting process.	Bruce Sewell	Annually in Spring	Provision made in budgets
26.	We will provide projections to the Finance Team about the amount of land that will need to be restocked for each of the next 10 years (if harvesting takes place as planned) and the likely cost of achieving this, so that these costs can be considered as part of Strategic Business Plans for the organisation.	Jo Ellis	Annually	Long term budget projections and advice based on this.

## E. Monitoring land awaiting restocking

The current area of land awaiting restocking by planting is estimated to be 32,415 hectares, with an additional 4,816 ha awaiting natural regeneration. This figure is high and results from increased harvesting programmes and inclusion of many low volume diseased coupes in recent years. However, taking account of the opportunity costs of fallow land for sites with an objective of timber production, we want to minimise the length of fallow periods for these sites.

**The outcomes we are seeking from this part of the Action Plan are:**

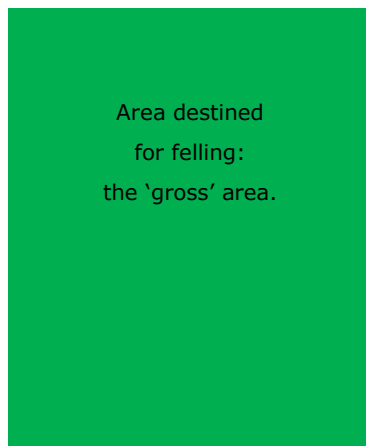
- **High quality restocking data;**
- **Active strategic management of our restocking land bank.**

Ref	Action	Who will lead this?	By when?	Outputs
27.	We will issue clear guidance about how to quality assure and manage data on the land awaiting restocking, including guidance on the use of the new 'awaiting natural regeneration' flag and the use of the land use code 'successional' .	Matt Young, Planning Managers	End March 2017 for initial work, follow-up summer 2017	Quality assured data.
28.	We will ensure the continued accuracy of land bank data by reviewing annually the land identified in the sub-compartment database as 'failed', 'burnt', or 'awaiting natural regeneration', and any areas with an extended time since felling. These will then be introduced into the replanting programme as required.	Planning Managers, with support from national GIS team.	Annually, before Business Plan	Accurate understanding of planting requirements.
29.	We will calculate and profile the area of land that should reasonably expected to be awaiting restocking by planting, taking account of the annually varying area that is felled and windblown on the estate.	Jo Ellis	Autumn 2017.	Target for FES restock land bank.

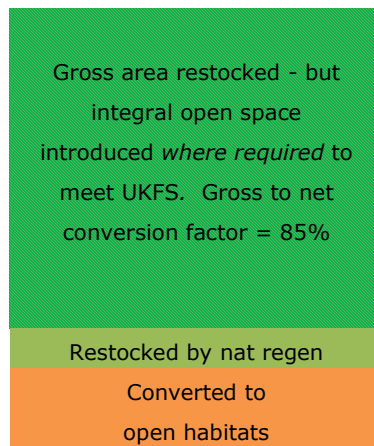
## Annex 2: The UK Forestry Standard, and gross and net forest area.

The following illustration shows how forest area changes over time as open habitats are restored and modern forestry standards are introduced at restocking time.

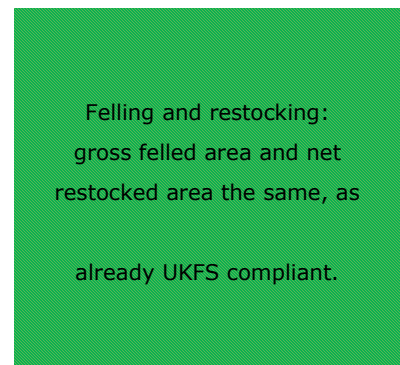
**First rotation:** UKFS requirements may not have been met.



