Forestry and Land Scotland
Coilltearachd agus Fearann Alba

Mark Hill and Tornat

Land Management Plan 2024-2034 South Region-V2.0

Plan Reference No:
Plan Approval Date: 22/07/2024
Plan Expiry Date: 22/07/2034

We manage Scotland's national forests and land 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.

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A. Description of Woodlands

A.1 Property Details

Property (LMP) Name:	**Mark Hill & Tornat**
Grid Reference (main entrance):	Mark Hill (NX 851 554) Tornat (NX 831 553)
Nearest town or locality:	Kippford
Local Authority:	Dumfries and Galloway

A.2 Location and Background

The Mark Hill & Tornat land management unit is located approximately 6 km south of Dalbeattie, in Dumfries and Galloway. Covering an area of approximately 153 ha, the area comprises conifer woodland with areas of native broadleaves. Mark Hill is a popular recreational woodland on the Solway coast, adjacent to the village of Kippford. Tornat sits on the opposite side of the Urr estuary. See Map 1.

A.3 Existing Schemes and Permissions

Type: Forest Design Plan (expired)
Ref. No: FDP177
Details: Covered Mark Hill only

Type: Felling Permission (expired)
Ref. No: STF59
Details: Covered felling operations in Tornat from 2014

A.4 Stakeholder Engagement

A public consultation event was held on 22nd May 2023 at Kippford Village Hall, there were approximately 30 attendees. Additionally, an online survey received 14 responses.

The following is a summary of the main points raised by stakeholders during scoping and where they are addressed in the plan. Appendix I contains the full consultation record.

1. Provision for public access (C.2.9)
2. Impacts of forest management on the local community (C.2.9)
3. Protection of heritage features (C.2.10)
4. Links with Kippford Community Nature Reserve (C.2.9 and C.2.11)
5. Management of ‘plantation on ancient woodland site’ (PAWS) in Tornat (C.2.11)
6. Protection of the heronry in Tornat (Section C.2.11)
7. Forest design to complement the East Stewartry Coast National Scenic Area (C.2.15)

A.5 Long Term Vision and Management Objectives

Vision

Mark Hill is a truly diverse forest, producing quality timber products from a range of conifer species, alongside native woodland that forms habitat corridors both through and beyond the forest. Visitors can access the forest easily and enjoy the experience of passing through changing scenery and different woodland types, which also makes a positive contribution to the special qualities of the East Stewartry Coast National Scenic Area (NSA).

Tornat has successfully regenerated with the desired native tree species and has developed a rich flora that supports a wealth of biodiversity. It is a quiet destination for visitors looking for peace and relaxation.

Management Objectives

Objective 1: Provide a welcoming and relaxing environment for the local community and visitors to enjoy, working with neighbours to enhance connectivity.

Indicator of objective being met: active engagement with local partners to explore opportunities to encourage recreational use of the forest.

Objective 2: Strengthen native woodland links in the wider landscape, working with neighbours to maximise the benefits - and continue to monitor native woodland establishment in Tornat (particularly in the PAWS area), providing timely management interventions if required.

Indicator of objective being met: the desired tree species are establishing at a suitable density to ensure establishment of native woodland cover (see section C.2.5); discussions with neighbour on coordinating PAWS restoration of Kipp Hill Wood.

Objective 3: Plant 'alternative' conifer tree species such as Douglas fir and Norway spruce on suitable sites for quality timber products and tree species diversity.

Indicator of objective being met: successful restocking and establishment (see section C.2.5) of all felled areas where the planned future species is an alternative conifer; alternative conifers have not been substituted with Sitka spruce.

Objective 4: Clear windblown trees, with careful consideration for any implications on wider forest stability and sensitive wildlife.

Indicator of objective being met: all significant areas of windblown trees have been cleared during Phase 1 of the plan. (Note: subsequent windblow will be addressed in subsequent felling phases).

A.6 General Site Description

A.6.1 Topography and Landscape

Elevation ranges from 5m along the east edge of Tornat to 110m on Torbay Hill. Topography is hummocky with several prominent rounded hills, and some rocky outcrops. A significant feature is the shallow valley running north-south through Mark Hill. Both sites contribute to the coastal landscape and are visible from various locations nearby, although much of Mark Hill sits 'hidden' back from the coast. There are short steep slopes along the west edge of Tornat.

Tornat and the south-west fringe of Mark Hill are situated within the East Stewartry Coast NSA and both woods sit within the wider Solway Coast Local Landscape Area.

