

# Forest Plan

## Plym

2014 - 2024



Forestry Commission  
woodlands have  
been certified in  
accordance with the  
rules of the Forest  
Stewardship Council.



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**FORESTRY COMMISSION - Application for Forest Design Plan Approval**

Forest District: West England Forest District (FD)

 Woodland or property name: **Plym**

 Nearest town, village or locality: **Plymouth**

 OS Grid reference: **SX52755991**

 Local Authority district/unitary Authority: **South Hams District Council**

1. I apply for Forest Design Plan approval for the property described above and in the enclosed Forest Design Plan.
2. I confirm that the scoping, carried out and documented in the Consultation Record attached, incorporated those stakeholders which the FC agreed must be included. Where it has not been possible to resolve specific issues associated with the plan to the satisfaction of consultees, this is highlighted in the Consultation Record.
3. I confirm that the proposals contained in this plan comply with the UK Forestry Standard.
4. I undertake to obtain any permissions necessary for the implementation of the approved Plan.

 Signed.....  
 (FE) Forest Management Director

 Signed.....  
 (FS) Regional Director

District.....

Region.....

Date .....

Date of Approval .....

Date approval ends: .....

(ha)	Conifers	Broadleaves	Open Space
New planting	Nil	Nil	
Felling	18.57	4.9	
Restocking *	18.04	19.65	2.83
Managed under continuous cover	450		

\* The area of restocking is greater than felling because there are a number of areas felled at time of writing.

Total plan area 543 hectares

## 1.0 Plym Forest Plan Summary

The Plym Forest Management Unit (FMU) extends over 543 Hectares (1341 acres) of the Public Forest Estate. It is situated just to the north east of Plymouth and is within the South Hams District Council area.

The woodland is a mix of conifer (56%) and broadleaves (44%) most of which are being actively managed to provide timber for local and national markets (approximately 2000 – 3000 cubic metres of timber per year) and to improve the quality of the remaining crop. Roughly 78% of the area is classed as an 'Ancient Woodland Site', which means that an area has been continually wooded since AD 1600. In the period 2010 – 2012 a disease called Phytophthora Ramorum had infected and was killing a particular species of conifer called larch. Some 147 hectares (363 acres) of young and mature larch crops were cleared which left a greater than normal amount of non wooded areas.

Roughly half of the main block is owned freehold by the Forestry Commission and is dedicated open access under the countryside rights of way act. The remainder of the area is leased on a long term basis and permission to access these areas does vary. There is a managed car park which provides access to over 17 Km (10 miles) of forest roads, rides and trails over varied terrain and slopes and is popular with local people for walking, cycling and horse riding. There are also several heritage features within the FMU, some of which are scheduled by English Heritage. These include a post medieval deer park, a 19<sup>th</sup> century lead mine and an Iron Age hill fort.

The woodland habitat supports a wide variety of wildlife including ground nesting and other birds, several birds of prey and various species of butterflies. There is also fallow deer and grey squirrel. This plan seeks to deliver a 7% increase in the amount of permanent / managed open space, which will improve the matrix of habitats for a wide range of flora and fauna.

The purpose of this Forest Plan is to make people aware of the way the Forestry Commission manage the public forest estate and its planned future management of this site. It aims to outline how every aspect of the forest will be managed for timber production , habitats and landscape as well as look at other elements such as how recreational opportunities in the forest will be managed. Forestry requires us to be forward looking and so this current management plan gives details of the management of Plym from 2014 until 2024. The plan outlines our intentions for the continued management of the site and contains information on the following topics:

**Continue the process of restoring ancient woodland sites.** Many of the ancient woodland sites currently have a commercial crop of conifer or non native broadleaves growing on them. These areas are called 'Plantation on Ancient Woodland Sites' or PAWS. There will be a number of ways in which restoration will be implemented depending upon the character and requirements of each area. However in the majority of cases the process will be carried out gradually and in some instances will take many generations, perhaps hundreds of years, to complete. Whilst habitat improvement is the main objective in PAWS it is also of fundamental importance that productivity and sustainable forest management continues in these areas. A key component in achieving success will be to monitor representative sites. After implementing this plan over the next 10 years we hope to see a 3% increase in the area of native broadleaves.

