

West Argyll Forest District

Corranbuie & Skipness

Land Management Plan

We manage Scotland's National Forest Estate to the United Kingdom Woodland Assurance Standard – the standard endorsed in the UK by the international Forest Stewardship Council® and the Programme for the Endorsement of Forest Certification. We are independently audited.

Our land management plans bring together key information, enable us to evaluate options and plan responsibly for the future. We welcome comments on these plans at any time.



The mark of
responsible forestry



Plan Reference No:

Plan Approval Date:

Plan Expiry Date:

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Summary of proposals

The Forest District's Strategic Plan for West Argyll Forest District includes a vision statement, to which each individual Land Management Plan (LMP) will make a contribution. The District Vision Statement states that 'West Argyll FD will be a key land manager in Argyll, producing quality timber for the market, providing sustainable employment in both the public and private rural sectors, and opportunities for renewable energy projects. We will also provide well-managed native woodlands for wildlife and places for enjoyment for visitors and local communities'. The Corranbuie & Skipness plan revision contributes to the District Vision by seeking the following outcomes:-

Economic context

- ◆ Approval for 462.8ha of felling and 432.7ha of restocking is being sought, for completion within the first 10 years of the plan.
- ◆ Timber production from felling operations is currently estimated at 16Km³/annum in the short term and 22Km³/annum thereafter until 2025.
- ◆ Construction of 1.3Km of new forest roads requires Prior Notification and EIA determination. The length of new roading required must achieve a satisfactory balance between cost and coupe size, with design minimising the need for spur roads.
- ◆ Reassessment of felling dates to ensure process of restructuring is on track and clearance of windblow prioritised.

Environmental context

- ◆ 6.5ha of PAWS restoration in the plan period.
- ◆ Development of habitat network framework for native woodlands, open space and riparian corridors. Fell 6.0ha of poorly grown conifers to improve open habitat linkages for Black grouse.
- ◆ Protection of sensitive conservation features through appropriate silvicultural design in respect of Tarbert to Skipness Coast SSSI and Tarbert Woods SAC.
- ◆ Elimination of rhododendron from the SAC as part of the process to improve the status of the woods.
- ◆ Species diversification or change in response to Climate Change Agenda, national targets for broadleaves, UKWAS and plant health issues.
- ◆ Restoration of deep peat through implementation of the FCS Deep Peat Policy.
- ◆ Facilitation of renewables projects following planning consent.

Social context

- ◆ Landscape enhancement with particular reference to views from public roads, ferry routes and the Kintyre Way.

1.0 Introduction

1.1 Setting and context

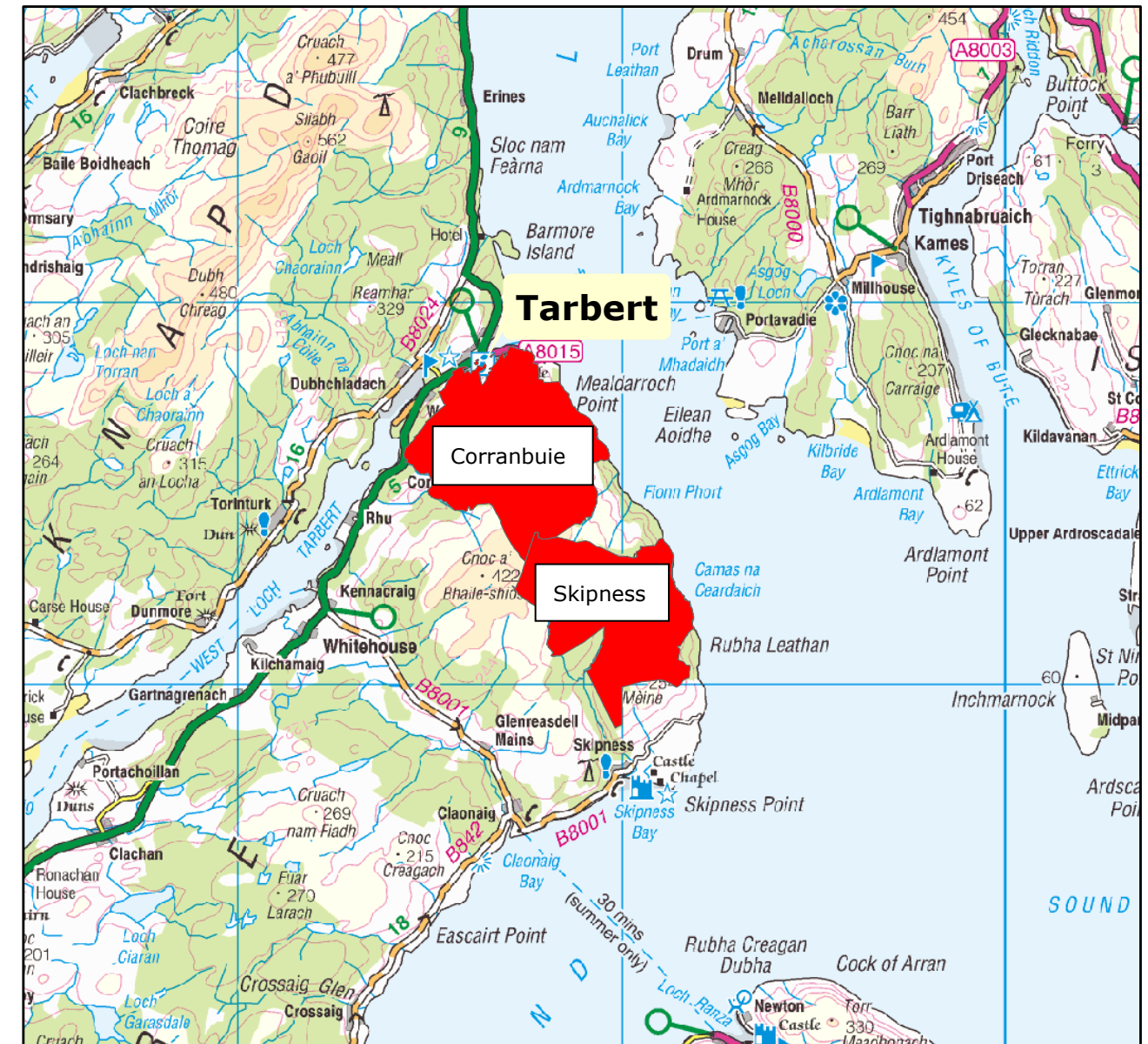
Corranbuie and Skipness are two adjoining forests lying immediately to the south of the village of Tarbert on Loch Fyne, linked by open hill land rising to over 350m at the highest point. Loch Fyne forms the majority of the eastern boundary while the western area is adjacent to elevated heath and private forestry plantations. Tarbert and Skipness are the closest settlements and the nearest transport link is the A83T which links Tarbert with Campbeltown. Ferry routes run close by from Tarbert to Portavadie, Claonaig to Arran and Kennacraig to Islay. Tarbert is an important tourist hub, with access provision into the forest from the village. The Kintyre Way runs through the forest. The eastern coastal strip is noted for its designated Atlantic oakwoods. The total combined management area is 2996.8ha.

SNH and Argyll & Bute Council are the Forest District's statutory consultees. The Tarbert and Skipness Community Council have also been consulted. The Consultation Record provides a summary of all formal correspondence, issues raised and Forest District (FD) responses (see appendix I).

The forest is managed primarily for timber production. Key plan objectives from the design brief can be summarised as follows: -

- ◆ Economic and sustainable timber production, including windblow clearance.
- ◆ PAWS restoration.
- ◆ Development of habitat networks.
- ◆ Landscape improvement.
- ◆ Enhancement and protection of Tarbert to Skipness Coast SSSI and Tarbert Woods SAC.
- ◆ Construction of new forest roads.
- ◆ Enhancement of the Kintyre Way.
- ◆ Protection and enhancement water features and water supplies.
- ◆ Delivery of Deep Peat policy outcomes
- ◆ Contribution to renewables targets through hydro-scheme construction.
- ◆ Protection and enhancement of cultural heritage assets.
- ◆ To comply with UKWAS guidance for certification.
- ◆ Species diversification or change in response to the Climate Change agenda and plant health issues.

Location Map (Map 1.1)



1.2 History of the forest

Corranbuie was acquired in 1976 with the main forest block of 1600ha planted in 1982-84 with Sitka spruce as well as smaller areas of pines, larches, Norway spruce and native broadleaves. Unplanted rocky knolls form an intimate pattern of open spaces taking up approximately 40% of the forest area.

Skipness was purchased in three stages with 1137ha acquired in 1973, 274ha in 1981 and Glen Skibble hill (southern section) in 1989. The majority of the forest was planted with Sitka spruce in the mid 1970s and late 1980s with approximately a quarter of the forest area given over to open ground.

There was a forest fire above Tarbert in 1994, caused by a flare from a yacht. The 1990's mixed plantings for landscape enhancement above the village were almost completely destroyed. The area was then left to regenerate naturally with native woodland, as part of a Millennium Forest for Scotland scheme. Some additional recreation facilities were also added under the scheme.

The former Forest Design Plan (FDP) was consented in 2003. This increased the area of larch, as well as an increase in native broadleaves. The FDP also implemented removal of exotic conifers in some areas. A Black Grouse Management Plan was incorporated into the FDP, having been prepared and agreed with RSPB. Very little work on implementing the plan has so far been undertaken and has in any case been superseded by changing policies.

The Kintyre Way was opened in 2006. Its route runs through both blocks and comprises a built, waymarked path, although it also uses some sections of forest road. It links Tarbert and Skipness villages.

Several large areas of windblow have occurred in the older Skipness block in 2012, which has resulted in amended felling dates, redesigning of coupe framework and planned road layout. Felling commenced in 2015. Smaller areas in Corranbuie also suffered wind damage, which has yet to be cleared.

The Skipness Caledonian Forest Reserve (CFR) was exchanged for an area in Knapdale (Carsaig) in 2013. A right of access through this block was retained and continues to be used by the Kintyre Way. The plan area also includes two pieces of designated native woodland totalling 205ha bordering Loch Fyne which were sold to SNH over two decades ago and reacquired in 2013.

Road construction was initially delayed due to windfarm proposals within the western side of the Skipness block being tabled. When these were withdrawn, road construction proceeded, linking the two blocks and taking access into the windblown area. A new access onto the A83(T) was constructed in 2015 to overcome poor sightline issues affecting the old entrance.

2.0 Analysis of previous plan

The previous plan set out specific objectives and goals, which form a basis of assessment:-

Table 2.1 - Analysis of previous plan's objectives outcomes

Objectives	Goals	Implementation?
To ensure an appropriate balance in Corranbuie & Skipness between maintaining the quality and supply of timber, and achieving non-market objectives.	<ul style="list-style-type: none"> • Define and prioritise objectives that reflect sensitivities and site quality. • Ensure a realistic timetable for restructuring crops approaching and beyond terminal height. • Explore the thinning possibilities of the second rotation crops. • Ensure an adequate access infrastructure in Corranbuie & Skipness. 	<p>Roading, and hence restructuring was delayed in Skipness initially due to windfarm interest, then for new access onto the A83T, although wind damage occurred earlier than anticipated. Restructuring has consequently been compromised.</p> <p>Thinning options in the second rotation await establishment of crops on the few suitable sites available.</p> <p>The planned road layout no longer meets the district's objectives for rationalisation of the network, in association with coupe restructuring.</p>
Ensure Corranbuie & Skipness contribute appropriately to District policies on conservation, recreation and archaeology.	<ul style="list-style-type: none"> • Adjust the land use balance toward the target vision in the FD Strategic Plan. • Protect and enhance lochan habitats, watercourses and private supplies within the boundary. • Ensure heritage features are identified and protected from potentially damaging operations and natural processes. • Maintain and improve designated sites and BAP species habitats. 	<p>Land use targets are now dealt with in other documents and have been redefined.</p> <p>Water and heritage features have been protected during road construction.</p> <p>Commitments to protect designated sites now require extension to cover new areas added.</p> <p>Little investment in Black grouse work has been undertaken, due to higher priorities elsewhere and reappraisal of forest management techniques.</p>
Increase the contribution of Corranbuie & Skipness to the wider landscape.	<ul style="list-style-type: none"> • Enhance the landscape value, particularly in the Landscape and Amenity zone. 	<p>No activities have been undertaken specifically to further enhance the backcloth to Tarbert. However, rhododendron control is seen as a positive landscape impact by locals, whereas ongoing extensive native woodland regeneration is seen by some as a negative impact on desired open space.</p>

A number of other issues and events have arisen within the plan area since the above changes. These include:-

- ◆ Further windblow has occurred, requiring additional changes to the timing of felling, recouping and road realignment.
- ◆ Forest resilience to climate change would encourage further species diversification.
- ◆ Plant health issues have resulted in bans on planting larch, ash and Lodgepole pine (with the exception of Alaskan provenance in mixture with spruce).
- ◆ New policy guidance relating to the conservation of deep peat will impact on the existing proposals to restock areas of low yield class Sitka spruce.
- ◆ The former FDP is being replaced by a Land Management Plan (LMP), which seeks to look more widely at subjects both within and without the plan area.
- ◆ Two hydro-schemes have been proposed, of which one will be constructed shortly.

3.0 Background Description

3.1 Site factors

3.1.1 Geology and soils (see map 3.1)

Topography is defined by stream gullies, rocky outcrops and rounded ridges inland, whereas landform in the coastal areas comprises steep slopes extending down to the edge of Loch Fyne. Elevation ranges from sea level to over 350m. Outcrops and ridges increase in number as the ground becomes higher, particularly in the central area. Steep ground (over 35% slope)(see map 3.16) affects only a small percentage of the commercial forest area. Most of these areas are unplanted or under native woodland and in Corranbuie.

The underlying geology in Corranbuie is mostly Dalraidian schist, giving rise to unflushed peats and peaty gleys. The pattern is similar in the Skipness block, but also with flushed molinia bog overlying areas of red sandstone. As a result, much of the high elevation sites are dominated by Calluna vegetation, while sites on lower and middle slopes support grasses, predominantly Molina. A rich variety of herbaceous plants are also mixed with the grasses.

Most of Corranbuie comprises unflushed blanket bogs and peaty rankers. The lowest sites tend to be peaty and surface-water gleys, whilst the SSSI is mostly a brown earth. Most of Skipness comprises flushed blanket bogs and peaty gleys. Trichophorum, Calluna, Eriophorum, Molinia flushed blanket bog (9e) is particularly common on the western side of Skipness.

3.1.2 Water (see map 3.2)

• Soil, water and air quality

The far southwest of the forest block is bordered by Skipness River which is classed as 'good' under the Water Framework Directive. A number of smaller watercourses also run through the forest, which have not been assessed. Some of the catchment area is occupied by private commercial conifers. The resultant landuse within the catchment is currently about two-thirds commercial forestry and the remainder either open moorland or native woodland.

Most of Tarbert is on a public water supply, the water coming from a catchment north-west of the village. Private water supplies are located within the plan area, serving Escart house, West Loch Tarbert Caravan Park and Culindrach farm. There are no known septic tanks in the forest. Water supply features are not currently fully mapped in GIS and precise arrangements for properties bordering FCS land are not fully known. A number of potentially disused supplies are also shown on GIS, which will be investigated further if any operations are planned in the area. There is a water tank above Meall Dharroch supplying properties in that area. There is a disused public water supply tank above the castle; the tank itself is not on FCS land but is surrounded by it. Some conifer clearance along watercourses was undertaken in the 1990's in Corranbuie, specifically to improve riparian corridors, both for water quality and habitat network creation. There are offshore fish farms adjoining the Corranbuie shoreline.

No areas feature in the FCS (BGS) Slope Instability dataset. Most gullies and watercourses have been afforded reasonable open buffers during planting operations. Slumping of slopes within gullies is a common occurrence, particularly in Skipness, where they coincide with Surface-water gleys. When Glenskibble (southerly Skipness section) was ploughed, advice was taken on cultivation and drainage techniques as the soils were considered susceptible to erosion and drains to scouring. A research experiment into different cultivation techniques was undertaken on the western face, including ripping, scarifying and moling with varying results. A pattern of increased drain intensity was adopted on steeper faces, to reduce water volumes in furrows. A minimal one degree drain inclination was specified, but this proved hard to achieve in practice, with some scouring occurring over short sections, requiring some remedial realignment and clearing of clogged silt traps. It was also noted that increased volumes of water being channelled into watercourses then falling into the CFR caused erosion of gullies with gleyed soils within the CFR. Problems encountered stabilised thereafter.

