Forestry and Land Scotland
Coilltearachd agus Fearann Alba

Castle O'er

Land Management Plan

2020 - 2030

V3

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.

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Property Details			
Property Name:	Castle O'er		
Grid Reference (main forest entrance):	NY 2014 9359	Nearest town or locality:	Eskdalemuir
Local Authority:		Dumfries and Galloway	

Applicant's Details			
Title:	Mr	Forename:	Robin
Surname:	Fuller		
Position:	Planning Forester		
Contact Number:	0131 370 5820		
Email:	robin.fuller@forestryandland.gov.scot		
Address:	Forestry and Land Scotland, Ae Office, Ae Village, Parkgate, Dumfries		
Postcode:	DG1 1QB		

Owner's Details (if different from Applicant)	
Name:	
Address:	

1. I apply for Land Management Plan approval for the property described above and in the enclosed Land Management Plan.

2. I apply for an opinion under the terms of the Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017 for afforestation / deforestation / roads / quarries as detailed in my application.

3. I confirm that the scoping, carried out and documented in the Consultation Record attached, incorporated those stakeholders which Scottish Forestry agreed must be included. Where it has not been possible to resolve specific issues associated with the plan to the satisfaction of the consultees, this is highlighted in the Consultation Record.

4. I confirm that the proposals contained in this plan comply with the UK Forestry Standard.

5. I undertake to obtain any permissions necessary for the implementation of the approved Plan.

Signed, Regional Manager		Signed, Conservator	
FLS Region	South	SF Conservancy	South
Date	12/8/2020	**Date of Approval**	
		Date Approval Ends	

Contents

1.0 Objectives and Summary

1.1 Plan overview and objectives

Plan name	Castle O'er
Forest blocks included	Garwaldshiels, Twiglees, Castle O'er
Size of plan area (ha)	3922
Location	See Location map (**Map 1**)

Long Term Vision
The Castle O'er blocks generate a reliable, steady supply of timber products to meet market demands. Timely thinning operations help to increase the quality of these products. Nationally important heritage features are well protected and enhanced by the surrounding woodland and open space. Visitors to these sites use well-maintained trails, with on-site information enhancing their experience. A range of natural habitats are connected through the area. Wildlife is protected and benefits from sustainable forest management. A viable population of red squirrels lives in the forest.
Management Objectives
1. Provide a reliable supply of timber products to support local markets 2. Protect and promote nationally important heritage assets 3. Maintain high water quality around Black Esk reservoir 4. Manage the forest to maintain a dependable food supply for red squirrels
Critical Success Factors
• Restocking must be timely and successful, whether planted or through natural regeneration. • Thinning interventions (where appropriate) must be timely to improve crop stability – especially first thinnings. • Significant historic assets must be protected and be under positive conservation management. • Broadleaves and soft conifers must be protected from damage, and beaten up where required, to ensure successful establishment. • Stands of mature Norway spruce should be retained as a food source for red squirrels, with potential future stands identified for succession.

1.2 Summary of planned operations

Table 1

Summary of Operations over the Plan Period	
Clear felling (gross)	581 ha
Thinning (potential area)	3265 ha
Restocking (gross)	844 ha
Afforestation	0 ha
Deforestation	0 ha
Forest roads	1120 m
Forestry quarries	0 ha

The forest is managed to the UK Woodland Assurance Standard – the standard endorsed in the UK by the *Forest Stewardship Council* and the *Programme for the Endorsement of Forest Certification*. Forestry and Land Scotland is independently audited to ensure that we are delivering sustainable forest management.

2.0 Analysis and Concept

The planning process was informed by collecting information about the woodland, which is presented in Appendix I and on the Features, Issues and Challenges map (Map 2). During the development of this plan we have consulted with the local community and other key stakeholders, and a Consultation Record is presented in Appendix III.

Different management options for achieving the plan's objectives were considered against the constraints and opportunities identified during scoping and consultation. The preferred approach is summarised on the Concept map (Map 3).

3.0 Management Proposals - regulatory requirements

3.1 Designations

The plan area forms part of, includes, or is covered by the following designations and significant features.

Table 2

Designations and significant features		
Feature type	Present	Note
Site of Special Scientific Interest (SSSI)	No	
National Nature Reserve (NNR)	No	
Special Protection Area (SPA)	No	
Special Area of Conservation (SAC)	No	

World Heritage Site (WHS)	No	
Scheduled Monument (SM)	Yes	
National Scenic Area (NSA)	No	
National Park (NP)	No	
Deep peat soil (>50 cm thickness)	Yes	
Tree Preservation Order (TPO)	No	
Biosphere reserve	No	
Local Landscape Area	No	
Ancient woodland	Yes	
Acid sensitive catchment	No	
Drinking Water Protected Area (Surface)	Yes	

Map 2 shows the location of all designated areas and significant features. Deep peat soil types are indicated on the Soils map (Map 9).