**Increase resilience to climate change, pests and diseases.** We will achieve this by increasing the diversity of tree species and age structure of the woodland. There will be an ongoing programme of clear felling and replanting but we are also looking to implement and develop continuous cover management systems. This means establishing one or more storeys of young trees in an area before the canopy of older trees is removed.

**Forests for people.** The Forestry Commission will continue to forge links with local councils, user groups and other organisations to pursue any opportunities to develop the recreational potential at Plym.

## 2.0 Policy & context

The Forestry Commission has been independently audited against the UK Woodland Assurance Standard (UKWAS) and its management standards have been endorsed by the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC). The FC is committed to maintaining woodland management to these standards.

This plan has been prepared in order to achieve compliance with UKWAS and comply with FSC and PEFC standards.

The Public Forest Estate in the Glynn Valley Forest Management Unit lies within West England Forest District, an amalgamation of the former Peninsula, Forest of Dean and West Midlands Forest Districts that were combined in April 2012. West England Forest District covers the west of England as far as North Shropshire.

## 2.1 Strategic objectives for the management of woodland on the Public Forest Estate in the South West.

Management of woodlands on the Public Forest Estate will deliver Government aims for forestry in England as described in the Forestry Policy Statement which is available from the DEFRA website. In Summary we will seek to achieve the following key objectives:

- **Protecting** the nation's trees, woodlands and forests from increasing threats such as pests, diseases and climate change,
- **Improving** their resilience to these threats and their contribution to economic growth, people's lives and nature,
- **Expanding** them to increase further their economic, social and environmental value.

Further details on how these objectives will be achieved and implemented in West England are available in our strategic plan due for publication in 2013.

## 2.2 Consultation

Consultation has been carried out with identified stakeholders as shown in the consultation record at appendix 1.

Our method of identifying consultees is based upon the three major sensitivities of any particular woodland : landscape, recreation and environment, coupled with the level of change we anticipate being caused by the renewed Plan.

## 2.3 Implementation of plan objectives

Before major forest operations are undertaken a documented Operational Site Plan is completed for the proposed operation. This identifies site constraints and opportunities and ensures that all actions are consistent with current statutory and UKWAS requirements.

## 2.4 Protected Species and habitats

Where the Operational Site Plan has confirmed that European Protected Species (EPS) or other protected species or habitats are present on a site, operations are undertaken in accordance with guidelines agreed by Natural England.

## 2.5 Cultural Heritage

### Scheduled Monuments

All Scheduled Monuments are subject to a separate Management Plan, agreed with English Heritage.

At Forest Plan level Scheduled Monuments will simply be mapped on the Heritage map layer. Any additional felling agreed in the Scheduled Monument plan will be subject to liaison with Forest Services.

Consultation with either English Heritage, Local Authority or National Park Heritage Departments on any potentially damaging operations to Scheduled Monuments will take place at the Operational Site Plan Stage.

### Other Heritage Features

Work on all other heritage features are subject to an agreement with Local Authority or National Park Historic Environment Record Services.

Heritage features will be identified by liaising with the relevant representative within the organisation and a suitable working method agreed prior to operations via the Operational Site Plan process.