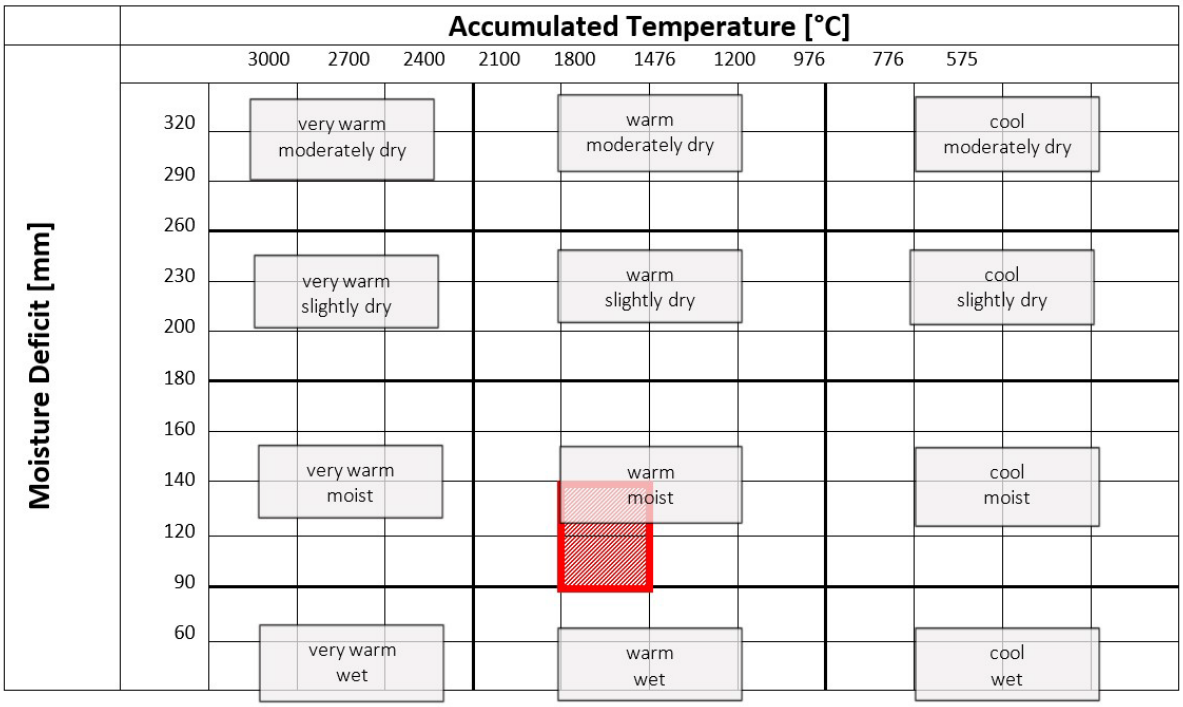
A.6.2 Geology and Soils

Bedrock is igneous Granodiorite (part of the Criffel-Dalbeattie Pluton). The only superficial deposit of note is a small strip of alluvium along the valley in Mark Hill.

Soil types are dominated by typical brown earths offering good growing conditions, interspersed with unproductive rankers and exposed rock on higher ground, with small areas of Juncus bog and surface-water gley in the valley bottoms and on flatter ground. There are no priority deep peats within the plan area. See Map 8.

A.6.3 Climate

The current local climate is highlighted on the table below.



The future climate is likely to be warmer. This is based on projections for 2080 (medium-high climate scenario). Current and predicted conditions are good for tree growth.

A.6.4 Hydrology

The plan area sits in the Solway Tweed River basin catchment. Both woodlands drain directly into the Solway Firth. There are no surface water bodies (as identified by SEPA) within the plan area. Several streams pass through the site - see Map 3. There are no known risks to the plan area from flooding. There are no Potentially Vulnerable Areas or known areas prone to significant flooding downstream from the plan area that may be negatively impacted by land management decisions. The plan area does not sit within either a Scottish Water - Drinking Water catchment area, or a Drinking Water Protected Area (Surface).

A.6.5 Windthrow

The site is mostly sheltered, with some moderately exposed locations. Trees in both Mark Hill and Tornat were damaged during Storm Arwen (2021) with unusual but significant local windblow, most of which has not been cleared to date (see Map 3). The location and extent of this damage blocked several paths including the popular core path link to the Muckle.

A.6.6 Adjacent Land Use

Tornat is bordered to the east by the Urr estuary, elsewhere by improved pasture, saltmarsh and native woodland.

Mark Hill has a mix of surrounding land uses. A large caravan site and chalet complex sits to the north. A community nature reserve and private woodland sit to the north-west. Rough grazing, improved pasture and gorsey scrub dominates the east side. To the south and west is private woodland and housing (the edges of Kippford and Rockcliffe). The strip of land to the south-west bordered by the coast is owned and managed by National Trust for Scotland (NTS). There is high recreation use in the area, both by locals and visitors.

A.6.7 Access

Core paths run through both Mark Hill and Tornat. Many informal desire lines run through Mark Hill including well-used links to Kippford Holiday Park to the north, and the community nature reserve to the west. The adjacent villages of Rockcliffe and Kippford and the connecting NTS land are very popular with tourists and are especially busy in the summer months. There are no significant issues with illegal or anti-social behaviour. See Map 3.

A.6.8 Historic Environment

There are no designated sites within or near the plan area. Historic environment records are shown on Map 9 and described in Appendix II.

A.6.9 Biodiversity

There are no designated sites within the plan area. Known priority habitats in the plan area include native woodland, and a small disused reservoir is now establishing as a wildlife rich pond. Parts of Tornat are historical ancient woodland of semi-natural origin. These areas are also recognised as plantation on ancient woodland sites (PAWS). The rest of Tornat is long established woodland of plantation origin (LEPO). No ancient woodland is recorded in Mark Hill itself, but a small area of PAWS at Kipp Hill Wood sits on neighbouring land to the north.

A.6.10 Invasive Species

Grey squirrel has been recorded in both woodlands. Rhododendron is present in several places in Mark Hill and is most abundant at the northern end.

A.7 Woodland Description

See Map 2 which shows the current tree species composition and pattern. Tornat has seen the removal of non-native conifers in recent years, mostly through the preemptive removal of larch - which although in keeping with the site's PAWS restoration goal, has been faster than desirable for maintaining a woodland climate. Mark Hill is a well-established conifer plantation, mostly second rotation and has benefitted from thinning. Recent storm damage has left large areas of windblown trees in both woods.