3.1.3 Climate (see map 3.3)

• Adapting to climate change

Continentality is low to moderate (20 - 22), in common with much of Scotland except the north-west, where rainfall is higher. The climatic region is described variously; for the upper parts of the plan areas as 'cool and wet, highly or severely exposed'. The lower parts are described as 'warm, moist or wet', and mostly 'moderate to highly exposed'. The coastal sections are described as 'warm, moist and sheltered'. Most of the afforested area is relatively exposed with DAMS (Detailed aspect method of scoring) (maximum) scores of between 17 and 21 (see map 3.4). The higher parts and open tops are severely exposed, with scores in the range 22 - 26. Only the coastal areas, extreme western side and northern edge of Corranbuie fall in the range 12 - 17. Open buffers are extensive within much of Corranbuie and some parts of Skipness.

Effective joined up habitat networks help mitigate the effects of climate change by facilitating the movement of site type species through the network. The newly acquired coastal SSSI/SAC constitutes a significant native woodland habitat network. It extends through the intervening private ground and south, before petering out along the coastal section of the Skipness Estate. West Corranbuie and Tarbert backcloth also contain native woodland habitat networks which are situated around the majority of the northwest perimeter of the plan area. There are links with somewhat fragmented areas of native woodland along both sides of West Loch Tarbert.

Open habitat networks are present throughout much of the plan area with almost half of the land comprising exposed knolls and clearings. The central massif which links the two forest areas includes several hill lochans and small ponds. Open areas link with adjoining areas of open hill ground on private estates (see map 3.7).

Deep peat soil types where present provide a natural carbon sink. There are no peat restoration project areas in the forest at present, but restoration areas are broadly identified in the plan.

• Flood and Catchment Management

No cases of flooding are known in the forest area. However, the Skipness River has been known to flood parts of the former CFR (now owned by Claonaig Estate) and SEPA's flood risk data (See Map 3.2) indicates the river can flood its banks and the low lying area around Skipness village. This has been compounded by woody debris getting trapped in the water gates around the CFR, the source of the debris being native woodland within the CFR or native woodland immediately above the CFR on private ground. Spates have also damaged the Corranbuie access road in the past and could affect properties in Tarbert. SEPA have noted flooding in School Road, Tarbert. Although the causes were not fully identified, issues with the drains beside the harbour in conjunction with high tides are thought to play a significant part. Some issues with the sewerage system have been noted in Tarbert in the past, and plans to address possible coastal flooding in the town are also being addressed over the next few years. The Bardaravine River and Abhainn

Achahoish are also shown as flood risks, with private dwellings downstream. The Bardaravine River can also (rarely) overflow into the catchment of the Abhainn Achahoish. Both may be affected by proposed hydro-schemes.

The plan area has no public water catchments.

3.1.4 Renewable energy

A community wind turbine project was recently explored for two turbines above Tarbert. However, the wind yield was too low and the project has been closed for now. A windfarm scheme across the western side of Skipness around 2008 was not taken further. However, the Claonaig Estate is still actively looking at potential schemes. Scottish Power has an exclusivity agreement over the plan area, but there are no proposals so far.

A hydro-scheme based on the Abhainn Achachoish within Corranbuie oakwood has received planning consent. The scheme intake is near the sheepfold on the main access road at NR854658. The penstock partly follows the forest road and partly the line of the old road, down to a proposed power house beside the powerlines at NR845658. A site compound will be constructed in the open ground beside the sheepfold. Felling of broadleaves along the penstock will be minimal. This project is currently under construction.

There is a second small hydro-scheme proposal at Bardaravine, on the western edge of Corranbuie. It is currently at an early stage of development. The watercourse forms the boundary between FCS land and the private forest to the west. Access to the intake may be constructed off the existing forest road on FCS land. The penstock and turbine house will be entirely within the private forest.

3.1.5 Infrastructure

Several overhead powerlines cross parts of the northern edge of Corranbuie. There are also several short sections of underground cable associated with Tarbert village. There is also a telecommunications mast at Achnaglach, by Tarbert. The Inverary-Crossaig line refurbishment may impact on Corranbuie Wood, but the details have yet to be presented in detail (July 2016).

3.2 Biodiversity and environmental designations

3.2.1 Designated sites (see map 3.6)

Natura sites and SSSI's

The Tarbert to Skipness Coast SSSI and Tarbert Woods SAC designations [Tarbert Woods - Special Area of Conservation - SAC - Habitats Directive](#) cover the same area of woodland on the Loch Fyne coast. The area is only partly owned by FCS. It represents the largest tract of semi-natural woodland in Kintyre. Birch is the dominant tree species, with some sessile oak, plus rowan and ash in the ravines. Some alder and willow occur close to the shore. There are also open areas, including wet and dry heath, bracken, molinia and Blanket bog.

Tarbert Woods SAC – The qualifying habitat is Western acidic oak woodland. SNH’s management objectives; to avoid deterioration of the qualifying habitat thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable condition status for each of the qualifying features; and to ensure for the qualifying habitat that the following are maintained in the long term:-

- The extent of the habitat on the site.
- The distribution of the habitat within the site.
- The structure and function of the habitat.
- The processes supporting the habitat.
- The distribution of species typical for the habitat.
- The viability of typical species as components of the habitat.
- That there will be no long term disturbance of typical species of the habitat.

There is no management plan in place. However a management plan for the SAC/SSSI area is currently under preparation following the recent acquisition of the area.

Tarbert and Skipness Coast SSSI – The notified natural features are; Upland oak woodland and bryophyte assemblages. The bryophyte assemblage feature when last assessed in 2008 was in ‘Favourable – Maintained’ condition. This assessment was conditional on steps being taken to eradicate rhododendron, which is ongoing. The bryophyte assemblage includes internationally important species, *Dicranum scottianum*:- http://www.bbsfieldguide.org.uk/sites/default/files/pdfs/mosses/Dicranum_scottianum.pdf and *Lepidozia cupressin*:- http://www.bbsfieldguide.org.uk/sites/default/files/pdfs/liverworts/Lepidozia_cupressina.pdf. Bryophytes were found particularly on rocks, banks and in the ravines. There are a number of nationally scarce liverworts, including; *Leptoscyphus cuneifolius*:- http://www.bbsfieldguide.org.uk/sites/default/files/pdfs/liverworts/Leptoscyphus_cuneifolius.pdf and *Adelanthus decipiens*:- http://www.bbsfieldguide.org.uk/sites/default/files/pdfs/liverworts/Adelanthus_decipiens.pdf. These are components of a community that is more extensive than anywhere else in Scotland. In addition, there are a number of important ferns, including; the Hay-scented buckler fern *Dryopteris aemula*, Wilson’s filmy fern *Hymenophyllum wilsonii* and Tunbridge filmy fern *Hymenophyllum tunbrigense*.

The Upland oakwood feature was found to be ‘Unfavourable – Declining’ condition. This was due to the presence of rhododendron, deer browsing and lack of deadwood. The volume of deadwood was assessed as ‘low’, although it was accepted that this would never be very high in this type of woodland. Bracken control was also required, but was only recommended once deer numbers had been reduced.

A management plan covering 2014-2019 will be put in place once the area has been inspected and assessed following its recent acquisition. A draft management plan has been drawn up by FCS. This details operational methods and mitigation measures for rhododendron control, in order to minimise any negative impacts on the designated features.

The boundary between the SAC/SSSI and the coniferous forest above was drawn in at a scale which has created a number of minor overlaps with the area under conifers. There is no fence or other feature demarking this boundary. Some of these overlaps will be felled within the 10 year period of the plan. None are known to contain any sensitive features, but will be surveyed as part of the work plan process prior to felling.

3.2.2 Species and habitats (see map 3.5) (Note: High sensitivity sites are excluded from the map)

Birds

- Black grouse have been recorded in the area in 2014 (open hill lek). A Kintyre wide survey in 2002, recorded a relatively high number of lek sites in Corranbuie. A Black Grouse Habitat Action Plan was in place in 2003, which resulted in a few small areas of stunted conifers being cleared for Black grouse habitat.
- Golden eagles, merlins, and Hen harriers have been recorded in the forest and nest in the general area. One disused eerie is located in Corranbuie.
- Golden plover, curlew and snipe have been recorded as breeding within the area.
- Red-throated divers are seen on both lochans in Skipness. There are diver rafts on both lochans and have seen some use. Black-throated divers were recorded in 2007.
- Barn owl nest barrels are located in Corranbuie oakwood (Achachoish plantation).

Other wildlife

- Otters have been recorded in the area and the blocks support suitable habitat and resting places.
- Red squirrels are known to inhabit the Corranbuie CFR. Red squirrels have also been sighted along the coastal woodlands along West Loch Tarbert.

- An active badger sett is located in Corranbuie oakwood.
- Wood ants have been recorded in Corranbuie and around Corranbuie oakwood (numerous nests). Nests have also been located in the SSSI (northern end).
- Bat boxes are located in Corranbuie oakwood.
- Juniper is located on Cruach Lagain, Corranbuie.

Open land

Approximately 45% of land within the plan area is open, particularly in Corranbuie. Approximately half of this block comprises scattered open land with rocky outcrops much of which is economically unplantable. Nearly a quarter of the Skipness block also remains open. These open areas are mostly heath, grassland and upland blanket bog. NVC classification (see map 3.9) has been completed along the eastern edge of the forest on the open land formerly owned by SNH. It includes M25a *Molinia caerulea* – *Potentilla erecta* mire and U20b *Pteridium aquilinum*-*Galium saxatile* community. Open land is contiguous with other areas of open private land, predominantly comprising open moorland used for rough grazing.

FCS open habitat survey (see map 3.20) was undertaken prior to reacquisition of the SSSI/SAC, hence this was excluded from the survey. The survey pre-dated the current practice of identifying important habitat points and polygons in GIS. No threat data was included in the survey. Principal habitat types were; Blanket bog, chiefly on higher areas; Upland heathland on drier areas, with some areas dominated by bracken; and a few patches of Upland flush, fen and swamp. Some areas of Upland birchwood and Wet woodland were also surveyed around north Corranbuie, which were formerly classed as open but have now regenerated with woodland.

One area of open land is seasonally let for grazing in north Corranbuie (Tarbert grazings 12.35 ha) and a larger area of 238.57 ha is leased for agriculture in the elevated middle section of the combined blocks. This latter area is mostly Blanket bog. The Tarbert grazings was classed as Neutral grassland. Part of the Tarbert grazing area has been excluded in recent years from the letting to provide an opportunity for housing development.

Open Water

Loch na Machrach Moire and the southern part of Loch na Machrach Bige are located in north Skipness and there are also various smaller boggy pools situated mostly in the elevated central area of the block. Only half of Loch na Machrach Bige is on FCS land. It and a surrounding buffer zone are within the Tarbert and Skipness Coast SSSI/Tarbert Woods SAC. The buffer zone does not contain any woodland. Some broadleaved groups

were planted around Lochan na Machrach Moire in 1990, but have not proved very successful, probably due to soils and exposure.

Native Woodlands

Native woodland is predominantly located within; the designated sites, Corranbuie oakwood, the eastern edge of the plantation, and several areas in north Corranbuie adjacent to Mealdarroch. The SSSI/SAC blocks comprises the largest continuous area of semi-natural woodland in Kintyre and extends from sea level to around 150 metres. The woodland features alder will oak and birch on the lower slopes and ash, hazel and rowan dominating many of the ravines and streams. NVC survey identified W11a *Quercus petraea*-*Betula pubescens* –*Oxalis* woodland as predominant. The FCS woodland is classed as a Natural Reserve. All the areas of native woodland are contiguous with similar woodland on adjoining private ground. That on the adjoining Skipness Estate has received grant funding under WGS3. There are also native woodland grant schemes on Escart Farm.

The former FDP provided for natural regeneration areas around the northern boundary of Corranbuie, particularly at Corranbuie oakwood and Mealdarroch, being an objective of the former MFST project. Regeneration has been patchy to date.

Deadwood

Deadwood priority has been assigned according to the ecological classification of the site. Current deadwood mapping is only at draft stage and does not yet include the SSSI/SAC. Medium and high priority areas comprise existing native woodland and riparian areas around main watercourses. A deadwood target of 20m³/ha across the wooded area is an UKWAS target.

Invasive Exotic Species

Documentation from SNH indicates that rhododendron had gained a firm foothold within northern end of the SSSI/SAC. A programme of removal was commenced in 2008 in the northern end of the site adjacent to Tarbert; however bushes outwith the area on private ground were acting as a seed source. Throughout the wider area rhododendron remains scarce, following an intensive program of eradication over a number of years, with only a few scattered bushes now mostly situated in north Corranbuie.

A similar scenario has affected the backcloth to Tarbert, where dense rhododendron started to be tackled in the 1990's and continued under the MFST project. Control now comprises spraying of regrowth on a regular basis, with seeding from bushes on adjoining private properties being an issue. Occasional exotics seeded from gardens in Tarbert are also encountered. Some conifer regeneration has also been removed from the backcloth area.

No other invasive exotic species have been identified.

Deer Management

Sika, Roe and Red deer are present within the forest with Sika the dominant species. FCS management takes place within the blocks which is facilitated by the considerable amount of open spaces providing deer lawns, in Corranbuie. Red deer numbers have increased as a result of escapees from a nearby deer farm. Deer control in areas of high public usage is more difficult. Two areas, comprising a total of 1132 hectares in the Skipness forest are leased to Scottish Woodlands Ltd for deer management. Claonaig Estate holds concurrent rights over part of Skipness.

There is a history of deer management by SNH within the SAC/SSSI. This has involved regular deer culls in the northern section. A management strategy for these areas is currently being developed.

Ancient Woodland (see map 3.8)

Ancient semi-natural woodland has been recorded within the SSSI/SAC, adjacent riparian areas and in northwest Corranbuie. PAWS restoration areas are located at the north western fringes of Corranbuie and several small scattered areas in the east close to the SSSI/SAC. The total area involved is very small. Most areas have yet to be surveyed for ecological value and threat rating (see map 3.8). Surveyed PAWS restoration areas in Corranbuie are all classed as of high ecological value and threatened by conifer plantation. Sites in west Corranbuie link with other sites to the west along West Loch Tarbert. Ancient Woodland sites link the two sections of FCS owned SSSI/SAC and extend into the section owned by Skipness Estate.

Landscapes and Ecosystems (see map 3.7)

Native woodland and open habitat corridors are noted under Section 3.1.3. Native woodland areas contribute to broader landscapes and ecosystems along lower margins. The MFST project above Tarbert was intended to create both a visual and natural link between existing native woodlands to either side. Development of this link is ongoing. Native woodland riparian corridors provide a useful visual interlocking feature between the native woodland blocks on lower slopes and more rigid shapes of conifer plantation above, where these corridors extend into the conifer areas.

Conifer plantation is currently broken up by large areas of unplanted or unplanted open habitat. Whilst there are some adjoining blocks of conifers bordering FCS plantation, these do not extend far. Furthermore, unplanted watersheds such as between Corranbuie and Skipness break up the visual and physical continuity of the conifer forest.

3.3 The existing forest

3.3.1 Age class, species and yield class

- **Age class (see table 5.8)**

Some variation in age diversity exists for conifers, accentuated visually by variations in growth, despite being planted in blocks of relatively uniform age. Age classes within most native woodland areas are confined to mature crops. Age classes of both coniferous and broadleaved woodland lying on adjacent properties are also of similar ages.

- **Species Choice (see map 3.10, table 5.7)**

Sitka spruce was the preferred species choice over most of the area. Norway spruce in Corranbuie has grown very slowly and is understocked. Some later plantings in Skipness, targeting apparent unflushed deep peat, were for Sitka spruce/Lodgepole pine self-thinning mixtures. However, these areas have subsequently proved to be flushed deep peats. Adjoining private commercial plantings appear entirely of SS. Only very small amounts of other conifer species have been used. Planted broadleaves have fared poorly in Skipness.

- **Yield class (see map 3.11)**

Average yield classes for Sitka spruce are obtained over most of the area, decreasing with exposure and altitude. Small areas of high yield class Sitka spruce are found in more sheltered, fertile sites (YC18-24). Significant areas of checked Sitka spruce are found on exposed Blanket bogs. Some areas have been planted as SS/LP mixtures, but not all have achieved the desired yield class range. Other species have been less productive or successful. Norway spruce has only achieved YC6, but the reasons for this and associated severe understocking may be down to a combination of factors, such as deer browsing and weed competition, rather than wrong site selection.