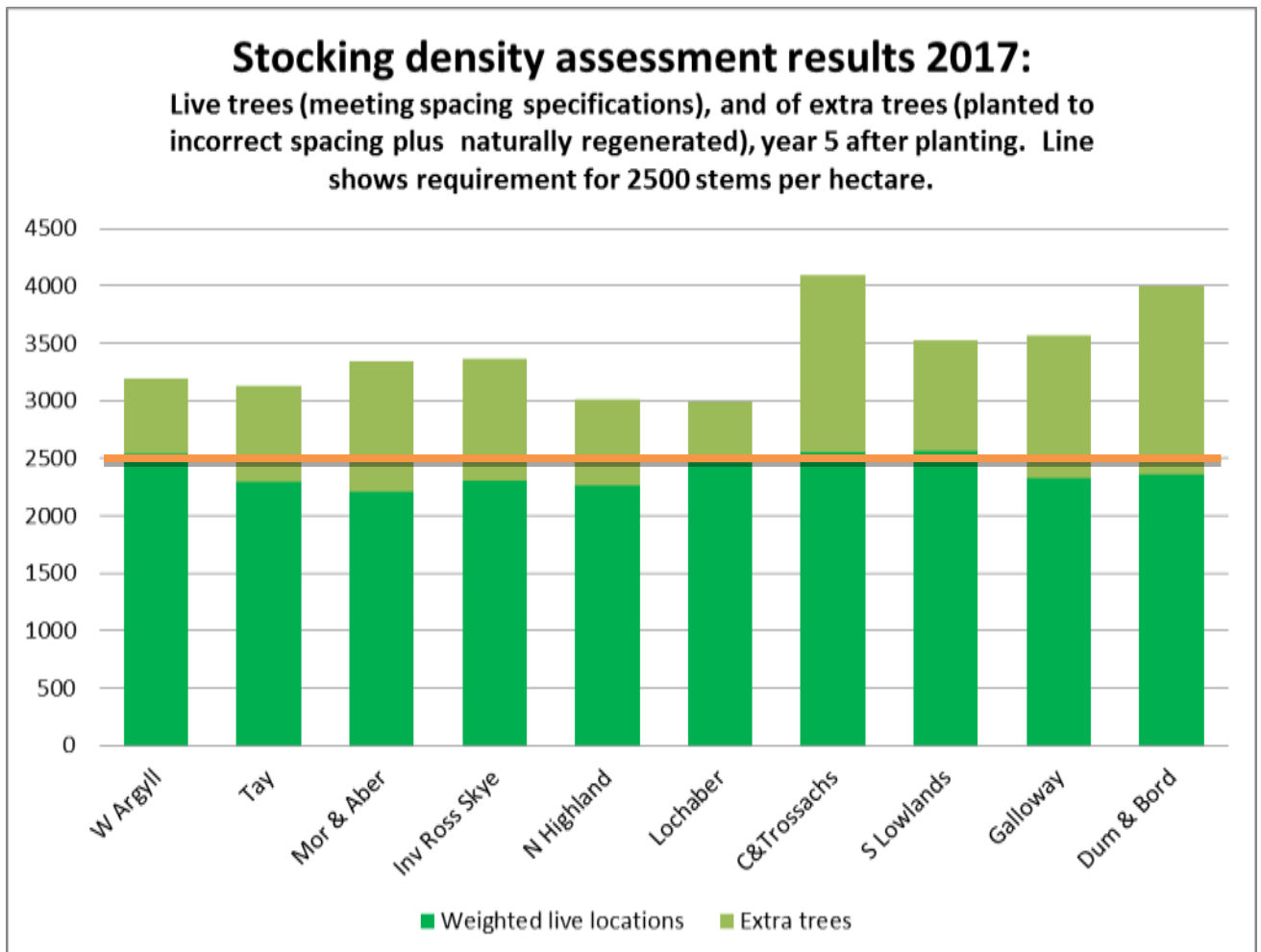
**Second rotation:** open habitats being restored, plantations brought up to UKFS standards.



**Third rotation:** Smaller area of UKFS compliant forest. Open habitats already restored.



## Annex 3: Results of establishment surveys by District



# Annex 4: Business process and implementation

## Roles and responsibilities

In FES the Forest District Manager (FDM) has oversight of and responsibility for the sustainable management of the National Forest Estate in their District. This includes both the planning and the delivery of the local restocking programme (and the harvesting programme that generates it). It is the FDM who is responsible for ensuring, at the District scale, that harvested sites are restocked as required, and that this is budgeted for appropriately.