Table 1: Area by species for LMP area

Plan Area by species						
Species	Current area (ha)	%	Year 10 Area (ha)	%	Year 20 Area (ha)	%
Sitka Spruce	81.10	53	60.20	39	24.30	16
Other conifers	15.10	10	25.40	17	52.90	35
Native broadleaves	36.50	24	43.90	29	53.30	35
Other broadleaves	8.90	6	8.50	6	7.50	5
Open ground	11.40	7	15.00	10	15.00	10
Fallow	0	0	0	0	0	0
Total	153	100	153	100	153	100

Table 1a: Area by species for Mark Hill only

Plan Area (Mark Hill) by species						
Species	Current area (ha)	%	Year 10 Area (ha)	%	Year 20 Area (ha)	%
Sitka Spruce	79.51	60.73	59.96	45.80	24.06	13.38
Other conifers	14.82	11.32	25.12	19.19	52.62	40.19

Native broadleaves	24.4	18.64	30.45	23.26	39.85	30.44
Other broadleaves	2.99	2.28	2.59	1.98	1.59	1.21
Open ground	9.20	7.03	12.80	9.78	12.80	9.78
Fallow	0	0	0	0	0	0
Total	130.92	100	130.92	100	130.92	100

Table 1b: Area by species for Tornat only

Plan Area (Tornat) by specie						
Species	Current area (ha)	%	Year 10 Area (ha)	%	Year 20 Area (ha)	%
Sitka Spruce	1.59	7.20	0.24	1.09	0.24	1.09
Other conifers	0.28	1.27	0.28	1.27	0.28	1.27
Native broadleaves	12.1	54.80	13.45	60.91	13.45	60.91
Other broadleaves	5.91	26.77	5.91	26.77	5.91	26.77
Open ground	2.2	9.96	2.2	9.96	2.2	9.96
Fallow	0	0	0	0	0	0
Total	22.08	100	22.08	100	22.08	100

Chart 1: Area by species for LMP area

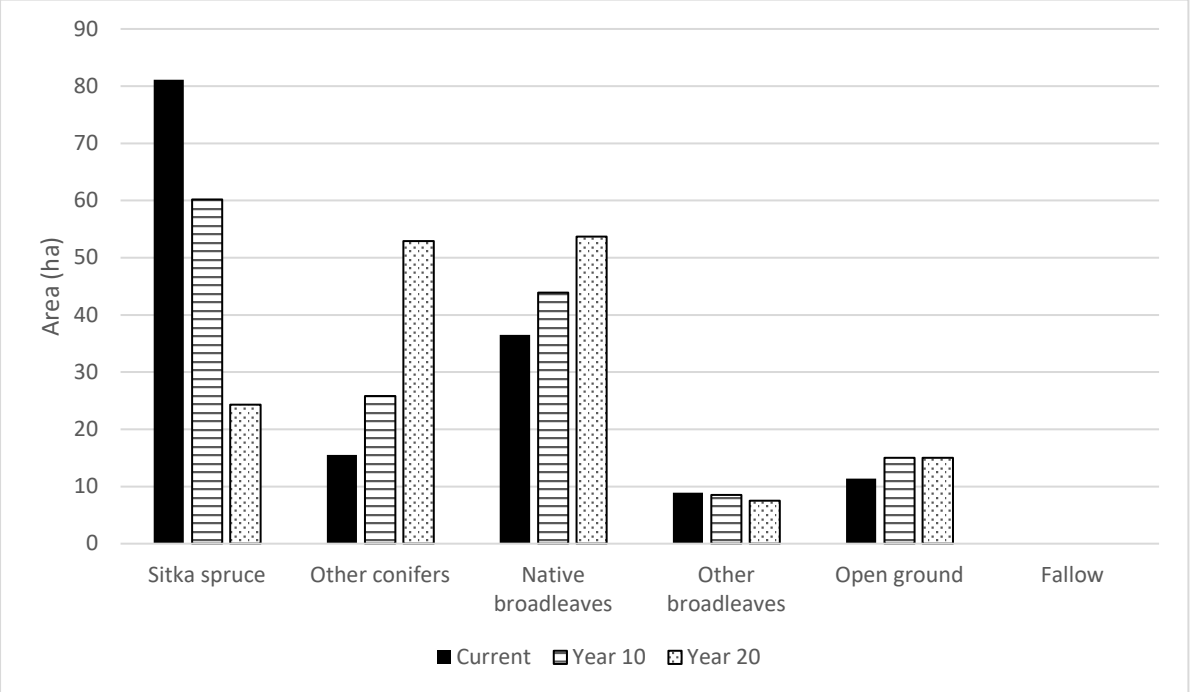
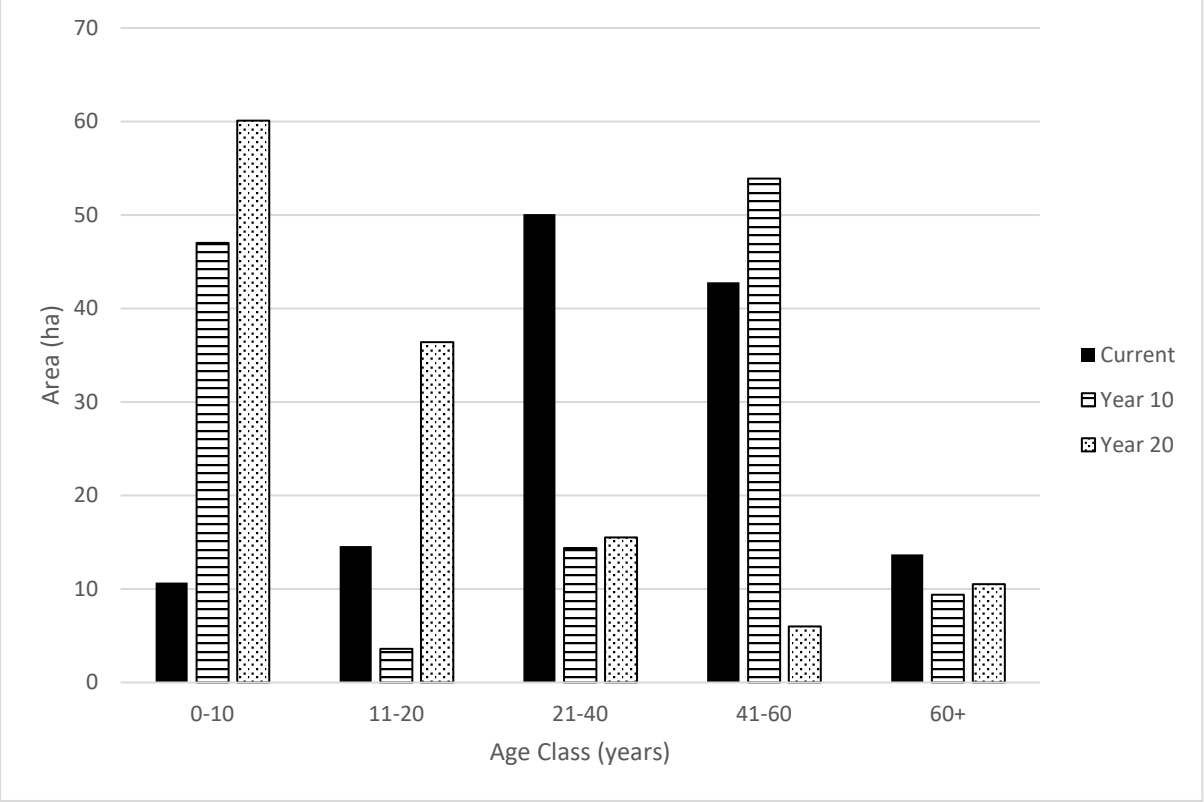