- **Timber supply**

Timber supply will initially be strongly influenced by windblow until it is cleared. Timber sales may be undertaken through a combination of Standing Sales (private sector working) and Direct Production (FCS working). Further final road network construction is required to access all planned and proposed harvesting coupes, including windblown timber.

- **Timber Quality**

Much of the forest will grow reasonable quality Sitka spruce. However, crops in much of the upper parts of Corranbuie have a higher percentage of edge trees, due to the fragmented nature of the plantable ground. This will have a negative impact on quality. Larch form is not good in places, due to exposure. No thinning has been carried out due to exposure.

Stocking densities are reasonably good in most places. Exposure and soils limit broadleaved establishment and production of good tree form. Some more sheltered parts may be suitable, provided they are adequately protected against deer browsing.

3.3.2 Access (see map 3.13)

• Timber transport

Timber transport will exit via the new west Corranbuie access. The access road from Skipness is unsuitable for timber traffic. No linkages with the private sector road network in Glenskibble are currently considered necessary. No requests for linkages have been made by neighbours, who in any case already have access infrastructure in place. No timber will be taken out via the minor access routes that enter Tarbert. Timber mostly goes to Campbeltown or Ardrishaig, where it is shipped to other Scottish ports or to Northern Ireland. The new access road into Corranbuie crosses private land. FCS is responsible for the maintenance of this section of forest road, but will not incur any charges for hauling timber over it.

Forest road investment is taking place to access areas of windblow and part of the final road network is now in place. Marking out of the network to access much of the windblow will only be possible once sightlines have been cleared. A phased working of windblown areas is therefore anticipated.

• Quad access

Few tracks for ranger access are currently identified in GIS. Those that are represent adoption of former Garron tracks used during establishment operations. None were anything more than grassy rides with piped stream crossings.

Access into the SAC has been difficult due to terrain. It is not currently considered a viable proposition to operate quads in this area, either on natural surfaces or built tracks, due to the steepness of the terrain.

3.3.3 LISS Potential

Few areas are suitable for thinning due to exposure and soils. Existing and new native woodland areas will be managed either as Minimum Intervention areas or Natural Reserves, unless commercial hardwood production is possible.

3.3.4 Current and potential markets

• Hardwood timber

The majority of hardwood timber is only suitable for the wood fuel market due to form. No hardwood timber is currently felled for commercial use. No areas have been identified for thinning. Some potential may exist or develop in and around Corranbuie oakwood, which is largely of plantation origin. Good regeneration of birch is occurring and may merit thinning in the future.

• Timber in construction

Markets for spruce and small quantities of minor conifer species are located outwith WAFD. High spruce yield classes may reduce suitability of use for construction. No specialist markets have been established.

3.4 Landscape and landuse

3.4.1 Landscape character and value

• Landscape

The **SNH Landscape Character Assessment (1996)** places most of the plan area within the 'Upland Forest-moor Mosaic' zone. Tarbert harbour area of north Corranbuie is defined as 'Rocky Mosaic'.

The main characteristics for management in each zone as they might apply to the plan area are:

Upland Forest-moor Mosaic:

- Upland plateau with rounded ridges, craggy outcrops and an irregular slope profile.
- Upland lochs.
- Winding narrow glens and wider river valleys.
- Extensive, large-scale mosaic of forestry plantations and small areas of open moorland.
- No field boundaries.
- Very few buildings, occasional isolated dwellings on edges of moor.

- Little access; roads typically follow shorelines

This landscape type is extensive across most of Kintyre and South Knapdale. This type of landscape is reflected in the area immediately south-west of the forest.

Rocky mosaic:

- Uneven, hummocky landform with rocky outcrops and narrow glens.
- Raised beaches, cliffs and distinctive rounded knolls.
- Relatively small-scale landscape with a diverse mix of colours and textures.
- Steep, wooded cliffs and hummocky, gorse-covered slopes.
- Archaeological sites.
- Scattered isolated farm buildings and small villages in sheltered sites.

This character zones extends around Tarbert and down the coastal shores of West Loch Tarbert.

• **Strategic planning zones (see map 3.12)**

Design objectives in each forest area have been broadly assessed by dividing each area into three strategic planning zones. These zones also form the basis for the forest operations Tolerance Table, given in Appendix II. Zones present in the plan area are as follows:-

- **Landscape and Amenity zone** – 166ha above Tarbert village and Loch Fyne, having the strongest visual impact on East Loch Tarbert, coastal views and the highest local recreation value.
- **Native Woodland zone** – Includes core areas of native woodland and broadleaved riparian corridors connected to these, amounting to 637ha. Landscape and amenity values in these areas are secondary. Native woodland is assumed to have a high landscape value in its own right.
- **Deep Peat Policy Zone** - High elevation low nutrient flushed and unflushed peats with heather dominance. 862ha of which about 300ha are under low yield class conifers.
- **Low Sensitivity Zone** – 1332ha of conifer plantation and some open space, largely hidden from external views apart from the eastern slopes facing Loch Fyne and the Cowal peninsula.

3.4.2 Visibility

• **Landscape Quality**

Improving landscape quality is of particular importance along the main tourist routes. Views of the forest from the A83 (T) are limited to short sections of mature native woodland beside the road.

The backcloth to Tarbert is visible to varying extents from within Tarbert village, harbour, and from the approach into the village along the A83 (T). The backcloth was redesigned in 1994, when the lower parts were planted with a variety of species, within a matrix of open space. This was lost following a fire, but has since begun to regenerate with broadleaves. The current conifer edge represents in part the upper extent of the fire damage and the extent of incomplete felling under the MFST scheme. Several clumps of pole-stage conifer were retained within the area to help break up the open landscape. No further modifications to the surrounding conifer edges have been undertaken.

The East-facing slopes above Loch Fyne are visible from south Cowal (4km+), Arran and the Tarbert-Portavaddie-Claonaig ferry although this is distance and weather dependant. Western Corranbuie is visible from Tarbert Golf course, isolated views from the B9024 north of Torinturk and at a distance of 5Km from Kennacraig. It is not visible from the B8001. Views of Loch Fyne are of particular importance from the Kintyre Way. Surrounding conifer plantations have not been modified in order to enhance the walk or improve the outward views.

3.4.3 Neighbouring landuse (see map 3.14)

The plan area is bordered by rough grazing and farmland for the most part. Several areas of private commercial conifer plantation are also situated adjacent to the forest blocks. In addition, Escart 2 is an area of native woodland restoration; and Altgalvash, the southernmost part of the Tarbert and Skipness Woods SAC, is owned by the Skipness Estate, and in receipt of an annual management grant. Funded operations here include erection of a deer fence and bracken control, to promote natural regeneration of the woodland. Other ground owned by the estate is principally rough grazing. The adjoining former Skipness CFR is now owned by the Claonaig Estate. It is deer fenced, and forms the south-western boundary to the Skipness block. It is predominantly native woodland, but the upper margins bordering FCS estate are open heathland or some scrubby willow. These areas link with similar vegetation types on the FCS side.

Loch Fyne forms much of the eastern boundary to the plan, but with a private estate (Lagganroaig) between the two sections of SAC in FCS ownership. This estate is primarily used for sporting. It comprises lower slopes with native woodland and upper moorland areas, including part of Loch na Machrach Bige. Nearly the whole estate falls with the SSSI. Its moorland areas are contiguous with the open moorland on FCS ground lying between Corranbuie and Skipness. This area links with open rough grazing along the rocky ridge of Cnoc a Bhaile-shios on the Claonaig Estate. The Claonaig Estate is used for deer stalking and owns a number of woodlands, mostly commercial conifers.

There is a caravan park at Escart (West Loch Shores/Tarbert Holiday Park). They purchased a section of Corranbuie oakwood for expansion purposes in 2005. There are informal paths from the caravan park into the forest.

The environs of Tarbert village include several areas of open ground associated with housing estates. These border either surplus open FCS estate or FCS agricultural land on short-term let. The surplus estate may be developed for housing in the future. In addition, there is private native woodland or open ground above School Road, which extends as an angular property up into FC ground. These landuses are contiguous with adjoining similar areas on the FCS estate. Similarly, FCS open and native woodland above Achnaglach links with similar landuse on Escart Farm.

March fences (see map 3.19) are generally in either poor or unknown condition (likely to be poor). Condition is largely the result of current requirements, which, for stock fencing, is low as most of the boundaries march with forestry neighbours. However, boundaries with Escart Farm, the Claonaig Estate and Skipness Estate are likely to need replacement as livestock are actively grazed. No incidence of sheep trespass is currently recorded. There are no immediate plans to replace any of these fences as higher priorities exist elsewhere. Fencing around the Tarbert grazings is in good condition. The march deer fence with the former Skipness CFR is also noted as in poor condition, but may be sustained by patching for a few years more. The neighbouring owner is responsible for the deer element of this fence. All other march fences are maintained on a 50:50 basis with neighbours.

No fence exists between the SAC/SSSI and the confer plantation above. Instead, the adjoining external fences roughly follow the external boundaries of the SAC/SSSI down to the sea at the northern and southern ends. Only the southern half of the intervening private estate is fenced. As this estate is used for sporting, there is no livestock control required.

3.5 Social Factors

3.5.1 Recreation

- **Tourism**

Tourism is important to the Kintyre economy. The Kintyre Way long distance footpath was built with this in mind and bisects the forest from north to south. [Kintyre Way | Great Scottish Walks](#) The majority of tourist facilities are located in Tarbert and Campbeltown. Ferry routes from Tarbert and Claonaig contribute to the local tourist industry. The Sustrans cycle route passes the entrance to Corranbuie. The Skipness Estate offers self-catering accommodation. The estate also offers some forest walks. Other tourist attractions in Skipness include the castle and chapel, and the seafood cabin.

- **Making access easier**

In addition to the Kintyre Way, there are formal way-marked paths established when the Tarbert backcloth was planted in 1994, and also under the Tarbert & Skipness MFST Native Woodland Restoration & footpath project. A circular walk is provided above Tarbert, as well as longer circular routes accessing the forest road. Several informal routes also exist up from Tarbert village. Other informal paths are located by the caravan site through the Corranbuie oakwood. The old road within the wood is periodically cleared of windblown trees. Public car parking is available in Tarbert. A signed path leads up to the castle from the harbour and then into the forest. There is also a link onto the end of Bruce Hill. No access provision exists into the SSSI. Public access to the area above Tarbert is likely to be relatively high, compared to most other FCS sites in the FD. No formal usage surveys have been undertaken.

A request to improve the forest road surface at the old Corranbuie entrance has been received and actioned. This area is used informally as a car park by dog walkers, but will not be advertised as such.

Discussions have taken place regarding possible re-routing of the Kintyre Way off the main timber haul route. These may be developed further if funding becomes available.

- **Recreation (see map 3.17)**

Several picnic benches and viewpoints have been established along the paths. Visitor Zones define areas of forest associated with recreation routes and entrances for additional amenity management. Interactive Zones have been set for the Kintyre Way, with Passive Zones falling between the Tarbert routes and towards the coast. The immediate backcloth to Tarbert is assumed to form the Welcome Zone, but has yet to be mapped. Scramblers and quads use the area; however this activity is unauthorised and there is no official infrastructure for this type of activity.

3.5.2 Community

- **Community Engagement**

Tarbert & Skipness Community Council covers the area.

- **Neighbours**

These mainly comprise Tarbert village residents and businesses, isolated dwellings, forestry neighbours, private estates and farmland. These include; Escart Farm and West Loch Tarbert caravan park in the north; the Claonaig and Skipness Estates, which include Culindrach and Coalfin Farms in the south. There are a couple of fish farms off shore in Loch Fyne (see map 3.13).

- **Partnerships**

There are no existing community partnerships associated with the forest.

- **Community Ownership and management**

There are no current community projects, following the abandonment of the Tarbert community wind turbine project. Transition Kintyre are a new group looking to establish community woodlands on the peninsula, including at Corranbuie.

[Corranbuie - TransitionKintyre.org](http://Corranbuie-TransitionKintyre.org) Proposals are at an early stage of consultation between the group and the community. Discussions have also taken place regarding land immediately adjacent to Tarbert Castle.

3.5.3 Heritage

- **Cultural Heritage (see map 3.15)**

There are no Scheduled Ancient Monuments or listed buildings within the plan area. Tarbert Castle was sold by FE to Tarbert Castle Trust some years ago. However, a small area of detached land on the west side of Tarbert Castle is mostly within the scheduled area of the castle. This seems to have been omitted from the disposal of the castle site. It comprises a steep bank with mature broadleaves and scrub. An area of former deer park associated with the castle existed, but the bounds of the park are unknown. [Tarbert Castle | Home](#)

A number of unscheduled sites are present, particularly on the east side of Corranbuie. These sites comprise mostly of post charcoal platforms in the oakwoods, at least one bloomery and sheiling huts. Many of these sites are not accurately recorded in FCS GIS mapping. There are three cup-and-ring marked rocks in the Skipness block. Several farmsteads, sheepfolds, associated enclosures, tracks and cultivation remains, largely of post-medieval date, also exist around the lower edges of the forest.

Policy - Archaeological features will be protected in accordance with the Forestry Commission's Archaeological Guidelines, and UK Forest Standard guideline 'Forests and the Historic Environment'. Standard prescriptions from the West of Scotland Archaeology Service include; leaving 5 meters either side of walls and linear features unplanted and 20 meter buffers around localized sites. Breaches in linear features will be kept to an absolute minimum. Other buffer zone widths are defined for each monument on the conservation plan and against the overlay key.

The plan area contains the following designations:-

- Tarbert & Skipness Coast SSSI/Tarbert Woods SAC
- Tarbert Castle SAM (small area)
- Powerlines and Wayleaves
- Ancient Woodland sites

Key external policies include:-

- Scottish Government policy on Woodland Removal
- Scottish government woodland expansion aspirations
- Latest advice on tree diseases, species choice and biosecurity protocols (FES Larch Strategy).
- Measures to combat Climate Change (Climate Change (Scotland) Act 2009)
- Scottish Outdoor Access Code
- Community Empowerment Act (2015)

3.6 Statutory requirements and key external policies

4.0 Analysis and Concepts for each site factor

A new District Strategic Plan the period 2014 -17;
<http://scotland.forestry.gov.uk/images/corporate/pdf/WestArgyllDsp2014-17.pdf>
expands on six key themes introduced in the National Strategic Directions document,
<http://scotland.forestry.gov.uk/images/corporate/pdf/FES-strategic-plan.pdf> making
specific district responses to these key commitments. The Corranbuie & Skipness
LMP takes these into consideration. These themes are as follows:-

- **Healthy**, achieving good environmental and silvicultural condition in a changing climate.
- **Productive**, providing sustainable economic benefits from the land.
- **Treasured**, as a multi-purpose resource that sustains livelihoods, improves quality of life, and offers involvement and enjoyment.
- **Accessible**, local woodlands and national treasures that are well promoted, welcoming and open for all.
- **Cared for**, working with nature and respecting landscapes, natural and cultural heritage.
- **Good value**, exemplary, effective and efficient delivery of public benefits.

National key commitments under these themes and the district's specific action response are highlighted where relevant in the text below.

4.1 Analysis

4.1.1 Physical site factors

4.1.1.1 Geology, soils and landform

• Deep Peat

The underlying geology (Dalradian Quart-mica-schist, grit, slate and phyllite) leads to increased acidification of the overlying deposits. It also contributes slightly improved fertility to Blanket bogs when compared with bogs in some other parts of the country, which has led to slightly improved yield classes over what might be expected through crop growth modelling. Peat depths are often fairly shallow, but peaty rankers are generally unplanted. Some areas of exposed flushed blanket bogs in Skipness were planted with SS/LP self-thinning mixtures. Options for restoration of Blanket bog or planting of SS/LP mixtures to improve yield have been considered in the plan. Deep peat soil types are typically unflushed (11b) in Corranbuie and flushed (9e) in Skipness. These give rise to soil nutrient regimes that are very poor. This is the primary limiting factor affecting nearly all major tree species. Exceptions are other pine species and birch, which are however deemed unsuitable on grounds

of exposure. Some benefits have arisen through the use of SS/LP mixtures in Skipness. Yield classes for SS are typically no higher than 10, with assistance from aerial fertilising. Lodgepole pine has not exceeded yield class 6. Poorer performing high elevation crops on deep peat will be considered for peatland restoration prior to harvesting. No areas have been identified for premature conifer removal specifically to safeguard bog habitats. The FCS document 'Deciding future management options for afforested deep peatland' will be followed; [Deep peat practice guide launched - Forestry Commission Scotland](#) Assessment of site suitability for restocking has been undertaken using ESC Version 4 (Ecological Site Classification). Predictions for replacement of existing crops on deep peat show SS as suitable provided there is an improvement in soil nutrient regime, derived from either the installation of drainage, presence of evenly spread fresh brush or use of self-fertilising mixture with Lodgepole pine, or a combination of these. Yield classes greater than 8 with improved nursery stock are achievable for SS. Appropriate peatland restoration techniques, such as drain blocking, will be undertaken on sites for peatland restoration. However, none of these sites are planned to be felled within the period of this plan. The extent of peatland restoration proposals will therefore be subject to review in future plan revisions, with restoration start dates currently planned to start with felling in Phase 4. Current crop assessment data is from crop survey in 2014. In addition, peaty rankers (13p), whilst not deep peats, have also been included in the assessment (FCS Soils specialist advice) as these soils also yield similar growth results and also suffer from windblow at an early age due to shallow rooting.