## 4.0 General Description

Topic	Description	Implications for Management	Proposals
<b>4.1</b> <b>Woodland Summary</b>	<p>The Plym Forest Management Unit (FMU) extends over 543 Hectares of the Public Forest Estate in South Devon. The woodland is a mixture of productive conifer plantation and mature / regenerating broadleaves.</p> <p>Age structure has been diversified during the last 20 years but 58% are between 50 and 70 years of age. (See Age Structure chart in section 6.0, page 12)</p> <p>There are a wide range of tree species present but the vast majority of introduced species are douglas fir (18%), western hemlock (11%) and beech (10%). (See species mix chart in section 5)</p> <p>Approximately 78% (424 ha) is classified as an ancient woodland site and isolated pockets / individual remnants of native broadleaves are evident, particularly adjacent to water courses. The Ancient woodland survey show predominantly <b>W10</b> (267 ha) – pendunculate oak, bracken, bramble with smaller areas of <b>W14</b> (22 ha) – beech bramble, <b>W16</b> (99 ha) oak, birch and wavy hair grass, <b>W7</b> (7 ha) Wet woodland, <b>W8</b> (13 ha) – Ash, field maple, dogs mercury and <b>W15</b> (14 ha) – beech, wavy hair grass.</p>	<p>The present and future commercial value of the conifer crops is significant.</p> <p>The native broadleaf resource requires targeted management to provide the opportunity for expansion.</p>	<p><b>Non PAWS areas</b>          Continue to manage on a rotational basis but accept natural regeneration of desirable species when available. Where the opportunity for continuous cover systems is not viable schedule felling coupes to achieve greater age diversity.</p> <p>Assess the potential for greater species diversification on a site by site basis utilising the Forestry Commission 'Ecological Site Classification' tool and climate change model.</p> <p><b>PAWS areas</b>          Increase the potential for natural regeneration of native species throughout (See PAWS strategy maps). Implement a strategic programme of felling in areas where remnant features are at greatest risk and the regeneration of non-native species threatens restoration of adjacent sites.</p>



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<b>4.1.1</b> <b>Woodland Summary</b> <b>(Production)</b>	<p><b>Timber Production Forecast</b></p> <p><b>Forecast based on the existing Forest Plan:</b></p> <table> <tr> <th>Forecast Period</th><th>All Species</th><th>All Conifers</th><th>All Broadleaves</th></tr> <tr> <td>2013-2016</td><td>2111</td><td>1800</td><td>311</td></tr> <tr> <td>2017-2021</td><td>2477</td><td>2011</td><td>466</td></tr> <tr> <td>2022-2026</td><td>1896</td><td>1726</td><td>170</td></tr> <tr> <td>2027-2031</td><td>3523</td><td>3038</td><td>484</td></tr> <tr> <td>2032-2036</td><td>1583</td><td>1436</td><td>147</td></tr> <tr> <td>2037-2041</td><td>2825</td><td>2056</td><td>769</td></tr> <tr> <td>2042-2046</td><td>3366</td><td>2672</td><td>694</td></tr> <tr> <td>2047-2051</td><td>2938</td><td>2485</td><td>453</td></tr> <tr> <td>2052-2056</td><td>2860</td><td>2574</td><td>286</td></tr> <tr> <td>2057-2099</td><td>2838</td><td>2187</td><td>651</td></tr> </table> <p><b>Forecast based on this Forest Plan:</b></p> <table> <tr> <th>Forecast Period</th><th>All Species</th><th>All Conifers</th><th>All Broadleaves</th></tr> <tr> <td>2013-2016</td><td>2812</td><td>2498</td><td>314</td></tr> <tr> <td>2017-2021</td><td>2289</td><td>1897</td><td>392</td></tr> <tr> <td>2022-2026</td><td>3251</td><td>2554</td><td>697</td></tr> <tr> <td>2027-2031</td><td>3109</td><td>2560</td><td>549</td></tr> <tr> <td>2032-2036</td><td>1231</td><td>1114</td><td>117</td></tr> <tr> <td>2037-2041</td><td>2750</td><td>2284</td><td>466</td></tr> <tr> <td>2042-2046</td><td>3150</td><td>2469</td><td>681</td></tr> <tr> <td>2047-2051</td><td>3818</td><td>3378</td><td>439</td></tr> <tr> <td>2052-2056</td><td>3596</td><td>3301</td><td>295</td></tr> <tr> <td>2057-2099</td><td>2425</td><td>1968</td><td>457</td></tr> </table> <p>(The figures shown represent an estimate of the average volume production per year. All figures are M3 over bark standing.)</p>	Forecast Period	All Species	All Conifers	All Broadleaves	2013-2016	2111	1800	311	2017-2021	2477	2011	466	2022-2026	1896	1726	170	2027-2031	3523	3038	484	2032-2036	1583	1436	147	2037-2041	2825	2056	769	2042-2046	3366	2672	694	2047-2051	2938	2485	453	2052-2056	2860	2574	286	2057-2099	2838	2187	651	Forecast Period	All Species	All Conifers	All Broadleaves	2013-2016	2812	2498	314	2017-2021	2289	1897	392	2022-2026	3251	2554	697	2027-2031	3109	2560	549	2032-2036	1231	1114	117	2037-2041	2750	2284	466	2042-2046	3150	2469	681	2047-2051	3818	3378	439	2052-2056	3596	3301	295	2057-2099	2425	1968	457		
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<b>4.2</b> <b>Location &amp; Access</b>	<p>The Plym FMU is located to the North East of Plymouth. The Southwest boundary of the wood is adjacent to the city authority boundary. The FC carpark is just over 2km from the city boundary. Just over 224 ha 53% of the area (southern part of the main block) is dedicated as open access under the countryside rights of way act.</p> <p>It is spread over several Parish council areas – Meavy, Shaugh Prior, Sparkwell and Bickleigh.</p> <p>Vehicular Access to the majority of FC landholding is good, although it is restricted to the Darklake block in the west of the plan area.</p> <p>Internally the woodland is serviced by a good network of forest roads, tracks, rides and routes suitable for forest machine access.</p>	<p>There is scope to expand the recreational useage of this woodland area given it's proximity to Plymouth. Although well used currently there is capacity to carry out targeted areas of work including interpretation, visitor facilities and expansion of formal trails.</p> <p>Access to Darklake, which is the large block of woodland to the west of the river is limited. Normal road vehicles can access from the entrance to the West but forestry machinery and haulage wagons need to cross the river at the ford. The ford crossing is engineered for this purpose and the Environment Agency are satisfied with this arrangement.</p>	<p>Maintain open access and provision for visitors including the car park and waymarked trails at the current standard.</p> <p>Foster existing links with local councils, groups and organisations who may be potential partners for future development.</p>
<b>4.3</b> <b>Tenure &amp; management agreements</b>	<p>301 hectares are leased from the several estates. The remainder is registered as freehold woodland with the Land Registry.</p>	<p>Sporting rights are reserved to the landlord in the leasehold parts. There are active commercial shoots running in most of these areas. Prior liaison with the landlord is essential to agree timing of operations.</p> <p>There are pheasant release pens within the wood. Some are located on sites where we are looking to achieve successional habitat of native species.</p>	<p>Monitor development of understory within the pens and work with the shoot(s) to minimise any adverse impacts.</p>