In practice the FDM delegates the strategic and tactical planning activities to the Planning team (led by the Planning Manager (PM)) and delegates the delivery of the required operations to the Area Operations Manager (AOM) and their team. Close collaborative working between PM and AOM is therefore critical to ensure a joined-up and cost-effective approach.

The FDMs are supported by and responsible to the Head of Land Management and their team, who together ensure that the overall restocking programme is resourced; is delivered to appropriate quality and quantity; and is in line with our strategic commitments.

## Business Process

An outline business process for restocking is described below. The areas where, as a result of this strategy, we intend to change or enhance our focus are highlighted in italics. This annex may therefore help staff to identify what this strategy means for their work:

### 1. Land Management Planning

- The Land Management Planning process decides which areas should be clear-felled, and which should be converted to open habitats – and hence determines which areas will require restocking, and when. *FDMs, PMs and AOMs should work together to ensure that there is an appropriate focus on increasing (or avoiding decreasing) the timber production capacity of the estate in terms of species choice and area restocked, consistent with the objectives of the Land Management Plan, modern forestry standards and our corporate commitments.*
- This is also the stage at which we work together, involving colleagues from the different specialisms (such as Wildlife Managers) to make broad decisions about the timing and species for restocking. We also inform the plant and seed supply system of future needs – particularly important when seed needs to be collected and propagated. *In situations where the HMSS suggests risks of damage are manageable, we plan for the use of 'hot planting'.*

- At the LMP stage careful decisions about forest management (such as decisions about whether we thin, or about rotation lengths) can have positive impacts on whether and when restocking is created.

## **2. Programming of felling and restocking**

- The Planning team, in collaboration with the Operations team, set out a 3-5 year felling and restocking programme derived from the Land Management Plan.
- At this stage final decisions about the timing of restocking are made, based on the principles of the *Hylobius* Management Support System and in consideration of a range of other relevant factors. *Opportunities to do hot planting should be sought, where this is consistent with the objectives of the LMP.*

## **3. Business planning**

- Resource requirements are set out annually in the District Business Plans. These show, for the next 2-3 years, the cash and staff resources that will be required for restocking (and all other activities) in that District.
- *The Forest Management Officer reviews the next 2-3 years of proposed restocking programmes with Districts in advance of producing the Business Plan, and provides appropriate challenge and oversight of the programme.*
- *The FDM ensures that the proposed restocking programme is adequate for the amount of felled sites that are (and will be) in their District.*
- They also ensure that provision is made for works such as deer management and respacing of natural regeneration which support the delivery of restocking. *Specific provision should be identified for the management of natural regeneration sites.*

## **4. Operational site planning**

- The Planning team, in collaboration with the Operations team and in consultation with specialists in the District, produce a Work Plan (operational site plan) for the restocking operation.
- Where restocking is due to follow quickly after felling this may be at the '75% visit' stage (towards the end of felling), though if a fallow period is being used this may be done after felling is complete.
- This is the stage where decisions about ground preparation methods and minor changes to species and provenance choice are finalised, based on site assessment and management objectives. This gives an opportunity for all involved to challenge the proposals to ensure that they are cost-effective for meeting the objectives of the site.

- *To ensure that we are meeting the commitments made in this Strategy, Work Plans for restocking that are currently 'live' or in development should be reviewed to identify whether there are opportunities for increased emphasis on productive conifers, where this is consistent with the objectives of the LMP, modern forestry standards and our corporate commitments. Relevant specialists (e.g. Environment team on PAWS sites) should be fully involved in these reviews.*

## **5. Delivery and monitoring**

- Restocking operations are overseen by the Operations team.
- For areas which have been planted for timber production, the success of restocking is monitored by 'Stocking Density Assessment' surveys at year 1 and year 5. The results of these surveys are fed back to Districts to support continuous improvement.
- For areas which are being established through natural regeneration (and have been 'flagged' as such), a natural regeneration survey is carried out at an appropriate point.
- The sub-compartment database is updated once restocking has been undertaken (or natural regeneration deemed successful).
- *Nationally-organised data checks monitor the size of the land bank and ensures that there are no sites which have been felled but not included in the restocking or natural regeneration programmes.*