Table 2: Area by age for LMP area

Plan area by age						
Age class (years)	Current area (ha)	%	Year 10 area (ha)	%	Year 20 area (ha)	%
0 - 10	10.7	8	47	37	60.1	47
11 - 20	14.6	11	3.6	3	36.4	28
21 - 40	50.1	38	14.4	11	15.5	12
41 - 60	42.8	33	53.9	42	6	5
60+	13.7	10	9.4	7	10.5	8
Total		100		100		100

Chart 2: Area by age



A.8 Plant Health

All the larch in Tornat was felled in 2016 prior to any signs of Phytophthora ramorum infection. The remaining small stand of larch in Mark Hill is now showing signs of die-back. There have been no other significant incidents of tree pests or diseases recorded.

B. Analysis of Information

B.1 Constraints and Opportunities

Constraints and Opportunities		
Factor	Constraints	Opportunities
Public access	High levels of recreational use. Forestry operations will disrupt access. Additional planning needed for the safety of operators and the public.	Enhancement of internal landscape and viewpoints with changes to the forest design, using open space and tree species diversity. Work with local community and neighbours to consider Mark Hill in the wider context of public access connectivity.
Biodiversity	The heronry in Tornat is a traditional nesting site - sensitive to disturbance during the breeding season.	Expansion of native woodland and other natural habitat connectivity through Mark Hill and beyond - particularly into the community nature reserve and NTS land.
Windblown trees	Large areas need clearing soon to recover timber - and to clear the core path to the Muckle viewpoint.	Change of species in some areas cleared of windblow would benefit landscape, biodiversity, tree species diversity and visitor experience.
Climate	The western edge of Mark Hill and its higher summits are too exposed for thinning.	The current and future climate is suitable for growing a range of alternative conifer species. Thinning in sheltered locations will continue to develop an attractive open woodland and produce quality saw logs in the future.

Landscape	Forest design must appropriately address the special qualities of the East Stewartry Coast NSA.	The landform of Mark Hill can be used to positively influence coupe shapes and species choice, to fit the forest more naturally into its pronounced topography.
Historic environment	Recorded features are likely to limit management options in their proximity.	Adoption of low impact management around these features can contribute to improving the internal landscape for the visitor experience. This also includes veteran trees.
Deer	Establishment of broadleaves (and soft conifers in Mark Hill) will be challenging, particularly in small, enclosed coupes and in quiet corners.	Target deer control effort at the appropriate time to protect establishing trees. Natural regeneration (where desirable) can be more resilient to browsing pressure than planted trees.
Water		The creation of new wetlands and ponds in the valley would enrich habitat diversity.
Soil	The shallow soils (rankers) and rocky ground over summits will hamper commercial forestry.	Most of the area has soils suitable for good tree growth. This offers a range of species options.

B.2 Concept

Tornat will continue to be restored back to a predominantly native broadleaf woodland using natural regeneration where possible, and the heronry will be left as an area of long-term retention.