3.2 Clear felling

Sites proposed for clear felling in the plan period are identified as Phase 1 and Phase 2 coupes on the Management map (Map 4).

Table 3

Clearfell Summary by Phase and Coupe Number			
Phase	Coupe Number	Fell Year	Gross Area (ha)
1	04065	2020/21	25.99
1	05053	2020/21	9.65
1	30053	2021/22	4.78
1	30023	2021/22	38.95
1	30032	2021/22	28.91
1	05100	2021/22	8.28
1	05034	2021/22	48.12
1	05064	2021/22	2.73
1	05073	2021/22	2.8
1	05101	2021/22	4.07
1	05058	2021/22	6.88
1	05059	2021/22	15.07
1	04004	2021/22	3.58
1	30017	2022/23	30.15
1	05031	2022/23	15.85
1	30019	2023/24	28.7
1	30016	2023/24	29.01
2	30024	2025/26	34.38
2	04044	2025/26	27.25
2	05052	2025/26	3.25

2	05027	2026/27	34.93
2	05037	2026/27	64.86
2	04041	2028/29	31.91
2	04057	2029/30	10.88
2	05033	2029/30	10.41

2	05039	2029/30	18.72
2	05040	2029/30	26.28
2	05086	2029/30	15.05

Total	581.44

Table 4

Clearfell by Species													
		Net Area (ha) by Main Species >20% (or MC, MB)											
Coupe Number	Fell Year	CP	DF	EL	HL	JL	LP	NS	SP	SS	MCXC	MB	Coupe Total *
04065	2020/21	0	0	0	0	0	3.1	0	0	21.2	0	0	**24.3**
05053	2020/21	0	0	0	0	0	0	1.7	1.2	6.5	0	0	**9.4**
30053	2021/22	0	0	0	0	3.6	0	0	0	0	0	0	**3.6**
30023	2021/22	0	0	0	0	0	0	0	0	36.8	0.5	0	**37.3**
30032	2021/22	0	0	0	0	0	0	1.7	0	24.1	0	0	**25.8**
05100	2021/22	0	0	0	1.0	3.4	0.5	0	0	2.3	0	0	**7.2**
05034	2021/22	0	0	0	0	1.5	0	0	0	42.9	0	0	**44.4**
05064	2021/22	0	0	0	0	0	0	2.3	0	0	0.4	0	**2.7**
05073	2021/22	0	0	0	0	2.0	0	0	0	0	0	0	**2**
05101	2021/22	0	0	0	4.1	0	0	0	0	0	0	0	**4.1**
05058	2021/22	0	0	0	0	5.2	0	0.1	0	1.0	0	0	**6.3**
05059	2021/22	0	0	0	0	2.4	0.3	9.8	0	2.2	0.2	0	**14.9**
04004	2021/22	0	0	0	0	0	0	0	0	3.6	0	0	**3.6**
30017	2022/23	0	0	0	0	0	0.4	0	0	29.7	0	0	**30.1**
05031	2022/23	0	0	0	0	1.2	0	0	0	14.6	0	0	**15.8**
30019	2023/24	0	0	0	0	0	0.2	0	0	27.3	0.8	0	**28.3**
30016	2023/24	0	0	0	0.8	0	0	4.2	0	22.2	1.6	0	**28.8**

30024	2025/26	0	0	0	0	0	0	0.9	0	27.8	0	0	**28.7**
04044	2025/26	0	0	0	0	0	0	0	0	25.4	0	0	**25.4**
05052	2025/26	0	0	0	0	0	0	1.7	0	1.4	0	0	**3.1**
05027	2026/27	0	0	0	0	0	0	0	0	33.7	0	0	**33.7**
05037	2026/27	0	0	0	0	0	0	0.2	0	63.1	0	0	**63.3**
04041	2028/29	0	0	0	0	0	0	0	0	30.0	0	0	**30**
04057	2029/30	0	0	0	0	0	0	0	0	10.8	0	0	**10.8**
05033	2029/30	0	0	0	0	0	0	4.3	0	5.7	0.1	0	**10.1**
05039	2029/30	0	0	0	0	0.3	0	0	0	17.6	0	0	**17.9**
05040	2029/30	0	0	0	0	0	0	0	0	24.2	0	0	**24.2**
05086	2029/30	0	0	0	0	0	0	0	0	14.9	0	0	**14.9**
Plan Area Total		**0**	**0**	**0**	**5.9**	**19.6**	**4.5**	**26.9**	**1.2**	**489**	**3.6**	**0**	**550.7**

* open ground is not included in Table 4, accounting for the area difference with Table 3

Table 5

Scale of Proposed Felling Areas										
Total Woodland Area			3922		ha					
Felling	Phase 1	%	Phase 2	%	Phase 3	%	Phase 4	%	Long Term Retention	%
Net Area (ha)	305.7	8	277.9	7	361.5	9	539.6	14	47.3	1

3.3 Thinning

Potential sites for thinning in the plan period are identified on the Thinning map (**Map 5**).