Topic	Description	Implications for Management	Proposals
<b>4.4</b> <b>Physical Environment</b>	<p>Elevation of the plan area ranges from 10 – 130m above datum.</p> <p>The majority of the woodland has a Southerly or Westerly aspect but discrete areas and valleys have a range of aspects and some are on relatively flat plateaus.</p> <p>Rainfall ranges from 436mm in the Summer to 700mm in the winter.</p> <p>The underlying geology is upper Devonian rocks and lower carboniferous rocks. Soil type is Upland Brown Earth (1) Gleyed, Brown Ranker (13b) in the vast majority but some areas are Typical Brown Earth (1u). There obviously a variation across such a wide area but in general the Soil Moisture Regime is fresh and the Soil Nutrient Regime is medium.</p>	<p>The Forestry Commission Ecological Site Classification tool (ESC) rates the main species currently on site as suitable or very suitable at the present time.</p> <p>Using the same tool the 2050 HI model which predicts impact of climate change rates the main species as follows:</p> <p>Suitable / Very Suitable – Scots pine, Douglas fir, Grand fir, Western hemlock, Beech, Sessile oak, Wild cherry, Silver birch,, Aspen, Sweet chestnut.</p> <p>None of the main species currently on site are considered Marginal or unsuitable.</p>	<p>On the areas designated as ancient woodland sites the choice of species will be site native broadleaves. Therefore the favoured approach, in general, will be to allow areas to regenerate naturally and monitor proportions of species components.</p> <p>The non ancient woodland areas will be primarily restocked with productive conifer species, but any existing groups or individual broadleaves will be retained if they are stable and safe. The exact species choice for coupes beyond the next round of felling interventions will be left open to allow for more accurate matching of site type to species choice. Opportunities will be taken to diversify the range of species used.</p>
<b>4.5</b> <b>Landscape Setting and Designations</b>	<p>Natural England National Character Area Profile is 151 South Devon.</p> <p>The Plym Forest Plan area is not within an AONB and does not contain any SSSI.</p>	<p><b>Relevant extracts from the NE NCA:</b></p> <p>South Devon NCA is predominantly a plateau, dissected by steep valleys and rivers, most rising on the adjoining Dartmoor NCA.</p> <p>Creating new accessible, natural greenspaces and links to help integrate new areas of development around Torbay, Plymouth and Newton Abbot Provide a range of natural and cultural benefits through the implementation of the Plymouth area, and Torbay Green Infrastructure Delivery Plans <u>significantly extending woodland north of Plymouth</u> and replanting areas affected by phytophthora, helping to contain and integrate built development in close</p>	<p>Forestry Commission Policy for managing Ancient woodland sites meets the required management actions.</p> <p>Manage the woodland to deliver economic, environmental and social benefits and ensure that future management compliments the local landscape.</p> <p>Liaise with Forest Services colleagues and Plymouth City Council to stay informed about Plymouth Green Infrastructure Delivery Plan regarding woodland creation.</p>