The disposition of plantation and open space was considered under the previous plan in Corranbuie, where Black grouse management opportunities sought to remove low yield class and understocked forest that had arisen on poor soils or exposed sites. These areas have been reconsidered following a review of the Black Grouse Management Plan. Limited felling proposals to improve habitat connectivity are included in the plan. These will also have benefit for peatland restoration.

(National Key Commitment (Healthy): We are exploring how to best steward the carbon resources locked up in the Estate's trees and soils. District specific action: We will seek to conserve carbon in soils in the large areas of deep peat through restoration projects in Kintyre, Mull and Eredine/Brenchoillie).

• Cultivation

Results of the cultivation experiments and ploughing of Glenskibble would suggest that mounding would be the preferred method of cultivation. Drainage on surface – water gleys should seek to apply a one degree inclination, with provision of silt traps, and being mindful of the route water that is taken off site will follow. Water on harvesting sites will need to be carefully managed in order to avoid ruts eroding out. Much of the experiment, planted in 1990, has recently blown down, having grown high yield class SS. Whether any of the cultivation techniques employed in the experiment were specifically to blame for the subsequent crop instability is unknown as this wasn't part of the trial.

- **Landform**

There is a desire for smaller coupes in association with public access routes, reducing the scale of felling adjacent to them. However, larger scale landform over the plateau areas requires larger coupes to fit the scale. Varying use of species objectives for each coupe will help enhance coupe shapes that reflect the landform. Matching of shapes to landform is part of the overall design objectives under landscape improvements. Growth patterns also dictate coupe shape, although this may not always reflect landform. Landform generally hides the forest from external viewpoints, except around the lower edges. Landform also tends to limit views within the forest.

4.1.1.2 Water

Under the Water Framework Directive, the assessment for the Skipness River was classed as 'good'. However, there has been further afforestation of the catchment by the private sector, so operations within the catchment must continue to improve the present position. There is scope for increasing riparian buffers in the older planted section of Skipness. Regeneration of native woodland along the lower riparian corridors is fairly certain, provided deer numbers are controlled, which will help buffer the watercourses. Use of mounding as opposed to ploughing will create less soil disturbance and runoff on the erodible Surface-water gleys in Skipness. This may help counter any increased flow as a result of loss on canopy through ongoing windblow clearance.

Felling over the next 10 years will not significantly affect acidification levels in the Skipness River catchment as only about 10% of the catchment is being felled over each of the two five-year periods. None of the forest area appears on SEPA's 'catchments at risk of acidification' from forestry dataset. Increased run-off as a result of loss of canopy cover within the catchment through felling over the next 10 years will be offset to some degree by woodland growth elsewhere within the catchment. Future drainage patterns will differ from the current ploughed cultivation and drainage, focusing on contour mounding with spoil drains at shallow angles and relatively few cross drains to slow down run-off. In addition there will be wide riparian buffers to the main watercourses. Risk of woody debris entering watercourses is only likely where there were formerly inadequate or no open riparian buffers, or where windblow has broken up material that is too small for mechanical removal. Watercourses and riparian areas are otherwise cleared of all brash and timber as part of the harvesting operation. Existing drainage systems will be assessed prior to felling, taking into consideration potential for increased run-off, erosion, brash redistribution and possible drainage solutions, noting these in the Work Plan.

Northern sections of the Phase 2 coupe above Escart Farm fall within the catchment of minor watercourses that flow down into Tarbert harbour. Again, contour

mounding with spoil drains will be employed. It is unlikely that woody debris could find its way into any watercourses, although one of the watercourses will need to be crossed in order to access one of the isolated stands of timber at the north-eastern corner. Avoidance of woody debris entering watercourses will prevent issues arising downstream in the town. There are no recognised watercourses within the coupe (OS mapping), but there will be minor watercourses and drains that will need to be assessed as noted above. In addition, where there are concerns, Argyll and Bute Council Flood Prevention Authority will be consulted and if advisable, a method statement for sensitive operations to be produced to demonstrate how control measures will help mitigate identified risks.

Adherence to the Forests and Water guidelines is essential where private water supplies utilize forest burns for water. Owing to the incomplete record of private water supplies on the FC estate, these will be progressively identified prior to the commencement of operations and information added to the district's GIS dataset covering water supplies. There are a number within the plan area, typically serving isolated farms and dwellings.

4.1.1.3 Climate

- **Adapting to climate change (see map 3.4)**

Windiness is the main climatic factor affecting the forest. Critical decisions on when and whether to thin, and whether stands can be converted to continuous cover are all dependent on accurate assessment of windthrow risk. DAMS data is the best available method of assessment to assess risk, using maximum scores to guide thinning and timing of felling decisions. There are also amenity reasons for encouraging thinning in parts of the forest in the public view. Most of the forest has DAMS scores of 18 and over. Predictions under climate change would suggest an increase in damaging gales. Windblow has been significant in mature areas of forest, compromising efforts to restructure the forest in Skipness. Wind weak species will be largely unsuitable throughout much of the forest area. Damage has largely occurred on gleys, where soil structure does not provide the same degree of binding found in the deep peats. Some improvement in stability is likely following restructuring, creation of improved windfirm edges and benefits from mounding as opposed to ploughing. Creating and maintaining an adequate drainage infrastructure will be important to avoid waterlogging precipitating windblow. Drainage systems must also take into account future predicted increases in rainfall for the area. Implementation of the Deep Peat Policy will have carbon positive outcomes to counter the negative effects of climate change.

Development of robust habitat networks is seen as part of the strategy for developing resilience against the effects of Climate Change. The SSSI, MFST project area and Corranbuie Oakwood (former CFR) are developing as a native woodland habitat network. Open habitat networks link with external open networks to the

west and south. Potential to improve riparian networks is greatest in the older sections of the forest.

(National Key Commitment (Healthy): We will help the Estate adapt to climate change and become more resilient to pressure. District specific action: Current evidence suggests that West Argyll will remain a core spruce-growing region, but we will also seek to increase locally suitable native species and other suitable conifers to increase forest diversity).

• Renewable Energy

The only active renewables projects are the hydro-scheme at Bardaravine, and scheme on the Abhainn Achachois. Water catchments within Corranbuie will be affected by these schemes. Scottish Power Renewables has extended exclusivity rights over the area for wind-powered renewable energy projects. Neighbours are also exploring renewables options.

(National Key Commitment (Productive): We aim to realise the Estate's renewable energy potential, while achieving a reasonable balance with other objectives. District specific action: We will work with energy businesses to increase renewable energy generation in the District in line with the Scottish Government's 2 Gigawatt target for 2020 and the wind energy guidance in the Argyll & Bute Landscape Wind Energy Capacity study (or successor documents)).

4.1.2 Biodiversity and environmental designations

4.1.2.1 Designated Sites

The **Tarbert and Skipness Coast SSSI/Tarbert Woods SAC** forthcoming management plan will set out measures for dealing with rhododendron within an agreed methodology and timescale. Following work started by SNH in 2008 (cut and burn), and followed up in 2011 (chemical treatment), it is hoped that rhododendron could be eradicated by 2026. In addition, bracken control will be implemented when advised by SNH. Bracken is partially responsible for interfering with woodland regeneration. It also has the potential to shade out bryophytes. Deer numbers will be reduced in line with an agreed deer management strategy.

Overlapping areas of conifer along the boundary due to be felled within the 10-year period of the plan will be assessed at work plan stage and consultation undertaken with SNH. All areas are to be returned to open space or be allowed to regenerate with native broadleaves. Conifer regeneration will be removed.

4.1.2.2 Species and habitats

• Ancient Woodland sites

Ancient Woodland sites will benefit from the rhododendron control. Areas occupied by commercial conifers do not amount to a significant area and can all be restored over time.

(National Key Commitment (Cared for): We are restoring around 85% of areas on ancient woodland sites to largely native species – remaining areas will be enhanced through our management. District specific action: We will continue to enhance ancient woodland remnants and restore plantations on ancient woodland sites to native woodlands, removing mature conifers from 100ha during 2014-2017).

• Birds

There are Black grouse leks within the forest and on adjoining moorland. The Black grouse habitat action plan for Corranbuie, prepared in 2002, saw only a couple of small, rushy areas cleared of conifers, close to the main forest road in the northern end of Corranbuie. None of the planned conifer removal and edge management, which was quite extensive over the upper parts of the Corranbuie, was implemented, for a variety of reasons. These included; other Black grouse work priorities lay elsewhere, the overall cost of the project was high, and FC policy based on field observations indicate that woodland edge management is of little or no benefit to Black grouse, and forest structure resulting from tree growth since 2002 has reduced the usability of much of the woodland for the birds. Consequently, proposals have been scaled back and now focus on improving connectivity of open space, in conjunction with Blanket bog restoration. Some heather swiping has been undertaken, which will be continued periodically.

(National Key Commitment (Cared for): We will identify particularly vulnerable species for which the National Forest Estate is important and take specific conservation action. District specific action: We will continue to support lek counts of black grouse in Argyll, incorporating their needs into key plans).

Golden eagles nest in the area. Their proximity to FCS plantation will require timing constraints on operations planned in the next 10 years, February to September. Other sensitive nest sites will also be protected to avoid disturbance during the nesting season, in line with current guidance and legislation.

• Deer Control

A Deer Management Unit plan for the forest was prepared in 2015. The primary objective for the unit is to keep the overall deer population in balance with the surrounding habitat such that deer have no detrimental effect on either flora or fauna and so that forest management objectives for restocking can be achieved. Impacts of Sika and Roe deer have been assessed as relatively low, so control is considered to be a low priority in the wider context of the FD. This may change with the increased felling and restocking program now underway. Deer numbers are generally under control. Increased planting of minor species and broadleaves will require monitoring for damage through the SDA process. Deer fencing is not a

preferred option due to expense, but may play a part in the future. There are however issues between deer fencing and Black grouse, which probably use the area. Restock sites will be prioritised for deer control, along with investment in quad tracks for access and carcass extraction.

Deer numbers in the SSSI are high, mainly because of access issues. There are no plans to introduce built ranger tracks here, primarily because of the steepness of the terrain. There are no track requirements in other areas of the plan, with existing rides and open space giving adequate access.

Native woodland regeneration above Tarbert has been providing increased cover for deer, which have been getting into neighbouring gardens and causing damage. Deer control in these areas is more difficult due to high public usage and disturbance caused by shots at night. Consequently, this area has been excluded from the shooting lease.

(National Key Commitment (Healthy): We will help the Estate adapt to climate change and become more resilient to pressure. District specific action: We will deliver our Deer Management Plans for each of the Deer Management Units in West Argyll District in collaboration with neighbours and key stakeholders).

• Open habitats

Although no priority habitat polygons or points were identified in the open habitat survey, priority habitat types, notably Blanket bog and Upland heathland, were identified. In addition, some areas were noted for particular vegetation types, which indicate sites with greater ecological interest. Priority Blanket bog habitats in the plan area are largely unsuitable for tree growth and generally show no sign of woody regeneration. Management intention is to maintain and enhance these areas. Some enhancement will arise through improving open habitat network linkages through premature removal of poor spruce for the benefit of Black grouse. Other areas will be created following planned harvesting in the future. Further more detailed survey would help clarify priority areas where there may be benefit, for example to the hydrology of an area, through not restocking adjoining plantation area. This is likely only to be accessed when the adjoining crops are harvested. Many of these areas appear to be a mix of habitat types, but only the largest component was recorded in the survey. Similar habitat types appear present on adjoining private ground. Current management of FCS open habitat areas and plantation does not appear to be adversely affecting any neighbouring priority habitat areas.

Removal of conifers from the Tarbert backcloth has resulted in a large area of degraded Upland heathland and encouraged the growth of bracken and native woodland regeneration in more fertile areas. Much of this area may best be regarded as transitional open habitat, with increasing native woodland cover, unless interventions are made. Areas of bracken dominated heathland also border the SSSI/SAC. There are currently no plans to manage bracken here. Open areas within

the SSSI/SAC are likely to regenerate with native woodland over time. Deer numbers are probably preventing regeneration in these areas at present.

(National Key Commitment (Cared for): We are committed to maintaining the best open habitats in good ecological condition. District specific action: We will continue open habitat surveys in West Argyll District to ensure completion by 2019).

• Native Woodland

Native woodland is concentrated on the lower slopes. Oak dominated woodland is found immediately above Loch Fyne and in west Corranbuie. This gives way to birch dominated woodland at higher altitudes. Native woodland regeneration is spreading slowly from these areas, typically of birch, and with willow at higher elevations. Seed sources are rare over much of Skipness. Further expansion along riparian corridors is likely over time. Native woodland expansion in Skipness will require planting. One sizeable area of unprotected oak planted in Skipness has failed. The reasons for this failure are likely to be a combination of factors including; deer browsing, weed competition, wrong species choice for the site and lack of maintenance. Tubed broadleaves in the area have also fared poorly. Native woodland development will contribute to the native woodland habitat networks in the area. This will also benefit key species, such as Red squirrels.

Native woodland regeneration in the Tarbert backcloth is unpopular to some local residents, who prefer a more open feel to the walks in the area. Regeneration will be monitored, but currently the view is that the backcloth is sufficiently open, with no tree clearance being proposed.

(National Key Commitment (Cared for): We aim to increase broadleaf tree cover from the current 8% of woodland cover to around 20%. District specific action: Our new Land Management Plans will use data from the Native Woodland Survey of Scotland to identify where expansion of broadleaf woodland will improve the habitat network and buffer ancient woodland fragments).

• Deadwood

Deadwood resource will be focused on the existing native woodland areas, and decayed and unrecoverable windblown areas. The deadwood network will also expand as the core native woodland network expands and matures. Current deadwood with the SSSI/SAC is low, and is not expected to increase. No intervention to increase deadwood content is planned in the SSSI/SAC. Windblow is likely to contribute a significant amount of deadwood in conifer areas. Deadwood will routinely be identified at Work Plan stage, selection being based on available opportunities and with reference to deadwood management guidance. Deadwood resource mapping is not currently identified geospatially in the FD, but a generalised evaluation based on anticipated deadwood content of different woodland types and

histories has been produced. This ranks sites low, medium or high, but has not been ground truthed.

- **Invasive species**

Rhododendron control above Tarbert has been largely successful, but will continue to require low level input whilst seed sources remain on adjoining land. Work in the northern part of the SSSI/SAC is ongoing, and has treated all core areas and cleared most of it. No work on removing isolated bushes further south has been undertaken so far. The Skipness Estate have committed to undertaking rhododendron control in their section of the SSSI/SAC.

(National Key Commitment (Healthy): We are committed to dealing with invasive plants and animals that threaten habitats and biodiversity. District specific action: We have treated 25% of the rhododendron in West Argyll and have moved 2,250 ha into the follow-up phase, tackling particular concentrations in Appin, Carradale, Lochgilphead, and on Mull).

4.1.3 The existing forest

4.1.3.1 Age class, species and yield class

There are environmental, landscaping and social reasons for increasing diversity. Increasing diversity may have possible benefits for countering possible effects of climate change. Differences in growth rates, and to a lesser extent, age classes, give some flexibility in timings of felling and restructuring. The older block in Skipness has been considerably affected by the gale of 2011/12, which has compromised the restructuring process. Clearance may take a few years as the road will only be built in stages. A variety of species are suitable over half of this area, whose differing growth rates will help restructure this area in the future.