The 'heart' of Mark Hill will grow a mix of productive commercial conifers, maturing into well-thinned open woodland, split into smaller management areas to create structural diversity. Open space and areas of low impact management will incorporate important natural and heritage features, as well as key viewpoints, and contribute to the visitor experience. Connectivity with the surrounding countryside (facilitated by partnership working) will be important - both for natural habitats and public access. Forest design will

use landform to contribute positively to the qualities of this special landscape area. Communication about forestry works with visitors and the local community will inform safe decision making and minimise disruption.

Map 3 illustrates how the plan concept incorporates the important constraints and opportunities into the management objectives.

C. Management Proposals

C.1 Silvicultural Practice

Tornat will be managed predominantly under minimum intervention with enrichment planting if required. Non-native conifer regeneration will be monitored and removed if necessary. Sycamore will be tolerated as a suitable ecological replacement for ash which is suffering from die-back. The beech element of the woodland will be thinned out over time.

The productive conifers in Mark Hill will be managed under a small coupe clearfell/restock system. Successive thinning will be undertaken (where the conditions suit), using long rotations to grow large diameter trees. Elsewhere, Low Impact Silvicultural Systems are proposed to develop an area of Continuous Cover Forestry (CCF) and manage broadleaves for biodiversity and landscape objectives.

C.2 Prescriptions

C.2.1 Felling

Sites proposed for clear felling in the plan period are identified as Phase 1 and Phase 2 management coupes on Map 4. Refer to Table 3 and Table 4 for scale of felling.

In mixed species stands, e.g. Coupe 02010, where there are mature NBL mixed with conifers, the default prescription is to retain as many of the mature NBL as operationally achievable to preserve biodiversity and limit landscape impact.

Stands adjoining felled areas will be retained until the restocking of the first coupe has reached a minimum height of 2m. Phase 1 and 2 clearfell coupes identified in this plan with known adjacency issues are listed below with the planned approach to achieving height separation. For any future clearfell coupes where adjacency is not possible, and there is no exemption under the Scottish Forestry Act, an amendment will be discussed and agreed with Scottish Forestry before the coupe is felled.

Other tree felling in exceptional circumstances

FLS will normally seek to map and identify all planned tree felling in advance through the LMP process.

However, there are some circumstances requiring small scale tree felling where this may not be possible and where it may be impractical to apply for a separate felling permission due to the risks or impacts of delaying the felling.

Felling permission is therefore sought for the LMP approval period to cover the following circumstances:

- Individual trees, rows of trees or small groups of trees that are impacting on important infrastructure (as defined below*), either because they are now encroaching on or have been destabilised or made unsafe by wind, physical damage, or impeded drainage.

  *Infrastructure includes forest roads, footpaths, access (vehicle, cycle, horse, walking) routes, buildings, utilities and services, and drains.

- The maximum volume of felling in exceptional circumstances over the plan area covered by this approval is 75 cubic metres per calendar year.

  A record of the volume felled in this way will be maintained and will be considered during the five-year Land Management Plan review.

- N.B. Trees may be felled without permission if they are of less than 10 cm diameter at breast height (1.3 m); pose immediate danger to persons or property; are completely dead; or are part of Authorised Planning Permission works or wayleave agreements.

C.2.2 Thinning

Potential sites for thinning in the plan period are identified on Map 5 and Table 5.

Coupe	Area	Prescription
6515	22ha	Thin to remove conifer, includes LISS area, see section C.2.3
6650	26ha	Thin to increase conifer timber value; includes MI area, see section C.2.3
6651	35ha	Thin to increase conifer timber value; includes LISS area, see section C.2.3
6652	19ha	Thin to increase conifer timber value; includes MI area, see section C.2.3
6653	33ha	Thin to increase conifer timber value; includes MI area, see section C.2.3
6654	18ha	Thin to increase conifer timber value; includes MI area, see section C.2.3

Thinning will normally be carried out at, or below, the level of marginal thinning intensity (i.e. removing no more than 70% of the maximum MAI, or YC, per year). Higher intensities (no more than 140 % of maximum MAI, or YC, per year) may be applied where thinning has been delayed, larger tree sizes are being sought or as part of a LISS prescription. In all cases work plans will define the detailed thinning prescription before work is carried out and operations will be monitored by checking pre and post thinning basal areas for the key crop components.

C.2.3 Low Impact Silvicultural Systems (LISS)

Areas identified for LISS management are shown on Map 4 (one group selection coupe in Tornat and one uniform shelterwood in Mark Hill). LISS coupes will generally be thinned in line with the thinning prescription outlined above.

Coupe no. (area)	Species/ Planting year	Proposed LISS	Management Prescription
Tornat 03003 (3.17ha)	BE (100%) p. 1931	Group Selection (FDT 6.1.1 – BE)	Select 100-130 FC trees/ha. Thin to release crowns from competitive neighbours. Continue to thin to keep FC trees free. Assess regen potential. To promote regen reduce BA to 30m^2/h.
Markhill 02017 (12.67ha)	SS/SP (99%/1%) p. 1975/77	Uniform Shelterwood (FDT 1.1.1 – SS)	Select 150-250 FC trees/ha. Crown thin to remove dominant/codominant trees with defects/poor shape. Continue to thin to benefit the FC trees. Assess regen potential. To promote regen harvest to reduce BA to 30m^2/h. Accept desirable regen, support spp. diversification with underplanting of NBL, DF and WRC.

The areas of Minimum Intervention in Markhill (coupes 02014, 02016, 02021, 02022, 02023, 02024, 02026 and 02028) are all NBL and the intention is to have the minimum of intervention possible. No silvicultural thinning is proposed but low intensity thinning to achieve recreational or environmental objectives may be undertaken hence the request for a thinning permission on these areas.