Topic	Description	Implications for Management	Proposals
		<p>proximity to Dartmoor National Park.</p> <p>Manage the broadleaved woodlands, and particularly ancient woodlands on the steep river valley sides reinstating and supporting traditional management opportunities such as coppicing, and protect and expand important lichen and bryophyte communities.</p>	

## 5.0 Management Objectives

- **Continue sustainable management of the woodland resource and develop woodland resilience.**

There will be a presumption for thinning all areas. Continuous cover and low impact silvicultural systems will be adopted where applicable. Where this is not a viable option, clear felling will continue with the intention of diversifying age structure and species composition. Clearfell coupes in the 10 year plan period will be fairly small and, on ancient woodland sites, targeted where there is most gain in terms of enhancing ancient woodland restoration. Select species and provenance according to site characteristics and potential to adapt to changes in climate. Move to a greater cover of native broadleaves in time, with the emphasis on Plantation on Ancient Woodland sites.

- **Maintain the wooded landscape.**

Ensure quality of coupe design enhances the external landscape. Monitor development of areas designated as successional habitat and react to natural processes to influence the diversity and productivity and continue to manage invasive exotic weed competition in these areas.

- **Enhance the woodlands value for nature conservation and biodiversity.**

Continue to diversify the woodland age structure and tree species diversity and designate areas of natural reserves. Consolidate existing managed open space and develop a matrix of open and semi open habitat to provide linkages for nature through management of existing corridors, particularly ride and water courses.

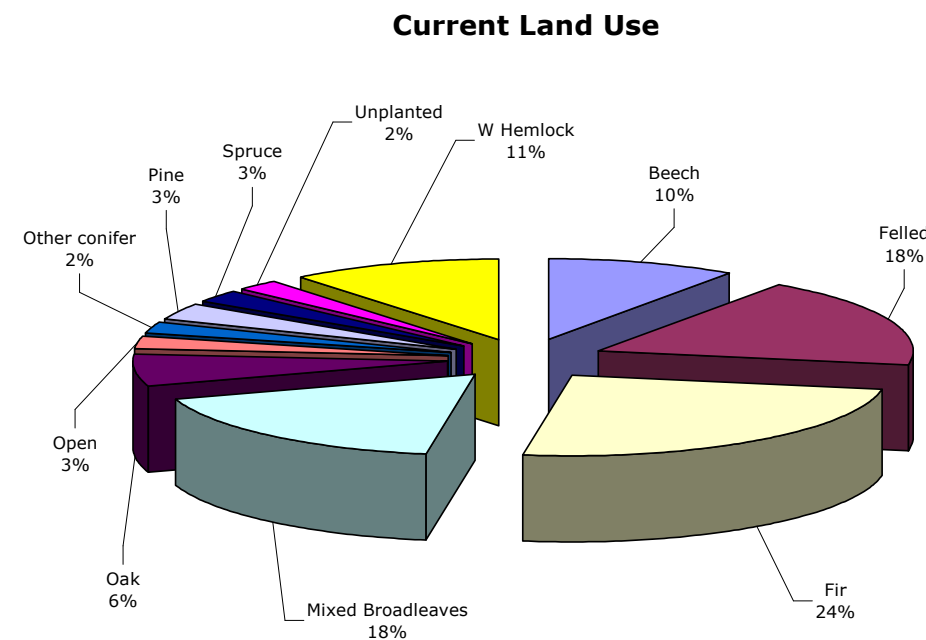
- **Conserve all cultural and heritage features.**