Sitka spruce will remain the preferred species choice for commercial forestry. It remains the only suitable species over much of the forest area. The lower areas are suited to some species diversification, but options are limited on the higher ground and wetter, peaty soils. Minor conifer species are only likely to be suited to small percentage of sites. Minor conifer species and broadleaves are also more vulnerable to deer damage, if deer fencing is not implemented or control measures are insufficient. Deer fencing is costly, but may be required for minor conifers, particularly where there is adjoining cover for deer. Sites suitable for productive broadleaved planting are very limited due to soils and exposure.

Plant health issues will continue to affect species choice. *Dothistroma* will prevent the planting of some pines for the foreseeable future. Use of all provenances of Lodgepole pine except Alaskan (ALP) is consequently restricted. ALP will be used in self-thinning mixture with SS on low fertility deep peat sites to assist establishment. The introduction of Macedonian pine may offer an alternative if available, as it is less

affected by *Dothistroma*, pine blister and other fungal pathogens. *Chalara fraxinea* currently prevents the planting of Ash. No cases have been found in Kintyre to date. *Phytophthora ramorum* has been identified on larch and rhododendron at Carradale which is located approximately 16km south of the plan area. Planting of larch is currently prohibited in West coast FCS forests, with substitute species being used on a site by site basis. There is, however, very little larch in the plan area.

Mounding, better drainage and improved provenance in the second rotation should help achieve improved yield classes. Areas with high yield class spruce will be considered for alternative slower growing species to avoid production of inferior grade timber.

(National Key Commitment (Healthy): We will help the Estate adapt to climate change and become more resilient to pressure. District specific action: We will implement mitigation strategies for current tree disease threats, such as Phytophthora disease of larch (tackling existing and new outbreaks), Dothistroma needle blight of pine, and Chalara disease of ash (if it becomes established in Argyll)).

(National Key Commitment (Productive): We intend to manage at least a quarter of our expanding broadleaf woodlands to produce quality hardwoods and woodfuel. District specific action: We will increase the area of broadleaf trees for the production of quality hardwoods and woodfuel during 2014-2017. We will bring timber to the competitive market that is suitable for biofuel projects).

4.1.3.2 Access

The main arterial route through Corranbuie and half of Skipness has been built. This leaves only spurs needed in Corranbuie and extensions and spurs in Skipness. The proposed road network is intended to access commercial areas for harvesting. There are no plans to improve access to the SSSI woodlands.

Access for deer control is reasonable across most of the area. The exception is within the SAC, where steep slopes make access difficult and potentially unsafe. Negative impacts of track construction within a designated area need to be weighed against gains to condition where increased access helps to reduce deer numbers and so increase native woodland regeneration.

(National Key Commitment (Productive): We will use our work programmes to promote the development of the forestry and land management sectors. District specific action: We will construct 75km of new forest roads to improve access to manage the National Forest Estate in West Argyll).

4.1.3.3 LISS Potential

DAMS data (See map 3.4) suggest opportunities for thinning are very limited and hence potential for LISS restricted to non-intervention methods or to the most

sheltered of sites. Any potential is now restricted to second rotation crops. Native woodland areas will typically be managed on a Minimum Intervention basis and as Natural Reserves where their conservation values merit this.

(National Key Commitment (Healthy): We are committed to high quality silviculture and, increasingly, to using alternatives to clearfelling. District specific action: Opportunities for low impact silvicultural systems will increase in the next rotation as more forest becomes accessible by road. We will review where alternatives to clearfelling can be practised (taking into account the climate change predictions of increased rainfall and more storm events) and include this in our Land Management Plans as they are developed. Low impact silvicultural will be concentrated in native woodland areas).

4.1.3.4 Current and potential markets

Markets are mainly located off the Kintyre peninsula. Woodfuel initiatives may provide greater future demand for small roundwood and hardwoods.

Should *Phytophthora ramorum* be found, it would be felled under a Statutory Plant Health Notice. Timber would have to go to approved sawmills for processing. Felling of larch within a defined 10Km buffer zone would be restricted to the period 1st June – 16th October. Currently there is very little larch in the forest, so no major issues are anticipated.

(National Key Commitment (Productive): We aim to provide at least three million cubic metres of softwood timber per year on a sustainable basis. District specific action: West Argyll District will bring 500,000 cubic metres of timber to market each financial year. We will adjust this as necessary in line with the development of plant health issues and windblow events).

(National Key Commitment (Productive): We will market timber in ways that encourage value adding and create additional jobs in manufacturing and processing, while recognising the benefits of contributing to local economic activity, especially in more fragile rural areas. District specific action: We will hold a 'log-shop' event annually for the local sale of specialist timbers to support small-scale wood processing. We will endeavour to assist small-scale timber business start-ups with short-term wood supplies).

4.1.4 Landscape and landuse

4.1.4.1 Landscape character and value

SNH's Landscape Character Assessment

The suggested specific landscape guidelines for the 'Upland Forest-Moor mosaic' that are pertinent to the plan area are as follows:-

- Identify and conserve contrasts in landscape pattern between large-scale mosaic of moorland and conifer plantations and more diverse, small-scale landscape on the fringes of the moorland. There is scope for more broadleaved woodland planting in these areas to create a more distinctive, diverse transition.
- Identify areas with relatively rich ecological interest, such as wet flushes, loch margins or upland pastures and design conifer plantations to create and maintain viable wildlife corridors.
- Give special consideration to views from roads in designing form, structure and phasing of conifer plantations.
- This is a large-scale landscape, with relatively few distinctive features, so it is particularly important to conserve the setting of small lochs, striking rocky outcrops and attractive groups of buildings.

The landform is generally large-scale and is able to accommodate large-sized coupes. Over time, these should be extended to encompass whole landform features, although this may be difficult to achieve where a variety of soil types, exposure and species give rise to restructuring based on crop growth patterns and windblow rather than landform. Windblow in Skipness will potentially give rise to some skyline fringes, which will need to be addressed in future rotations. The major gullies provide the natural breaks between coupes. Views from the Kintyre Way and other routes used by the public need to be conserved and enhanced; in particular, edges and views of Loch Fyne. Watercourses and unplanted areas provide the principal framework for coupe boundaries. These provide a framework for wildlife habitat corridors. There are no striking distinctive features in the forest, but the settings of most archaeological features can be improved after felling of first rotation crops. The settings of the two hill lochans are already afforded wide, open buffers, but further open linkage to the Kintyre Way will reveal more of Loch na Machrach Moire as a feature along the path. Native woodland should extend little more than its current position on the eastern coast, occupying the steeper lower terrain. Native woodland can be extended up the larger gullies to provide landscape interlock. Coupes should where practical, be carried over skylines to avoid upstanding fringes, when viewed from the Cowal peninsula. Conifers on the upper slopes should not appear as too thin a band in views from Cowal. This requires keeping some spurs of conifers down ridges, whilst extending broadleaves up hollows. Use of mixtures will help address hard breaks between conifers and open space/broadleaves below in this view. Use of Scots pine may be considered as part of the mixture, although exposure is an issue. Evidence from Norway spruce planted on the lower eastern coastal slopes suggests use of minor conifer species may be challenging, as stocking has been unsatisfactory and growth rates poor. Deer may be partly to blame for this, but improved access may assist future protection.

Specific guidelines for the 'Rocky Mosaic' landscape type that might apply to the northern end of the block are:-

- Restrict afforestation to the outer inland edges, to conserve the characteristic diverse, small-scale landscape pattern and retain the strong transitions in scale between the landscape inland and that of the coast.
- Identify and conserve the landscape setting of important archaeological sites.
- Restore broken stone walls using local materials and techniques.

The area involved is very minor, within the area burnt by the fire of 1997. Smaller scale coupes and increased diversity are appropriate here to fit the complex mosaic seen in the landform analysis. Maintaining diversity is possibly the main challenge, should the area develop uniform blanket of native woodland. Maintenance of open space in the area has been raised as an issue by locals. Views of the village, harbour and loch are important from the various paths and viewpoints in the area. The hummocky landform was originally picked out by individual species choice selection and planting/open land shapes in the 1994 design. The design of the conifer edge requires further amendment in the future. The original MFST scheme envisaged no conifers being visible from the primary viewpoint in Tarbert (the war memorial, see View 1). Some further conifer removal is therefore incorporated into the design, even though not achievable in the plan period until these areas become economically harvestable and accessible through road construction. Some compensation for this deforestation is also achievable where this does not conflict with the original objective.

4.1.4.2 Visibility

Much of the area is not visible from public roads or settlements. The parts that are visible are highlighted in the FD's Landscape and Amenity Strategic Planning Zone and also most parts of the Native Woodland Zone. These areas are targeted for native woodland or conifer species diversification, where soils permit. Coupe size and shapes are more important from more distant views, where topography influences shape. Visitor Zone Management prescriptions for the Interactive Zone along the Kintyre Way and other paths will modify edges in the future. Creating open space at key locations will help retain views out to Loch Fyne.

Views from the Cowal peninsula are marginally more significant than from either Arran or Kennacraig. Weather conditions will affect all these views. The forest forms only a minor part of the views from Arran and Kennacraig.

4.1.4.3 Neighbouring landuse

Private woodlands border on the forest edges in various places. No adjacency issues are likely to arise at with the Claonaig Estate woodlands, as FCS is felling adjoining coupes early due to windblow. Adjoining private woodland areas at Corranbuie were felled several years ago. FCS is working with hydro-scheme developers at Bardaravine. No concerns have been raised by neighbours.

4.1.5 Social Factors

4.1.5.1 Recreation

No new recreation facilities are planned. Some members of the local community have expressed unofficially a concern about loss of open space and views behind Tarbert as a result of native woodland regeneration. Whilst the area retains an open feel to it, no plans to limit growth or regeneration will be implemented. Visitor Zone management may require future interventions to restructure the woodland around recreation sites/trails.

Improvements to the Kintyre Way, including rerouting from the main arterial haulage route, are desirable and will be explored further if funding becomes available to the Long and Winding Way Company. Currently, priorities lie elsewhere. A possible route utilising the remains of an old drove road to the east of the present route have been identified.

Unofficial use of the area by quads and scramblers will continue to be discouraged.

(National Key Commitment (Productive): We will work with partners to develop the Estate's potential for tourism. District specific action: We will work with our local partners in the Argyll Forest Tourism Initiative and Visit Scotland, as well as local destination organisations, to develop the forest tourism potential of Argyll).

(National Key Commitment (Treasured): We are committed to creating more uniquely special places across the Estate and to delivering benefits to an increasingly diverse range of Scotland's people. District specific action: We will define and invest in the management of visitor zones to make them more attractive and welcoming).

(National Key Commitment (Accessible): We will continue to invest available resources into high quality facilities that encourage and help visitors experience and enjoy the outdoor environment. District specific action: We will make use of our visitor survey data to refocus our investment in recreation facilities on projects that improve the quality of sites in Argyll with higher footfall).

4.1.5.2 Community

Development of the community wind turbine project above Tarbert failed due to insufficient wind yield. No other schemes have currently been tabled.

Transition Kintyre, a local group seeking to develop community woods in Kintyre has identified Corranbuie as a possible community woodland. Some initial local meetings have recently taken place in Tarbert.

FCS are willing to transfer a small parcel of land adjacent to Tarbert Castle for community management and benefit.

National Key Commitment (Treasured): We want to encourage local people to get involved in using and managing local Estate woodlands, so we will actively engage with local communities and be open to work in partnership. District specific action: As part of the National Forest Land Scheme, we will promote opportunities for communities to acquire a stake in renewable energy developments on land we manage.

4.1.5.3 Heritage

The small area of scheduled land forming part of the Tarbert Castle SAM is currently open ground, with footpaths. FCS currently undertakes any tree cutting work requested by Tarbert Castle Trust as a good will gesture.

A number of unscheduled archaeological sites exist in the forest, plus potential for new discoveries. The settings of identified sites will be improved through increased open space and diversification of surrounding tree species around the site where conditions permit. Access rides or tracks detailed at Work Plan level may assist in future public access. Sites for which no exact position is recorded will require ground checking ahead of any planned operations. No operations are currently planned to remove native woodland from any sites, mainly in the SSSI.

The district's Cultural Heritage Strategy details working methods around archaeological sites, which is sufficient for all sites within the plan. No sites currently have any interpretation associated with them. The district's heritage records have been consulted, which include data from searches of the RCAHMS inventories, WoSAS online data and NMRS. Old one-inch Ordnance Survey maps have also been checked for sites.

(National Key Commitment (Cared for): We will safeguard archaeological sites through our planning and management, and recognise special places and features with local cultural meaning. District specific action: We will continue to undertake conservation management, condition monitoring and archaeological recording at significant historical assets in West Argyll District. We will continue to work with stakeholders to develop, share and promote best-practice historic environment conservation management).

4.1.6 Statutory requirements and key external policies

Ancient Woodland sites are generally localised to a few riparian corridors, and existing mature native woodland. Full PAWS restoration is achievable within the plan area, within one rotation. Rhododendron eradication on Ancient Woodland sites forms part of the management agreement with SNH for the SAC.

Powerline corridors are routinely widened to 20m either side of the lines after harvesting of conifers. All lines in the plan area are within native woodland areas or areas of existing open space.

A draft management plan with SNH has been prepared for the Tarbert & Skipness Coast SSSI. FCS will undertake operations agreed within the plan.

4.2 Plan Concepts (See map 4.3)

4.2.1 Physical site factors

4.2.1.1 Geology, soils and landform

- **Deep peat**

The FCS Deep Peat Policy will be implemented. Blanket bog under checked or low yield class spruce/pine crops will be restored and incorporated into a wider open habitat network connecting with the adjoining private open moorland. Peatland restoration is unlikely to start until Phase 4 of the felling plan or beyond. These areas build on the existing open hilltops and consolidate existing fragmented open space at higher elevations within the plan area. Edge woodland development will be encouraged where appropriate and feasible, but is likely to be extremely limited due to climatic factors. Blocking of drains will be employed. SS/LP mixtures will be used on deep peat where acceptable yields are achievable. No application of fertiliser or heather treatment is planned, with most second rotation crops likely to achieve satisfactory growth rates.

- **Landform**

Coupe shapes reflect landform where possible and use existing open riparian corridors and existing unplanted areas as coupe boundaries. Where growth patterns determine coupe shapes, this will be accepted provided there are no landscape sensitivities involved.

*National theme - **Cared for** - delivery by forest design that respects landform. Blanket bog will be restored when carbon outcomes favour restoration.*

4.2.1.2 Water

Key riparian habitat corridors and water bodies will be given wider buffers (15 - 30m). Detailed survey for private water supplies will be undertaken as part of the site Work Plan arrangements. Liaison with private water supply owners and Scottish Water will be entered into if operations are likely to affect them. Contour mounding

with drains at shallow angles will be employed in sensitive areas to slow down run-off. Adequate riparian buffers will be created at the next rotation to assist water filtration, slow down run-off and widen future brush - free areas. Care will be taken to avoid situations where woody debris might enter watercourses, methods to be detailed at work plan stage, in order to prevent downstream clogging of waterways contributing to potential downstream flooding incidents. Coupes in flood risk catchments will be inspected prior to operations, assessed for risks and measures taken to mitigate the risks. Argyll and Bute Council Flood Prevention Authority will be consulted where necessary and either a method statement or mitigation measures agreed. All operations will conform to the Forests and Water guidelines.

4.2.1.3 Climate

Species choice will be largely restricted to the more windfirm species. Coupe structure follows windfirm boundaries where possible to alleviate windblow risk. Mounding rather than ploughing will be preferred for cultivation, to minimize runoff and erosion risk. Creation and strengthening of open and native woodland habitat corridors will benefit species associated with each. Standard 20m open coupe buffers will apply, except where broadleaves or permanent woodland cover is present.

4.2.2 Biodiversity and environmental designations

Once agreed, the management plan for the Tarbert & Skipness Coast SSSI will be implemented. A deer management strategy will be prepared specifically for the SSSI management plan.

Full PAWS restoration is envisaged for the plan area. Ancient Woodland sites and existing native woodlands form a basis for creating a native woodland habitat network. Natural regeneration is the preferred method of establishment of such sites. Deer fencing may be employed for broadleaved planting and also where natural regeneration is affected by deer browsing. Protection of regeneration on PAWS and non-PAWS sites and subsequent monitoring will be given a higher priority. Deer control on non-fenced sites containing vulnerable crops will be prioritised.

Timings of operations and buffer zones will follow specified guidance for key species.