C.2.4 Long Term Retentions (LTR) / Natural Reserves

One stand in Tornat identified as LTR is shown on Map 4 (coupe 03002). There are no designated Natural Reserves in the plan area.

C.2.5 Restocking Proposals / Natural Regeneration

Planned restocking of felled areas, and proposals for the future habitats and tree species over the whole plan area are shown on Map 6. See Table 5 for areas, establishment, and mix proportions. Timing of restocking will comply with the tolerance table shown in section C.4.

Where required, the choice of ground cultivation technique will consider the short-term benefits for establishment against any long-term side effects on tree stability, access for future forest operations and the environment. There will be a preference for the least intensive technique.

Stocking densities will be at least 2500 stems per ha (sph) for conifers and 1600 sph for broadleaves unless justified elsewhere in this plan. If the restock or natural regeneration should fail to reach these levels the site will be beaten-up to the required planting density. This will be assessed at year 3 and year 5 after planting with beat-up by at least year 5.

There will be a preference for natural regeneration of native woodland areas. Any non-productive broadleaf planting will be native to the area and will complement existing naturally growing scrub and woodland to give the most ecological value.

The Restocking Strategy for Scotland's National Forest Estate explains that we will minimise chemical usage in restocking (insecticides and herbicides) by considering options at the site scale and using tactics such as delayed planting to achieve this.

Table 3: Felling

Scale of proposed felling area										
Total area plan	153 ha									
Felling	Phase 1	%	Phase 2	%	Phase 3	%	Phase 4	%	LTR	%
Area (ha)	22.9	15	14.71	10	20.94	14	25.85	17	0.2	<1

Table 4: Felling by species by phase

	Phase	
Species	Phase 1 (ha)	Phase 2 (ha)
Conifer	22.59	14.37
Broadleaves	0.4[1]	0.4[1]
Total	**22.99**	**14.71**

Note 1 – 10% of total BL area to account for operationally necessary felling, aim is to retain all standing BL where practicable.

Table 5: Thinning

Thinning over the first 10 years of the plan	
Total area where thinning may be undertaken during the plan period	126 ha

Table 6: Restocking

Felling phase	Map identifier (coupe number)	Species to be planted – or established through regeneration (nr)	Area (ha)
1	02001	SOK 70% / NHB 30%	4.84
		NMB	1.48
		Scattered enrichment planting (open / NMB)	1.43
			7.75
1	02002	NF	2.33
		NMB 80% (nr) / Open 20%	0.87
			3.20
1	02003	SS	5.82
		SY	1.10
		NMB	1.04
		SP 50% / NMB 50%	0.64
		Open	0.18
			8.78
1	02006	SP	1.48
		NMB	0.42
			1.90
1	03004	NMB (nr)	1.35
			1.35
2	02005	DF	2.70
		NMB	1.56
		NS	0.9
		Open	0.59
			5.75
2	02010	DF	5.73
		NMB (nr)	3.23
			8.96
LISS	02017	NBL	5.94
		DF	4.80
		WRC	2.0
			12.77
		Total restocking area (ha)	50.46

C.2.6 Protection

Management of deer is an underpinning activity essential for the delivery of benefits from Scotland's National Forests and Land. The aim is to manage healthy wild deer populations and manage deer impacts across the Estate consistent with the carrying capacity of the land and successful delivery of FLS land management objectives. Deer Management Plans direct the priorities for management and are available on request.

C.2.7 Fence erection / removal

No fence erection or removal is currently planned for silvicultural activities. If deer fencing is subsequently deemed necessary this will be carefully planned to avoid impacts on public access.

C.2.8 Road Operations

Map 7 shows the existing forest road network and timber haulage egress points. No new roads are planned during the next ten years.

C.2.9 Public Access

Visitors are welcome to explore Scotland's National Forests and Land (managed by FLS) and will only be asked to avoid routes while certain work is going on that will create serious or less obvious hazards for a period (e.g. tree felling). Scotland's outdoors provides great opportunities for open-air recreation and education, with great benefits for people's enjoyment, and their health and well-being. The Land Reform (Scotland) Act 2003 ensures everyone has statutory access rights to most of Scotland's outdoors, if these rights are exercised responsibly, with respect for people's privacy, safety and livelihoods, and for Scotland's environment. Equally, land managers must manage their land and water responsibly in relation to access rights, and FLS will only restrict public access where it is necessary and will keep disruption to a minimum.

There will be early and clear communication with neighbours and the local community when felling operations are being planned in Mark Hill to ensure visitors can make informed safe decisions.

FLS will support the aims of the Kippford Community Nature Reserve by working in partnership to ensure access connectivity for recreation.

Woodland Management in Visitor Zones

Visitor Zones have been identified in areas where FLS encourage and manage access or where the woodland managed by FLS interacts with popular visitor sites or access routes. These are shown on Map 3.

In these areas, single trees or small groups of trees will be removed when necessary to protect facilities, infrastructure and trails, or to enhance the setting of features, or to maintain existing views.

Woodland in these zones will also be thinned, or trees re-spaced, for safety reasons (including to increase visibility to ensure that sites are welcoming and feel safe) and where it

is necessary to enhance the experience of the forest setting, through the development of large trees, or preferential removal of trees to favour a particular species.