Adopt appropriate mitigation measures to avoid damage and where possible improve any issues which may increase the risk of deterioration. Seek opportunities to improve interpretation and promote heritage features to members of the public.

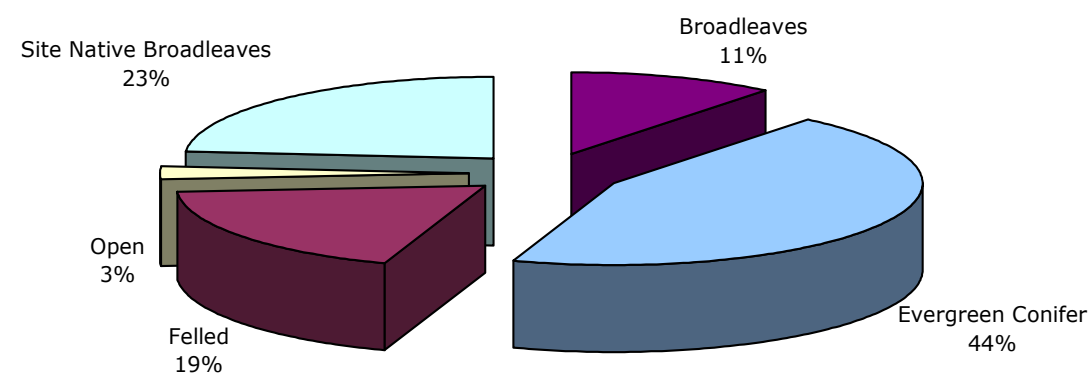
- **Maintain open access in freehold areas for formal and informal recreational activity.**

Enhance visitor experience by managing internal landscaping along existing corridors, and maintaining access points. Continue liaison with local organisations and pursue any opportunities for partnership working and external funding.

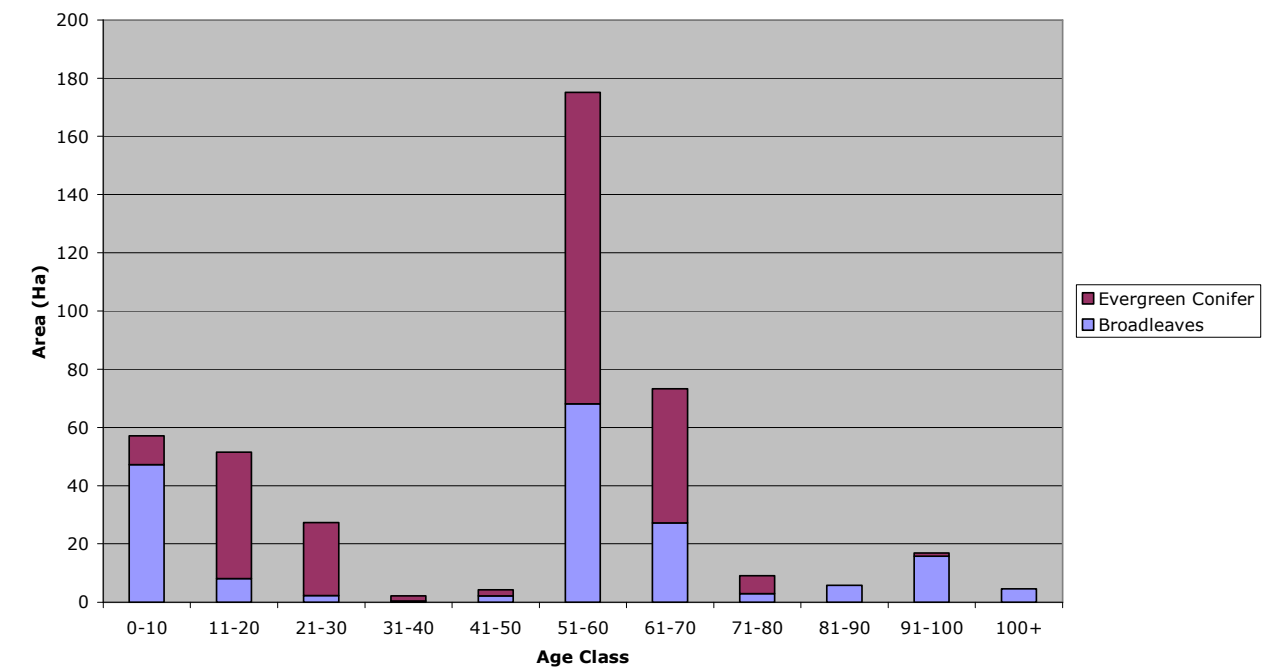
## 6.0 Silvicultural Management and Implementation