*National theme - **Cared for** - delivery by implementation of management plans for Tarbert & Skipness Coast SSSI/Tarbert Woods SAC; development of improved native woodland habitat network linkages; protection and enhancement of open habitats and linkages with benefits for Black grouse.*

*National theme - **Healthy** - delivered through elimination of rhododendron from the SSSI and ongoing control to eliminate it elsewhere.*

*(National Key Commitment- **Healthy** - delivered through our Deer Management Plan and SSSI deer management plan in collaboration with neighbours and key stakeholders.*

4.2.3 The existing forest

4.2.3.1 Age class, species and yield class

The plan will deliver a balanced future age class structure through manipulation of felling dates and future species choices. Sitka spruce will be the preferred commercial conifer. High yield class areas of Sitka spruce will be planted with alternative species where feasible in order to grow an acceptable quality of timber on the site. Alaskan Lodgepole pine will be used in self-thinning mixture with SS where nutrient issues are suspected. Other provenances of LP will not be planted or pines susceptible to *Dothistroma*. Larch will not be planted, so long as *Phytophthora ramorum* is an issue. The FES Larch Strategy document will be followed, WAFD being within the 'Vulnerable area' for policy. Ash will not be planted owing to the recent outbreak of *Chalara fraxinea* (Ash dieback). Delivery may be constrained by local conditions, such as suitability of alternative species.

*National theme - **Cared for** - delivery of at least 20% broadleaved woodland cover (% of wooded area) contribution to FD Strategic Plan target of around 20% cover through the design.*

*National theme - **Healthy** - delivered through species diversification, removal of diseased trees and planting of alternatives to increase resilience against Climate Change.*

4.2.3.2 Access

Phased construction of the main arterial route through Skipness is required due to the difficulties of surveying roadlines through windblow. Other roads will be constructed as and when required. Links onto the FC road network from neighbouring forests will be accepted, subject to acceptable agreements being achieved. However, all existing forest neighbours have their own access already in place.

*National theme - **Productive** - delivery through contribution to FD Strategic Plan road construction target of 75km.*

4.2.3.3 LISS Potential

There is little scope for thinning in this forest. At present, no thinning is undertaken. Steep and difficult working sites are generally excluded. Opportunities to thin limited

areas of second rotation crops will be considered in more sheltered areas and when road construction is in place.

Other types of LISS/CCF, including Natural Reserves and Minimum Intervention areas have been identified in the plan. These are nearly all native woodland areas. Expansion of native woodland areas will be the primary means of delivering an increase in area managed under LISS.

*National theme - **Healthy** - Area managed under LISS will be increased over time through expansion of native woodland area.*

4.2.3.4 Current and potential markets

Main timber markets are likely to remain off the Kintyre peninsula. Opportunities may arise to work with local wood fuel markets and suppliers.

*National theme - **Productive** - delivery through commercial conifer timber production; and productive broadleaves at Corranbuie oakwood to be explored. Opportunities for firewood and use of small Roundwood in woodfuel plants will develop as production increases.*

4.2.4 Landscape and landuse

4.2.4.1 Landscape character and value

The design includes species variation between coupes in landscape sensitive areas. This is important in order to define the coupe shapes in the landscape, particularly where landform is fairly amorphous. Larger coupe sizes reflect the larger scale landscape over much of the forest area. Links with surrounding often diverse scenery through the creation and strengthening of habitat linkages will help strengthen the unity of the landscape. Native woodland habitat linkages will mostly be strengthened by the ongoing process of natural regeneration. Use of mixtures will help integrate different woodland types.

The settings of important archaeological sites are enhanced through increased use of open space and diverse species choice.

*National themes - **Treasured and Cared for** - delivery through landscape improvements focusing on species diversification and restructuring, native woodland expansion along lower edges and riparian areas, use of minor conifer species and open space along the Kintyre Way.*

4.2.4.2 Visibility

Enhancement of forest edges will have various benefits, either for amenity, landscape or wildlife, or a combination of these. Feathering of upper edges will be anticipated as best practice, rather than represented at design plan level. Increased use of broadleaves around lower edges will assist with this. Specific viewpoints and focal points in the landscape have been identified for more detailed assessment and design. Diversifying species choice and coupe size fitted to scale are options used in the plan for more visible areas.

4.2.4.3 Neighbouring landuse

The need for deer fencing will be reviewed in discussion with neighbours when fences are renewed. Adjacency issues will be discussed and agreed in advance of felling plan approval. Approaches from neighbours to share or link access for timber haulage will be viewed favourably. The Forests and Water guidelines will be adhered to when working upstream of water supplies and where fishing interests are concerned. Increased buffers will be adopted on sensitive watercourses.

*National theme - **Healthy** - delivery of Deer Management Plan commitments. FCS is willing to work with neighbours seeking direct access to the A83 (T) for timber haulage through creation of linked road networks/timber haul routes.*

4.2.5 Social Factors

4.2.5.1 Recreation

No new recreation facilities are planned. Enhancement of existing routes will primarily be delivered through Visitor Zone management and implementation of changes to future forest design after coupes have been felled.

*National theme - **Treasured** - delivery through improvements to Visitor Zones and working with Long and Winding Way Company regarding routing to Kintyre Way.*

4.2.5.2 Community

No major drivers as yet. FCS will work with any other any community group expressing an interest in the area through the Community Empowerment Act (2015).

National Key Commitment (Treasured): delivery through provisions of Community Empowerment Act and National Forest Land Scheme, including offering small parcel of land adjacent to Tarbert Castle for community management.

4.2.5.3 Heritage

Settings have been improved where possible through species diversification and increase in open space. Best practice is contained in the district's Cultural Heritage Strategy and UKFS guide 'Forest and the Historic Environment'.

*National theme - **Cared for** - protection and enhancement of cultural assets.*

4.2.6 Statutory and legal requirements and key external policies

Restoration of around 85% of all Ancient Woodland sites is an FD objective. Full restoration is delivered in this plan.

The forthcoming management plan for the Tarbert & Skipness Woods SAC/SSSI will be implemented.

Powerline corridors will be widened to 20m, except where lower canopy broadleaves are present. This is likely to be the case for all powerlines in the plan area. FCS will work with SSE to ensure powerline resilience is adequate and maintained.

All national themes - we will comply with UKWAS, the UKFS and all other policy documents and legal obligations.

Table 4.1 - Analysis of Opportunities and Constraints (see maps 4.2 & 4.3)

Factor	Opportunities	Constraints	Concept development
Water quality	Forest restructuring can help protect water quality. Use of increased open and native woodland buffers will benefit watercourses.	Very limited opportunities for LISS and no thinning planned. Scope for using broadleaves is limited by soils. Soil erodability is a concern in places and could impact on neighbours.	Creation of riparian habitat corridors and expanding buffers around sensitive water features. Adherence to Forest and Water guidelines. Contour mounding on flood risk areas. Assess risks prior to operations on sites upstream of flood risk areas and undertake mitigation measures.
Ancient Woodland Sites	Forest redesign to protect sites. Use of LISS on sensitive sites. Linkages with sites on neighbouring private ground would strengthen habitat networks.	Conifer regeneration and rhododendron may be an issue. Deer numbers are higher in some parts, such as the SSSI.	A policy of full restoration is achievable in this plan area.
Species choice	Forest redesign to increase species diversity for amenity, landscape and conservation. Review species choice under the Climate Change agenda to make more resilient. Adjust future choices to take account of plant health issues.	Choice limited by soils, deer browsing, cost of deer fencing, exposure, markets/economic requirements and tree diseases restricting species choice.	Increase diversity where conditions permit. Focus on high landscape and amenity areas. Join up native woodland habitat networks where possible. Do not plant unsuitable pine species or provenances, ash or larch. FES Larch policy will apply.
Coupe size & felling	Opportunity to change coupe size. Increasing coupe size will reduce roading costs. Decreasing coupe size will bring size more into line with UKWAS guidance.	Coupe size should fit scale of landscape. Natural windfirm edges may not be present in first rotation crops. Windblow in Skipness will affect first rotation coupe sizes and shapes. Cost of roading increases with decreasing coupe size.	Focus on smaller coupe size where associated with views and walks. Fit size to scale elsewhere. Build in future windfirm boundaries. Avoid the need for spur roads where possible.
Kintyre Way	Opportunity to build in improvements to environs of walk and consider alternative routing.	Most changes only achievable over longer time period. Route change will require significant funding resource.	Improve Visitor Zone and environs in conjunction with programmed work. Await funding from Long and Winding Way Company for re-routing.
Housing	Possible development opportunities including affordable housing at Tarbert.	May not be welcomed by some residents. Associated loss of agricultural ground and open space.	Work with Argyll & Bute Council in relation to community housing needs.
Roading	New roading may increase recreation opportunities and provide better access for deer control.	Significant cost to introduce final road network.	Ensure road and access proposals are fit for purpose and meet requirements of markets and restructuring.
Open land	Existing open land is valuable for deer control, conservation, wildlife and landscape/amenity. Maintaining and protecting areas of deep peat and developing open habitat networks make a positive contribution towards resilience to climate change. Retaining agricultural use provides diversity, rural employment and support for the agricultural sector.	Increasing open space is a cost to commercial forestry. Woodland expansion on open land may be sensitive from a public perspective and may have impacts on open habitats and species. Agricultural land offers other opportunities such as for development or conservation management.	Maintain and enhance areas of existing open space, except where there is clear justification for change. Maintain linkages with neighbouring open land. Accept limited housing development where this meets community needs.
Low YC crops/ low stocking/ Deep Peat policy	Differences in growth rate provide more flexibility to restructure the forest. Opportunities to restore deep peat areas to open land where low yield classes are anticipated in the next rotation under the FCS Deep Peat Policy.	Deforestation goes against climate change agenda. Costly to fell and replant poorly stocked areas. Small areas are difficult to manage commercially. Lower commercial returns for minor species, including increased protection costs. Low yield class crops are carbon negative on Blanket bogs.	Low yield class crops on Blanket bogs will be reassessed and a carbon positive strategy outcome assigned. Use of SS/LP self-thinning mixtures will be employed on nutrient deficient sites.

5.0 Management Proposals

5.1 Forest stand management (see map 5.1)

5.1.1 Commercial areas

◆ Clearfelling

Some coupes included for approval were previously approved in the old plan, but are either partially complete or yet to start, notably the ongoing windblow clearance in Skipness. Consequently, approval is being renewed for these areas where felling has yet to start (July 2016). Windblow clearance will continue over several years and is prioritised in the felling plan. Further windblow is likely in the remaining mature crops. Timing of felling will be to some extent influenced by the rate of construction of new roading. A total of 50.3ha of windblow is currently recorded. A sustainable flow of timber is desirable and may be achievable, provided there is no further windblow. Stacking for boats may also involve larger accumulations of timber at roadside, requiring increased stacking facilities. Timber is marketed via Standing Sales and roadside sales. It is hoped to undertake a drone survey of the windblow in Skipness during 2016, which will provide further information on the extent of damage and possible future amendments as a result. The aerial photography from 2012 shows a peppering of damage in areas planned for Phase 2, with significant damage to some coupe edges, so it is debatable how long these coupes will remain standing.

The Tarbert backcloth area was intended for native woodland regeneration under the MFST project, but has not been formally surveyed to determine the current broadleaved regeneration success. Given the desire for a degree of openness in the area for amenity, the priority will be to ensure that there is sufficient interlock between the various components in the landscape, which is addressed in the landscape appraisal in this plan. The project was never fully completed, and no detailed landscape appraisal was undertaken to design the interface between the project area and the surrounding commercial woodland. A revised coupe structure and boundary between the two is part of this plan. This will remove the remaining isolated pockets of conifers and some larger areas visible from the War Memorial over the next 25 years or so. The previous plan committed to achieving 30% broadleaved cover, an aspiration which will be continued but over a longer timescale.

Table 5.1 - Felling Areas Analysis (Conifers)

PHASE	1	2	3	4	5	6	7+	LISS	Open	SUM
AREA	197.3	265.5	211.4	244.9	176.0	193.7	227.0	505.4	975.6	2996.8
%	6	9	7	8	6	6	8	17	33	100

No more than 25% shall be felled in any 5 - year period (See UKWAS 3.4.2).

Phytophthora ramorum may become a problem in the future. However, the area of larch is minimal. Infected larch will be felled as a priority, irrespective of whether there is access for timber recovery or economic value in the crop. No areas of Lodgepole pine are known to be infected with *Dothistroma*. Should any arise, these will be felled as a priority when other crops in the vicinity are being harvested.

Table 5.2 - Felling and thinning volumes (Conifers)

Average Annual Felling volumes by phase	Clearfelling (Km3)	Thinning (Km3)
2017-2021	12.4	Nil
2022-2026	22.2	Nil
2027-2031	21.0	Nil
2032-2036	13.7	Nil

Production profile smoothing is an FD objective to which this LMP contributes. However, options for delaying felling are extremely limited given levels of exposure and current levels of damage.

No areas of deep peat restoration are included in the tables below as no areas for restoration are anticipated within the next 10 years, except for table 5.5 which shows areas to be felled for Black grouse management that will also contribute to peatland restoration.

Forest Operations Area Statements:-

Table 5.3 - Productive Forest Area Statement (Phase 1 felling)

FELLING COUPE AREA (HA)		RESTOCK AREA (HA)	
Conifer	= 197.3	Conifer	= 132.8
Open space	= 30.1	Open space	= 51.4
		Broadleaves by natural regeneration (net area)	= 2.0
Broadleaves to be felled	= 0	Native broadleaves by planting (net area)	= 36.7
		Planted non-native broadleaves	= 4.5
Broadleaves (not to be felled but within coupe area)	= 4.4	Existing Broadleaves	= 4.4
TOTAL	= 231.8	TOTAL	= 231.8

Table 5.4 - Productive Forest Area Statement (Phase 2 felling)

FELLING COUPE AREA (HA)		RESTOCK AREA (HA)	
Conifer	= 265.5	Conifer	= 213.0
Open space	= 56.9	Open space	= 66.3
		Broadleaves by natural regeneration (net area)	= 10.5
Broadleaves to be felled	= 0	Native broadleaves by planting (net area)	= 32.7
		Planted non-native broadleaves	= 0.5
Broadleaves (not to be felled but within coupe area)	= 4.9	Existing Broadleaves	= 4.3
TOTAL	= 327.3	TOTAL	= 327.3

Conifers will be restocked to a minimum density of 2500/ha net plantable area. Broadleaves will be established through natural regeneration to achieve a minimum stocking of 1100/ha over a 5 to 10 year period, and 2500/ha if planted. Assessment of regeneration areas in this plan will be made 5 and 10 years after felling. Full establishment will be achieved by year 15, planting when necessary to supplement natural regeneration (see Map 5.9 Proposed areas for natural regeneration).

Table 5.5 – Felling for Black grouse (Phase 1)(with associated peatland restoration benefits, included in Table 5.3)

FELLING COUPE SUMMARY (HA)	
Conifer (conversion to open space)	= 6.0
Existing Open space	= 1.5
Broadleaves (not to be felled but within coupe area)	= 0
Broadleaves to be felled	= 0
TOTAL	= 7.5

Felling for Black grouse will clearfell areas of poor growth that will link up areas of open hilltop. Detailed prescriptions will only be worked up immediately ahead of work programmes, which will only be considered after new Black grouse surveys have been undertaken. These areas would otherwise contribute little to future timber volumes. These areas would also classify for full peatland restoration. These areas are fragmented and would not normally be considered for subsequent restocking under normal forest practice and edge management so are not considered to constitute deforestation.

♦ **Thinning**

There are currently no plans to thin any part of the forest due to exposure. Thinning of commercial conifers in the next rotation is likely to be very limited for the same reason. Thinning may be undertaken parts of Corranbuie oakwood if no significant conservation constraints are identified.

♦ **Continuous cover forestry**

The former Corranbuie Oakwood CFR may be suitable for Continuous cover management if no conservation sensitivities are identified within it and merchantable timber is identified and accessible. It is currently classified as under Minimum Intervention management. One small area of mature conifers in the oakwood, planted in 1925 and now partially blown, has been retained. The future objective for it is native woodland. There are no plans to fell this stand and it has no ready access for harvesting equipment.

Some native woodland areas, once established, may be suitable. One area of mostly failed planted native woodland in Skipness is currently classed as continuous cover. Once more fully established, it should be thinnable. No commercial conifer areas have been identified as suitable for conversion.

♦ **Long-term Retentions**

Historic wind damage throughout the forest otherwise largely mitigates against use of this management type. Opportunities will be reassessed in second rotation crops as they mature, particularly as alternative species are introduced. One area of mixed woodland and another of checked spruce have been identified for Long-term retention.