C.2.10 Historic Environment

The Regional Historic Asset Management Plan includes conservation management intentions for designated historic assets on Scotland's National Forests and Land (however there are no designated sites within the plan area). Details of all known historic environment features are held in FLS's Heritage Dataset and included within work plans for specific operations to ensure damage is avoided. Significant historic environment features will be depicted on all relevant operational maps. Areas of historic environment interest will be checked both on FLS's records and with the Council's HER prior to the commencement of forestry activities. Any upstanding features will be clearly marked, both on the ground and on operational maps. Care will be taken to avoid any damage to surviving structural elements.

Map 9 and Appendix II provide more information about the historic environment features within and adjacent to the plan area.

C.2.11 Biodiversity

UK Forestry Standard guidance is to manage a minimum of 15% of the forest management unit with conservation and the enhancement of biodiversity as a major objective. The figure for this plan is 50%.

FLS will support the aims of the Kippford Community Nature Reserve (and other neighbours such as NTS) by working in partnership to create, expand and connect natural habitats, particularly native woodland. The stand of trees holding the traditional heronry in Tornat will be retained. Most non-native conifers have been removed from the PAWS area in Tornat, and this will continue to be managed for restoration back to native woodland.

C.2.12 Tree Health

The remaining larch stand in Mark Hill is planned for felling and restocking in Phase 1.

C.2.13 Invasive Species

LS is committed to supporting efforts to control grey squirrel in the plan area. Ongoing programmes of work aim to control the spread of rhododendron.

C.2.14 New Planting

No new planting in the plan area.

C.2.15 Other

Landscape

The East Stewartry Coast NSA is designated for its special qualities including: 'a coastline of endless variety; a landscape of woods, fields, dykes and hedges; and is known as the Secret Coast'. Both woods sit within the wider 'Solway Coast' Local Landscape Area - a designated area which 'exhibits a diverse and attractive mixture of coastal landscape types'.
The future forest design presented in this plan has taken account of these special qualities using coupe shape/size, tree species choice, designed open space, and age structure diversity to highlight landform features - aiming for a forest design that reflects the topography of the plan area, contributes positively to this special landscape area, and helps meet the vision of this plan.

Wildfire

FLS continues to work closely with Scottish Fire and Rescue Service (SFRS) to prevent and tackle wildfires that threaten Scotland's National Forests and Land. FLS support SFRS in their lead role for fire prevention and suppression through creating annual fire plans, maintaining a duty rota, and providing additional logistical support. FLS's primary objective is always to protect people's health, safety and wellbeing.

Soils

Brash mats (or alternative measures) will be used to protect sensitive soils. There will be minimal soil disturbance and machine movement on sites with clayey soils to reduce the risk of compaction or damage to the soil structure. Felling residue will usually be left on site to allow nutrient recycling, with consideration for the practicalities of restocking. Where required, the choice of ground cultivation technique will consider the short-term benefits for establishment against any long-term side effects on tree stability, access for future forest operations and the environment. There will be a preference for the least intensive technique.

Private Water Supply

There is a private water supply (PWS) located outside the forest boundary, to the south-west of Tornat, at grid reference NX 8270 5560 supplying South Glen Farm. No operations proposed for this plan period have the potential to impact the PWS.

C.3 Environmental Impact Assessment (EIA) and Permitted Development Notifications

Table 6 – EIA projects (in Phase 1)

Table showing tree species type and distribution by area, against current area, year 10 area and year 20 area.					

Type of Project	Sensitive Area	Sensitive Area	Non-sensitive Area	Non-sensitive Area	Total
Afforestation	0%Con	0%BL	0%Con	0%BL	0ha
Deforestation	0%Con	0%BL	0%Con	0%BL	0ha
Forest Roads	0ha	0ha	0ha	0ha	0ha
Quarries	0ha	0ha	0ha	0ha	0ha
Provide further details on your project if required.					

C.4 Tolerance Table

See Appendix III.

Appendices

Map 1 – Location
Map 2 – Current tree species
Map 3 – Concept
Map 4 – Management (Felling)
Map 5 – Thinning
Map 6 – Future habitats and species (Restock)
Map 7 – Timber haulage
Map 8 – Soils
Map 9 – Historic environment
Appendix I – Consultation record
Appendix II – Historic environment records
Appendix II – Tolerance table

Appendix I: Consultation record

See section A.4 for a summary of the main points raised below by stakeholders and where they are addressed in the plan.

Issue	Raised by	Requirement / Recommendation / Concern / Aspiration
Kippford Community Nature Reserve	Reserve manager (Mike Riding)	Supportive of the draft concept, particularly habitat links between FLS land and the reserve, and public access connectivity.
Heritage sites - particularly the charcoal burning platforms in Tornat	D&G Council Archaeologist (Andrew Nicholson); Scottish Forestry	D&G Council confirmed that all HER sites have been identified on the consultation map. Highlighted regional significance of charcoal burning platforms.
Mote of Mark (Scheduled Monument)	Historic Environment Scotland	No concerns about impacts on the monument at this stage. Feature highlighted in case any works proposed in immediate vicinity as plan develops. [FLS comment: not on FLS land]
Heronry (in Tornat)	RSPB; public	Recommend retaining area of nest trees unless any safety issues.
Core paths and public access	Scottish Forestry; public; Colvend & Southwick Community Council	Consideration for this popular location both with locals and tourists.
National Scenic Area	Scottish Forestry	Consideration for impacts of proposals on landscape.
Neighbouring community	Scottish Forestry; public	Consideration for impacts of forestry operations (particularly felling) on the local community.
Water mains pipe under main vehicle access track	Scottish Water	Any works to the track in the vicinity of the pipe will require SW approval.
Colvend Local Place Plan	Colvend & Southwick Community Council	Keen to work with FLS in the development of both parties' plans. Particularly in respect of public access.
The following stakeholders responded with no comment or no issues: NatureScot; National Trust for Scotland.		
The following stakeholders were contacted during scoping but did not respond D&G Council Road Network team; Timber		

Issue	Raised by	Requirement / Recommendation / Concern / Aspiration
Transport Officer; D&G Council Access team; SEPA; British Horse Society; Buittle Parish community council.		