**Current Species Groups and Land Use (SUMMARY)**



**Current Age Classes in Plym**



### Species and Habitat Composition

This forest plan starts to deliver a move from conifer plantation towards a greater proportion of broadleaved species. There is advanced regeneration of various broadleaved species, shown as MB in the illustrations on this page. The amount of permanent open space will be increased during the life of this plan.

### Age structure

The plan aims to increase the diversity of the age structure and begin the process of achieving a greater degree of naturalness.

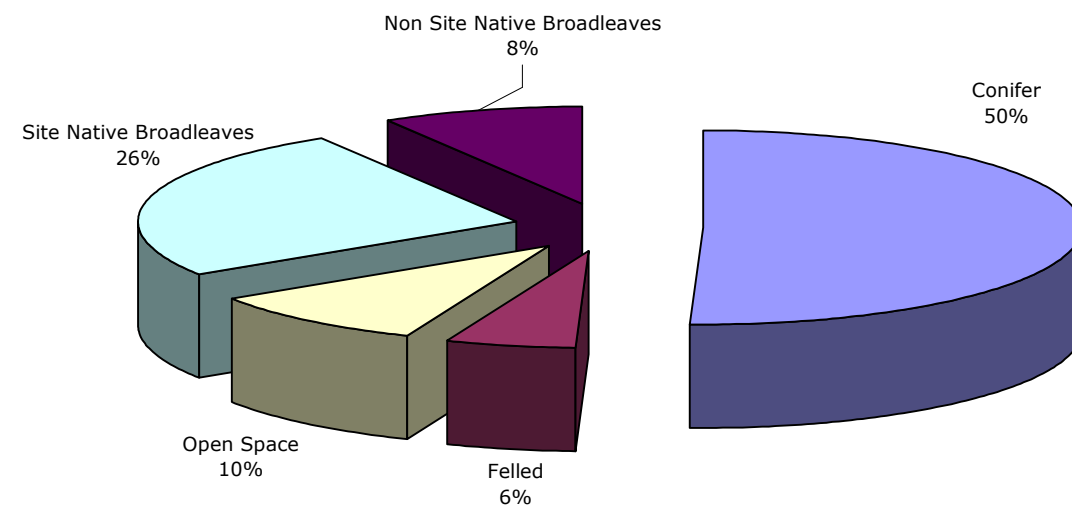


## Future Species Model

There is a combination of silvicultural system in this woodland block, clearfell and restocking and continuous cover relying on natural regeneration. Because of the amount of woodland being managed under a continuous cover regime the timing of establishment and composition of species is difficult to predict accurately. The charts on this page seek to illustrate how the woodland is expected to develop over time given the management interventions (woodland thinning and felling) described in this plan.

The preferred method of regeneration, particularly in PAWS areas is to allow it to occur naturally. Major factors which will have an influence on regeneration is lack of seed source, competition from vegetation and predation from mammals. The PAWS management strategy later in this document explains in broad terms how we intend to manage these areas in order to achieve the objectives of the Forestry Commission PAWS policy.

**Future Species Groups and Land Use 2024**



**Future Species Groups and Land Use 2044**