5.1.2 Non-commercial areas

♦ **Natural Reserves**

The FCS section of the Tarbert and Skipness Coast SAC/SSSI native woodland is classed as a Natural Reserve. This is complimentary to those areas in private ownership and in accord with site designation and management intentions. Conifer natural reserve areas have been identified in first rotation crops immediately above the SSI/SAC. These contain low density stocking of low yield class Norway spruce, with varying amounts of native woodland regeneration and open space. These are relatively sheltered sites and may become useful habitat for Red squirrels in the future. They also provide a useful landscape transition from native woodland and open space below, to pure conifers above.

◆ Minimum Intervention Areas

These are currently represented by a variety of woodland structural types, where there is benefit in retaining the stands for diversity and where the likelihood of achieving an economic crop is low. These areas will be expected to contain a high proportion of native woodland by natural regeneration in the future. The principal area is the Tarbert backcloth, where a variable density of native woodland is regenerating and where some future management to preserve open views around walks and from viewpoints will become necessary in the future.

Several other areas of checked, understocked Sitka spruce have been left around the forest. None of the areas are likely to warrant expenditure to restore to open habitat at present as priorities lie elsewhere.

Table 5.6 - Current Area Summary – Low Impact Systems (gross areas)

TYPE	AREA (HA)	%
Continuous Cover Areas	10.1	-
Natural Reserves	227.4	8
Minimum Intervention Areas	223.4	7
Long Term Retentions	13.5	-

5.2 Future habitats and species (see map 5.4)

◆ Species rationale

Conifer species choice is orientated towards SS in low sensitivity areas as the main commercial species that is suitable on most sites. Most pines cannot be planted due to *Dothistroma*. Alaskan LP will be used in self-thinning mixtures with SS on low nutrient sites. Sitka spruce will therefore increase as Lodgepole pine is reduced by self-thinning. Lodgepole pine used in self-thinning mixtures is included under the figures for Sitka spruce, as it is assumed it will disappear over time. Larch was previously used for texture, contrast and amenity, but is currently prohibited due to *Phytophthora ramorum*. Use of minor conifer species and mixtures is supported as a measure to build in resilience against climate change. Minor conifer species are also used in small amounts for amenity. Soils and exposure limit the choice of most minor species. Norway spruce is likely to be the most commonly used minor species in mixed conifer mixtures, with smaller amounts of firs, Western red cedar and Western hemlock. Planting of Norway spruce in the vicinity of native woodland areas will have future benefits for Red squirrels. Planting of Western hemlock will be restricted to areas where potential regeneration will not impact on any sites of conservation value. Douglas fir in Corranbuie was planted on the best of the available sites, but still has not grown particularly well. Sites chosen for mixed

conifers are mostly Peaty gleys. Suggested provenances for use in the district are shown in Appendix VI.

No commercial broadleaved planting is anticipated. Native broadleaves, either by natural regeneration or planting, are envisaged for most of the plan area. However, broadleaves have fared poorly in upper areas. Sycamore is a potential alternative in these parts and is likely to be used in mixture in the upper reaches of the Skipness River. Sycamore may also be used as a substitute for larch in mixture with productive conifers. Ash is also no longer available due to Ash Dieback disease, *Chalara fraxinea*.

Table 5.7 - LMP Species Distribution

WOODED AREAS SPECIES	2003		2017		2026		2099	
	AREA (ha)	%	AREA (ha)	%	AREA (ha)	%	AREA (ha)	%
Sitka spruce	1401.4	83	1439.4	70	1188.7	59	1054.5	49
Norway spruce	24.1	1	15.9	1	54.2	3	123.9	6
Lodgepole pine	62.8	4	60.9	3	56.0	3	-	-
Mixed conifer	3.8	-	0.9	-	16.8	1	21.5	1
Douglas fir	2.6	-	2.6	-	2.6	-	5.5	-
Noble fir	-	-	0.4	-	4.9	-	21.4	1
Western hemlock	-	-	-	-	1.0	-	0.6	-
Western red cedar	-	-	-	-	12.6	1	21.7	1
Scots pine	-	-	4.3	-	4.6	-	10.5	1
Larch	26.5	2	24.6	1	9.6	1	-	-
Oak	No info	-	140.1	7	140.1	7	140.1	7
Birch	No info	-	58.6	3	58.6	3	92.9	4
Native Broadleaves	162.6	10	47.3	2	129.2	6	244.6	11
Sycamore	-	-	-	-	5.0	-	6.4	-
Failed	No info	-	32.6	2	-	-	-	-
Internal open space	No info	-	221.7	11	347.4	16	402.1	19
SUB-TOTALS	1683.8	100	2049.3	100	2031.3	100	2145.7	100

Open hilltops	1054.9		752.0		770.0		655.6	
Agriculture	159.0		192.7		192.7		192.7	
Open water	8.8		2.8		2.8		2.8	
TOTALS	2906.5		2996.8		2996.8		2996.8	

The figures above show an increase in the area of broadleaves, mainly due to native woodland expansion. However, it is assumed that most areas of open ground in the SSSI will not regenerate due to bracken and deer pressure, but this could change, so the figures reflect some loss of hill top open space here by 2099. Some reduction in open hilltops also occurs as the Tarbert backcloth regenerates with native woodland (net change for these reasons is 752.0ha to 655.6ha). The final extent of native woodland on the backcloth will be dependent on a number of factors, including deer pressure, site suitability, and public opinion. A slight increase in open hill tops arises over the first two phases of the plan (752ha to 770ha) as a result of removal of conifers from open hill tops. The principal contributors to this are the area associated with the black grouse work (coupes 29026 and 29297), and consolidation of the open hill top 29207 with Phase 2 felling of 29390.

The percentage of minor conifer species increases in order to diversify the forest, but larch decreases as it is not replaced. Norway spruce area is increased to diversify productive conifer species. Internal open space increases with further roading and development of coupe buffers. However, there are a considerable number of unplatable rocky knolls and bogs contributing to this area. Open space increases due to consolidation of open space where planting is fragmentary, and conversion to open habitat where growth is poor including deep peat restoration. The area of SS falls as a result of these changes.

Sitka spruce/mixed conifers have been used for areas along the eastern side of Skipness. Site conditions may be challenging for growing minor conifers here, so some flexibility is needed in species choice, which will be more apparent after felling. It is assumed that mixed conifers on these sites will include Norway spruce, Noble fir and Western Red cedar in a 50:50 mix with Sitka spruce, which will serve as a nurse species for these are other conifers.

SS is the conifer most matched to the commercial objectives within the planned conifer areas (See UKWAS 3.3.2). Open and broadleaved areas contribute more than the UKWAS target of 15% of the woodland area being managed with conservation and biodiversity objectives. Table 5.6 lists other woodland areas contributing to the area (See UKWAS 6.3.1). Species distribution will move towards the future goal in 2099 in one rotation for most areas, but longer where LISS management is undertaken. The reduction in area of agricultural land arises from the intention to take the open hill top between the two forest areas out of grazing, although this area hasn't been actively grazed for some time and its fences are

derelect. Note: increase in plan area after 2003 is due to transfer of SSSI woodlands from SNH to FCS.

◆ Habitat networks

The Habitat Networks map (see map 3.7) identifies the main habitat networks, both open, native woodland and riparian. Buffer zones along main burnside corridors go beyond the Forest and Water guidelines, typically 20m for major riparian corridors. Native woodland can be expected to regenerate in lower riparian corridors. PAWS restoration will strengthen the native woodland linkages. Native woodland habitat networks will also contribute to the deadwood resource, providing a deadwood habitat network as a consequence. Old windblow is likely to make a significant contribution to the deadwood resource.

Open habitat networks (see map 5.7) are strengthened by removal of fragmentary conifer plantings in the upper areas. Some loss of open habitat is likely as areas such as the Tarbert backcloth and within the SSSI regenerate with native woodland. However, the resulting woodland habitat is likely to be of greater value.

5.3 Restructuring

Restructuring can largely been achieved in one rotation, despite the original uniformity in age classes. One or two areas of more extensive windblow will require further restructuring at the next rotation. Development of a well-balanced age structure will take several rotations (see section 5.5). No fallow management is currently planned within the forest. Excessive weed growth tends to limit use of fallow or delayed restocking. The process of restructuring has a cost implication in terms of forgone revenue through not adopting economic rotation lengths.

5.4 Future management

◆ Invasive species

Rhododendron control is ongoing in north Corranbuie, including within the SSSI. This is likely to continue so long as significant seed sources remain outwith FCS ownership. Scattered bushes remain elsewhere. Conifer regeneration is not currently a problem.

◆ Monitoring

Monitoring of outputs within the plan area are handled in accordance with the district's Monitoring Plan. Subjects are grouped under Key Themes from the Strategic Plan. Specific methodologies are detailed under separate guidance

documents. Responsibilities for undertaking, recording and responding to the results of ongoing monitoring are also detailed in these documents. Any relevant to LMP delivery will be reviewed at the mid-term review stage. Monitoring within the SSSI/SAC is undertaken by SNH.

5.5 Age structure

The development of old growth and mature high forest conifer woodland is limited by exposure. Old growth forest is likely to be represented, for the foreseeable future, by existing and planned areas of native woodland around the lower edges of the plan. Higher yield classes from improved species provenances and cultivation techniques may shorten rotation lengths in the future. Use of alternative, slower growing conifer species may increase future rotation lengths.

Table 5.8 – Age structure

Age of Trees (Years)	Successional Stage	Percentage of Forest over Year			
		2003	2017	2036	2056
0 - 10	Establishment	-	-	29	5
11 - 20	Scrub & Early Thicket	66	-	30	23
21 - 40	Thicket & Pole Stage	34	76	-	59
41 - 60	Mature High Forest	-	14	31	-
61+	Old Forest	-	10	10	13
TOTALS		100	100	100	100

The process of restructuring shall continue through successive rotations to achieve a minimum 2m height growth difference between adjacent coupes, based on a minimum of 7 years between felling dates, as per the UK Forestry Standard.

5.6 PAWS restoration

All the areas on the NCCS inventory that are classed as 'Ancient Woodland Sites' or 'Long-Established Semi-natural origin' will be restored to native woodland in the future in the plan area. All areas identified by the FD from the 1st Edition Ordnance Survey mapping will also be restored, unless subsequent survey demonstrates that they are not Ancient Woodland sites. Restoration is incomplete, but should be achievable in one rotation. Natural regeneration will be the preferred method of

broadleaved establishment. Restoration will be initiated on all sites through clearfelling. The long-term objective is full PAWS restoration for the plan area.

5.7 Management of open land

• Agriculture

The central open hill top will continue to be managed as a full agricultural tenancy for the foreseeable future. This does not conflict with conservation objectives for the area. A small number of hefted sheep currently graze here. Consequently, this area does not need fencing. Some heather management for Black grouse is likely. Protection of deep peat and associated carbon storage will also arise from avoiding damaging operations and uses in this area. Additional areas of open hilltop will also be linked into this and managed as part of the wider open habitat network in the locality.

The lower fields below Achnaglach and around the radio mast are managed under a seasonal grazing let. The fields behind Oakhill and Easfield are currently unused, having been excluded from the grazing area in case opportunities for housing development should arise. The seasonal grazing area may also be considered for development, hence the short-term nature of the grazing let. The continued usage of this agricultural area will also depend on community and agricultural interests.

A small area above Meall Darroch Cottage was until recently used for grazing a horse. This has been discontinued, partly due to the state of the fences and also due to access issues. There are no plans to reinstate the grazing.

• Tarbert backcloth

The open upper parts of the Tarbert backcloth will be considered for intervention planting of low density broadleaves when the plan is next renewed in 2025. Maintenance of open space lower down the hill will be considered in the light of MFST objectives for the area, some local pressure for maintenance of open space, and landscape enhancement requirements. Community desires and interests will also affect the area, including community management of land immediately above the castle.

• Development

Housing development above Oakhill is the most likely future outcome for the lower parts of the open area here. However, further housing development in the village is currently restricted by the capacity of the village sewerage system.

5.8 Deer Management

Planted broadleaves, either tubed or untubed, have generally performed poorly in Skipness. This may be due to a number of factors, rather than simply deer numbers. Soft conifer species will also be fenced if funding is available where deer control is otherwise difficult. Current policy requires rangers to prioritise new restock sites for deer control along with resources for the construction of quad tracks on these sites. The FD will monitor success of broadleaved regeneration and ranger staff will be asked to intervene where issues arise due to browsing. Deer stalking will be the preferred method of deer control, in line with the FD's Deer Management Strategy. Additional ranger tracks will be applied for separately, when needs are identified. Neighbouring estates will be consulted and agreement reached on march fence replacement. Only the boundary with the former CFR is deer fenced currently. There are no plans to convert existing stock fences to deer fences by either FCS or neighbours at present. Deer management will comply with SNH's 'Code of Practice on Deer Management'; [Code of deer management - Scottish Natural Heritage](#) Deer fencing will comply with the Joint Agency Fencing guidance; [Deer fencing guidance - Scottish Natural Heritage](#)

5.9 Access (see Map 5.8)

All roads will be built from material won from local borrow pits and along the roadline. One small quarry in Corranbuie may possibly be used to produce the running surface, but currently adequate sources are being found closer to the construction. No quarries are expected to exceed the threshold requiring an EIA determination. None of the proposed roads have any significant impact on the landscape or environmental sensitivities. Road construction will be UK Forest Standard compliant and will follow the Forest and Water Guidelines 5th Edition. Stream crossings will be processed under the SEPA CAR Regulations in advance of construction. The design will conform to the Timber Transport Forum document 'The design and use of the structural pavement of unsealed roads, 2014'; <http://timbertransportforum.org.uk/attachments/article/12/TTF%20The%20design%20and%20use%20of%20the%20structural%20pavement%20of%20unsealed%20roads%202014.pdf>

It will also conform to SNH's 'Constructed tracks in the Scottish Uplands' revised September 2015; <http://www.snh.org.uk/pdfs/publications/heritagemanagement/Constructedtracks.pdf>

A total of 1.3Km of new roading is required in the first 5 years of the plan. Road width will be about 10m. Hydraulic peckers will be used on the roadlines. Construction will be outwith the breeding season of sensitive species that might be affected by such operations. Borrow pits will be approximately 20m by 20m by 8m

high as a maximum, depending on site, and are routinely backfilled after use. Passing places will be positioned roughly every 200m and turning places every 500m, including at the road end. A 120m micro-siting corridor will be required due to uncertainties surrounding the siting of the proposed culvert, but otherwise should follow the planned route. This road will not be visible in the landscape, except limited views from the Kintyre Way. Landform hides the roadline in views 5 and 10.

- Road A – 1.3Km to reach windblown coupe in Glenskibble. Associated felling amounts to 3.9ha, included in Table 5.3.

This road will be extended in Phase 2 to reach the associated coupe. Spurs in Corranbuie will also be needed around 2021. Further network development will be required for Phase 4 and later coupes. Roading approved under the previous plan is ongoing in Skipness, amounting to 2.6Km.

Haulage will adhere to the following protocols 'The ATTG Protocol for Timber Haulage in Argyll and Bute'; <http://www.argyll-bute.gov.uk/sites/default/files/ATTG%20Protocol%20for%20Timber%20Haulage%20in%20Argyll%20and%20Bute%20-%20Updated%20April%202012.pdf>

And with the 'Protocol for Timber Transport Operations (Appendix 1)'; http://www.argyll-bute.gov.uk/sites/default/files/ATTG%20Timber%20Haulage%20Protocols%20for%200Argyll%20and%20Bute%20Appendix%201_0.pdf

Prior notification for road A will be submitted to Argyll & Bute Council following EIA determination by Perth & Argyll Conservancy through LMP submission.

5.10 Critical success factors

In the 10-year plan period, the following outcomes are required:-

- Restructuring – requires completion of felling (462.8ha) and restocking (432.7ha) programs (see section 5.1 Forest Operations area statements)
- Roading – construction of 1.3Km required to facilitate the first 5-years harvesting program.
- Timber production (212.4Km³) - requires completion of the felling program.
- Construction of consented hydro-schemes to deliver renewable energy.
- Landscape design from key viewpoints - requires coupes to be felled as per the Management Map and restocked as per the Future Species and Habitats Map to deliver planned landscape enhancements.
- Creation of habitat networks will be an ongoing process, beyond the next 10 years of the plan. Success depends on ongoing commitment to implementing the felling and restocking elements of the design.