Appendix II: Historic Environment records

Historic environment records						
Map ref.	Designation	Name	Feature Description	Grid reference	Importance	Area)ha)
1	Undesignated	South Glen Wood. Building	Remains of old building	NX826558	Regional	0.09
2	Undesignated	Tornat Plantation. Charcoal burning platforms	Six charcoal burning platforms. Most are circular or D-shaped and are either dug into the W facing hillslope or use natural terraces.	See map	Regional	0.01
3	Undesignated	HEAD DYKE (POSSIBLE), SHEEPFOLD	Sheepfold with possible building on E arc and a boundary dyke.	NX841548	Local	0.24
4	Undesignated	FIELD SYSTEM, SHEEPFOLD	A field system and a sheepfold.	NX843543	Local	8.18
5	Undesignated	ENCLOSURE(S), HEAD DYKE, STRUCTURE(S)	Two farmsteads with associated enclosures and head-dyke.	NX846549	Regional	6.31
6	Undesignated	ENCLOSURE, FIELD SYSTEM (POSSIBLE)	Field system and one enclosure	NX845551	Local	2.36

7	Undesignated	DRUMWHINNY, AUCHENHILL	ENCLOSURE(S)	NX847554	Local	0.04
8	Undesignated	KIPP. FIELD SYSTEM (POSSIBLE)	Field system.	NX845556	Local	1.09
9	Undesignated	TORBAY HILL	Enclosure	NX851546	Local	0.02

Appendix III: Tolerance table

	Maps Required (Y/N)	Adjustment to felling period *	Adjustment to felling coupe boundaries **	Timing of Restocking	Changes to Restocking species	Changes to road lines	Designed open ground ** ***	Windblow Clearance ****
FC Approval normally not required	N	• Fell date can be moved within 5 year period where separation or other constraints are met.	• Up to 10% of coupe area.	• Up to 3 planting seasons after felling.	• Change within species group e.g. evergreen conifers or broadleaves.		• Increase by up to 5% of coupe area	
Approval by exchange of letters and map	Y	• Advance felling of Phase 2 coupe into Phase 1	• Up to 15% of coupe area	• Between 3 and 5 planting seasons after felling, subject to the wider forest and habitat structure not being significantly compromised.		• Additional felling of trees not agreed in plan. • Departures of > 60m in either direction from centre line of road	• Increase by up to 10% of coupe area • Any reduction in open space of coupe area by planting.	• Up to 5ha
Approval by formal plan amendment may be required	Y	• Felling delayed into second or later 5 year period. • Advance felling (phase 3 or beyond)	• More than 15% of coupe area.	• More than 5 planting seasons after felling, subject to the wider forest and habitat structure not being significantly compromised.	• Change from specified native species. • Change Between species group.	• As above, depending on sensitivity.	• In excess of 10% of coupe area. • Colonisation of open space agreed as critical.	• More than 5ha.

		into current or 2nd 5 year period.						

NOTES:

* Felling sequence must not compromise UKFS, in particular felling coupe adjacency

** *No more than 1ha, without consultation with FCS, where the location is defined as 'sensitive' within the Environmental Impact Assessment (Forestry) 1999 Regulations (EIA)*

*** *Tolerance subject to an overriding maximum 20% open space*

**** *Where windblow occurs FCS should be informed of extent prior to clearance and consulted on where clearance of any standing trees is required*

Larch Tolerance Table

	Adjustment to Felling period	Timing of Restocking and species component	Felling of larch within a mixed coupe	Changes to Road Lines
FC Approval normally not required	Fell date for phase 2 can be moved forward where larch comprises 50% or more of the coupe species component.	changes to restocking proposal that exclude larch and closely related species in the same genus, eg Sitka and Norway Spruce. Up to 3 planting seasons after felling		
Approval normally by exchange of letters and map	Felling moved between phases 1 and 2 where larch comprises less than 50% of the coupe species component	Changes to restocking proposals that include larch or closely related species in the same genus, eg Sitka and Norway Spruce. Between 3 and 5 planting seasons after felling	Areas of pure larch up to 20% of coupe area within phase 1 and 2 can be felled to remove the sporulating host, with restocking deferred until the rest of the crop is felled. Where the Larch constitutes more than 20% of the coupe component, then the whole coupe must be felled and restocked together.	New road lines (subject to EIA screening opinion) or tracks within existing approved plans necessary to allow the extraction of Larch material. Where necessary Prior Approval should be dealt with directly with the relevant Regional Council
Approval by formal plan amendment is required	Advance felling into current or 2nd phase for pre-emptive larch removal			Where a new public highway entrance or exist is required. Where necessary Prior Approval should be dealt with directly with the relevant Regional Council

Larch felled in the autumn and winter, when the presence of P ram cannot assessed visually must be treated as infected and will therefore require a movement licence. When carrying out operations where the clearance has not been on the Public Register or through the consultation procedure it is important that due diligence is undertaken to identify sites that will require to be protected.