- Full PAWS restoration requires conifer removal, not replanting with conifers and control conifer regeneration or other exotics, to achieve satisfactory habitat restoration. Timescales for completion go well beyond the plan approval period. A total of 6.5ha will be restored in the plan period.
- Rhododendron control within the SAC must be achieved within the plan period in order to address the 'Unfavourable – declining' status and potential failure rating noted in the draft management plan.
- Delivery of Deep Peat Policy outcomes through implementation of restocking/open land proposals.

(At present, there are no critical success factors associated with removal of trees affected by *Dothistroma* or *Phytophthora ramorum* or due to windblow).

Appendix I: Land Management Plan Consultation Record

Statutory Consultee	Date contacted	Date response received	Issue raised	Forest District Response
Argyll & Bute Council	22/06/2016			
SNH	25/07/2016	15/08/2016	Would require a Natura test and operational consent (ORC) should proposals to build a quad track into the SAC be tabled.	No plans to build at present due to safety concerns operating quads on steep slopes.
Neighbours	Date contacted	Date response received	Issue raised	Forest District Response
Skipness Estate - Rupert James - Sophie James	16/06/2016 26/07/2016	16/06/2016	Eco-tourism opportunities and funding	Referred request to FCS
Robin Dixon & Son Ltd Claonaig, Skipness & Bardaravaine Estates	21/06/2016			
Escart Farm, Bob Crawford	26/07/2016		Requested copy of previous plan for comparison.	
Westlochshores Caravan Park	26/07/2016			
Community Groups	Date contacted	Date response received	Issue raised	Forest District Response
Tarbert and Skipness Community Council	22/06/2016			
Tarbert Castle Trust	25/07/2016			
Others	Date contacted	Date response received	Issue raised	Forest District Response
Community Consultation drop-in	16/06/2016	At meeting & returned questionnaires	Path upgrade for cyclists through Skipness. Clearance of windblown tress off of old road through Corranbuie oakwood. Barbed wire beside path. Creation of woodland crofts.	No funds. Work done in spring, and will be done again, hydro penstock will also use route. Will remove barbed wire. Not currently on offer
SEPA	21/06/2016	06/07/2016	Note of flooding in Tarbert, peatland restoration techniques, % felling in catchments	Generally all points covered in standard FC guidance, work plans, follow Water guidelines to protect catchments.
Confor	22/06/2016			
John Coon, Larick House	16/06/2016	21/06/2016	Wanted an orienteering course in Corranbuie Oakwood, and cycle trails	Referred to Rec team, unlikely as no funds and no clubs in Tarbert.
John Palmer, Craig-dhon	09/2016	09/2016	Bracken encroachment above Tarbert.	No funds to deal with.
Mike Steel, Glenreasdale (shooting lease)	26/07/2016			

Appendix II: Tolerance Table

Tolerance Table for West Argyll Forest District

Area or Zone	Action required	Adjustment to coupe boundaries (to a limit of 20% of coupe area)	Timing of restocking (years after felling)	Changes to species (in excess of 25% change)	Windblow clearance (ha>40% blown)	Changes to roadlines (m from centre line)
Native woodland areas	Exchange of letters	1.5ha	5 yrs	No threshold	0.5ha native species. 5ha conifer	50m*
	Plan amendment	3.0ha	10yrs**	No threshold	10ha conifer	100m
Landscape sensitive areas***	Exchange of letters	0.5ha	3 yrs	Between evergreen and deciduous conifer species. No threshold for native species.	2ha conifer	50m
	Plan amendment	1.5ha	5 yrs	Between evergreen and deciduous conifer species. No threshold for native species.	5ha conifer	100m
Low sensitivity areas****	Exchange of letters	3.0ha	4 yrs	Between evergreen and deciduous conifer species. No threshold for native species.	5ha conifer	200m
	Plan amendment	5.0ha	7 yrs	Between evergreen and deciduous conifer species. No threshold for native species.	10ha conifer	400m

* Any impact on existing ancient woodland will be agreed with no threshold

** Due to preference for natural regeneration

*** Includes all landscape designation areas, e.g. NSA's, designed landscapes, plus WIAT, community woodlands and FD Strategic Planning Landscape Zone

**** All other areas not included in other zones. Localised environmental sensitivities within the zone will be covered under existing management plans. Consultation on these sites will be undertaken as part of the normal approval process and methods detailed in work plans.

Note: Any increase in open space will be subject to EIA thresholds for deforestation unless part of normal process of forest restructuring

Appendix III: LMP Brief and Introductory Information for Initial Stakeholder Meeting

(Outcomes from Initial Stakeholder meeting to be added in italics)

(The new plan was initiated in 2013 as a revision to the existing FDP. External consultation was started I 2014. It was reconstituted as a LMP in 2015).

Introduction

Corranbuie and Skipness are two adjoining blocks lying immediately to the south of the village of Tarbert on Loch Fyne, established on the northern and southern slopes of a single Dalraidian schist massif and linked by open hill land rising to over 350m at the highest point. Skipness Forest extends from Skipness Glen northward to the open hill watershed. Corranbuie Forest comprises the area north of the Skipness block to Tarbert.

Loch Fyne forms the majority of the eastern boundary while the western area is adjacent to elevated heath and commercial plantations. Tarbert and Skipness are the closest settlements and the nearest transport link is the A83T which links Tarbert with Campbeltown. Ferry routes run close by from Tarbert and Claonaig to Arran. Tarbert is an important tourist hub, with access provision into the forest from the village. The total combined management area is approximately 2997ha.

Corranbuie was acquired in 1976 with the main forest block of 1600ha planted in 1982-84 with Sitka spruce as well as smaller areas of pines, larches, Norway spruce and native broadleaves. Unplanted rocky knolls form an intimate pattern of open spaces taking up approximately 40% of the forest area.

Skipness was purchased in three stages with 1137ha acquired in 1973, 274ha in 1981 and Glen Skibble hill (southern section) in 1989. Much of Glen Skibble comprised the Skipness Caledonian Forest Reserve, an area of native woodland in the glen, managed by FCS until 2013, when it was exchanged for land in Knapdale. The majority of the forest was planted with Sitka spruce in the mid 1970s and the late 1980s with approximately a quarter of the forest area given over to open ground.

The forest above Tarbert caught fire in 1994, caused by a flare from a yacht. The 1990's mixed plantings for landscape enhancement above the village were almost completely destroyed. The area was then left to regenerate naturally with native woodland, as part of a Millennium Forest for Scotland scheme. Some additional recreation facilities were also added under the scheme.

Progress (on previous plan)

The previous FDP was consented in 2003. This increased the area of larch, as well as an increase in native broadleaves. The FDP also implemented removal of exotic

conifers in some areas. A Black Grouse Management Plan was incorporated into the FDP, having been prepared and agreed with RSPB. Very little work on implementing the plan has so far been undertaken.

The Kintyre Way was opened in 2006. Its route runs through both blocks and comprises a built, way-marked path, although it also uses some sections of forest road. It links Tarbert and Skipness villages.

Several large areas of windblow have occurred in the older Skipness block in 2012, which has resulted in amended felling dates, redesigning of coupe framework and planned road layout. Felling is due to commence in 2015/16. A smaller area of Corranbuie also suffered wind damage, which has yet to be cleared.

The Skipness Caledonian Forest Reserve (CFR) was exchanged for an area in Knapdale during 2013. A right of access through this block was retained and continues to be used by the Kintyre Way. The FDP area also includes two pieces of land in the east totalling 205ha bordering Loch Fyne which were sold to SNH over two decades ago and reacquired in 2013. The combined area is SSSI/SAC designated for oak woodland and bryophytes. Approximately 90% of the designation was assessed as sessile oak woodland, dating from about 1910. The remaining land is either unplatable or bare.

Road construction was initially delayed due to windfarm proposals within the western side of the Skipness block being tabled. When these were abandoned, road construction proceeded, linking the two blocks and taking access up to the edge of the windblow within Skipness. A new access onto the A83T was required to satisfy sightlines. Its route had to be agreed with adjoining private land owners and was completed in spring 2015.

Issues

- There is a significant area of windblow to clear in Skipness, plus pockets of damage in Corranbuie. The extensive windblow is hampering the setting out of access roads.
- The upper parts of the Corranbuie plantation is fragmented and of poor growth. *(Possible peatland restoration opportunities)*
- The agricultural let on the open hill top has not been actively grazed for some time. *(To be discontinued)*

Corranbuie & Skipness Land Management Plan 2017-26

- Access into the SSSI is poor, especially for deer control. *(Some debate as to whether a ranger track is needed or not)*
- The Kintyre Way utilises long sections of the main haul route, which isn't ideal. *(FE is working with the Long and Winding Road Company to move it away from larger forestry tracks. There is an old road from Skipness to Tarbert that might be appropriate).*
- The Black grouse management plan, which was built into the previous FDP, has largely not been implemented due to priorities elsewhere. *(Further monitoring of population required in order to inform decisions)*
- Under the MFST project for the Tarbert backcloth, a target of 25% broadleaved woodland cover was envisaged by 2025. *(Some locals however do not like the loss of open space arising from good broadleaved regeneration in the lower parts). The upper parts however remain devoid of regeneration. The project plan's felling was not fully completed, nor adequately evaluated against desired goal of removing all conifers from the immediate view from key viewpoints in the village. (There have also been issues with deer affecting private gardens, finding cover in the new native woodland).*
- Erodible soils in Skipness were identified as an issue at new planting in Skipness. Drainage issues may also have contributed to the windblow. Coupe structure and road infrastructure need further consideration in order to improve the economics and fit coupe shapes more adequately to the landscape scale. *(Civil engineers have asked for coupes to be aligned to roads so extra spurs for access don't need to be built). (Do we need forest road in this area to allow management of north Corranbuie for harvesting and firewood? Access ok for now but question of the future difficult as the area is so visible. Looked at the spur from the radio mast. Can we hide a track down in the gully?).*
- Renewables – Discussed possibility of standard clause in LMP's – Scottish Power has exclusivity in this area for renewables. *(No indication they will take forward in the next four years. Neighbours in SW have proposals – small proposals for hydro, west Corranbuie).*

Plan Objectives

The role of Scotland's National Forest Estate focuses on 6 key themes:-

- **Healthy** - achieving good environmental and silvicultural condition in a changing climate
- **Productive** - providing sustainable economic benefits from the land
- **Treasured**- as a multi-purpose resource that sustains livelihoods, improves quality of life, and offers involvement and enjoyment
- **Accessible** - local woodlands and national treasures that are well promoted, welcoming and open for all
- **Cared for** - working with nature and respecting landscapes, natural and cultural heritage

- **Good value** - exemplary, effective and efficient delivery of public benefits

The plan will deliver on these themes in the following ways:-

Healthy

- Species diversification or change in response to the Climate Change agenda and plant health issues

Productive

- Timber production – commercial conifer areas with road access provision

Cared for

- Enhancement and protection of open habitats and linkages, with benefits for Black grouse.
- Landscape improvement
- Development of native woodland habitat networks, including contribution to the broader native woodland network in the area
- PAWS restoration
- Enhancement and protection of Tarbert to Skipness Coast SSSI and Tarbert Woods SAC, including elimination of rhododendron.
- Protection and enhancement of cultural heritage assets
- Protection and enhancement water features and water supplies

All themes:-

- To comply with the Forest and Water Guidelines
- To comply with UKWAS guidance for certification

Summary of proposals

The Forest District's Strategic Plan for West Argyll Forest District includes a vision statement, to which each individual Forest Design Plan (FDP) will make a contribution. The District Vision Statement states that 'West Argyll FD will be a key land manager in Argyll, producing quality timber for the market, providing sustainable employment in both the public and private rural sectors, and opportunities for renewable energy projects. We will also provide well-managed native woodlands for wildlife and places for enjoyment for visitors and local communities'. The Corranbuie & Skipness FDP revision contributes to the District Vision by seeking the following outcomes:-

Economic context

Corranbuie & Skipness Land Management Plan 2017-26

- ◆ Approval for 5 of felling and 462.8ha of restocking is being sought, for completion within the first 10 years of the plan.
- ◆ Timber production from felling operations is currently estimated at 16Km³/annum in the short term and 22Km³/annum thereafter until 2025.
- ◆ Construction of 4.85Km of new forest roads requires Prior Notification and EIA determination, plus associated felling approval of ha. Length of new roading required must achieve a satisfactory balance between cost and coupe size, with design minimising the need for spur roads.
- ◆ Reassessment of felling dates to ensure process of restructuring is on track and clearance of windblow prioritised.

Environmental context

- ◆ Full restoration of PAWS.
- ◆ Development of habitat network framework for native woodlands, open space and riparian corridors. Fell 6.0ha of poorly grown conifers to improve open habitat linkages for Black grouse.
- ◆ Protection of sensitive conservation features through appropriate silvicultural design in respect of Tarbert to Skipness Coast SSSI and Tarbert Woods SAC.
- ◆ Elimination of rhododendron from the SSSI as part of the process to improve the status of the woods, and ongoing control to eliminate it elsewhere.
- ◆ Species diversification or change in response to Climate Change Agenda, national targets for broadleaves, UKWAS and plant health issues.

Social context

- ◆ Landscape enhancement with particular reference to views from public roads, ferry routes and the Kintyre Way.

Stakeholder consultation

In addition to the FD's statutory stakeholder's (SNH & Argyll & Bute Council), SEPA is routinely consulted. The RSPB, Confor and SSE have also asked to be routinely consulted. Tarbert & Skipness Community Council will be consulted, along with the Tarbert Castle Trust. Transition Kintyre will also be informed. Neighbours, where identifiable, will also be consulted, although individual residents in living Tarbert will not receive direct communication by mail due to the numbers and logistics involved. A drop-in public consultation exercise will be held when draft proposals have been prepared. Information will be posted on line on the FC website at various stages of the plan development, with the approved plan eventually being made available here.

Appendix IV: Glossary

ASNW	Ancient Semi-natural Woodland
BAP	Biodiversity Action Plan
CCF	Continuous cover forestry
CFR	Caledonian Forest Reserve
DAMS	Detailed aspect method of scoring
EMIS	Establishment Management Information System
ESC	Ecological Site Classification
FCS	Forestry Commission Scotland
FD	Forest District
FDP	Forest design plan
HAP	Habitat action plan
HS	Historic Scotland
LISS	Low Impact Silvicultural System
LMP	Land Management Plan
LP	Lodgepole pine
MFST	Millennium Forest for Scotland Trust
NNR	National Nature Reserve
NVC	National Vegetation Classification
PAWS	Plantation on Ancient Woodland Sites
SAC	Special Area of Conservation
SAM	Scheduled Ancient Monument
SNH	Scottish Natural Heritage
SS	Sitka spruce
SSSI	Site of Special Scientific Interest
UKWAS	UK Woodland Assurance Scheme
WAFD	West Argyll Forest District
WGS	Woodland Grant Scheme
WoSAS	West of Scotland Archaeology Service
YC	Yield Class

Appendix V: Supplementary Information

Available for inspection at:

West Argyll Forest District
 Whitegates
 Lochgilphead
 Argyll
 PA31 8RS Tel: 0300 067 6650

Documentation includes:-

- Roadline surveys
- Production Forecast 2015
- Sub-compartment database
- Conservation plan
- Landscape Character Assessment by SNH
- Aerial photos
- Forestry Guidelines
- Recreation Plan
- Strategic Plan
- Forestry Commission approval procedures
- FES Larch Strategy
- Inventory of Ancient, long-established and semi-natural woodland, Argyll & Bute District (NCCS)
- Economic felling ages
- Crop surveys

Appendix VI: Provenance Guidance Chart

West Argyll FD LMP provenance guidance chart

Species	Guidance
SS	Improved QSS standard throughout
VPSS	Limited use in best locations
SP	High rainfall type specified as standard
NSP	From the nearest appropriate zone near CFR areas
LP	Only ALP being used in mixture with SS on poorer sites
DF	Seed stand or coastal origin
ESF	Czech or central European
NF	Registered seed stands
GF	Scottish registered seed stands
WH	Registered seed stands with low fluting
WRC	Scottish seed stands
NS	Seed stands, Eastern European or Harz
JCR	Northern Japanese range
XC	PSSB will advise on any other minor species
<p>Notes: PSSB can provide the most up to date guidance on provenance selection including advice on best suited seed stands. Virtually all seed supplied by PSSB comes from registered seed stands and is based on geographic area compatibility. Use of VPSS has declined as seed orchard QSS improves and this also has a wider genetic base for resilience purposes.</p>	