This covers an area of 3265 ha

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.

3.4 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 40 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].

3.5 Restocking

Proposed restocking is shown on the Future Habitats and Species map (Map 6).

Mixed broadleaf planting will consist of native species.

Table 6

Restocking							
Phase †	Coupe Number	Gross Area (ha)	Proposed Restock Year	Species	Method *	Minimum stocking Density (s/ha)	Note
F	04010	15.5	2020/21	SS	R	2500	
F	04013	12.17	2020/21	XC, MB	R	2500 (MB 1100)	
F	04014	2.56	2020/21	XC	R	2500	
F	04017	15.64	2020/21	MC, MB	NR (MC, MB), R (MB)	500	Peatland edge woodland
F	05002	14.21	2020/21	MB, SP	R (SP, MB), NR (MB)	2500 (MB 1100)	This area has previously been left to naturally regenerate with broadleaves. However establishment is patchy and so it is proposed to enhance this with planting MB and adding in areas of SP
F	05013	3.67	2020/21	MB, MC	R	1100	This area will become minimum intervention or LISS in the future
F	05018	12.97	2020/21	SS, NS, MB	R	2500 (MB 1100)	
F	05065	2.48	2024/25	SS, SP	R	2500	Restock with 05031
F	05069	12.05	2020/21	SS, DF	R	2500	
F	05076	11.5	2020/21	SS, SP	R	2500	
F	05077	5.63	2020/21	SS	R	2500	

F	05099	1.61	2023/24	SS, NS, DF	R	2500	Restock with 05059
F	30005	23.68	2020/21	SS, SP	R	2500	
F	30012	60.47	2020/21	SS, LP	R	2500	
F	30015	49.7	2020/21	SS, LP	R	2500	
F	30029	16.42	2020/21	SS	R	2500	
F	30044	2.15	2020/21	XC	R	2500	
1	04065	25.99	2022/23	SS, MC	R	2500	
1	05053	9.65	2022/23	DF, NS, SS, SP	R	2500	
1	30053	4.78	2023/24	SS, SP	R	2500	
1	30023	38.95	2023/24	SS, LP, MB	R	2500 (MB 1100)	
1	30032	28.91	2023/24	SS, LP	R	2500	
1	05100	8.28	2023/24	SS, MC, MB	R	2500 (MB 1100)	
1	05034	48.12	2023/24	SS, MB	R	2500 (MB 1100)	
1	05064	2.73	2023/24	MB	NR	1100	Roadside strip
1	05073	2.8	2023/24	SS	R	2500	
1	05101	4.07	2023/24	NF	R	2500	
1	05058	6.88	2023/24	MB, MC	R	2500 (MB 1100)	
1	05059	15.07	2023/24	NS, DF, SP, MB	R	2500 (MB 1100)	
1	04004	3.58	2023/24	SS	R	2500	
1	30017	30.15	2024/25	SS, NS	R	2500	
1	05031	15.85	2024/25	SS, SP	R	2500	
1	30019	28.7	2025/26	SS	R	2500	
1	30016	29.01	2025/26	SS, MC	R	2500	
2	30024	34.38	2027/28	SS, XC, SP, MB	R	2500 (MB 1100)	

2	04044	27.25	2027/28	SS, SP	R	2500	
2	05052	3.25	2027/28	MB	R	1100	
2	05027	34.93	2028/29	SS, MB	R	2500 (MB 1100)	
2	05037	64.86	2028/29	SS	R	2500	
2	04041	31.91	2030/31	SS, LP, SP, MB	R	2500 (MB 1100)	
2	04057	10.88	2031/32	SS	R	2500	
2	05033	10.41	2031/32	DF, NF, SP	R	2500	
2	05039	18.72	2033/34	SS	R	2500	Delayed restocking to achieve separation with coupe 05037
2	05040	26.28	2031/32	SS, SP, MB	R	2500 (MB 1100)	
2	05086	15.05	2031/32	SS, MB/SP	R	2500 (MB 1100)	

Total	843.85

† recently felled awaiting restock (F) / Phase 1 (1) / Phase 2 (2)
* replant (R) / natural regeneration (NR) / plant alternative area (ALT) / no restocking (None)

If the Restock by natural regeneration should fail to reach 1100 or 2500 stems per hectare (Native Broadleaves or Conifers) four years after the felling the site will be beaten-up with "Native Broadleaves or Conifers" at planting density of 1100 stems per hectare by year five.

3.6 Species diversity and age structure

The following tables and charts show how the proposed management of the forest will help to maintain or establish a diverse species composition and age-class structure, as recommended in the UK Forestry Standard. The current woodland composition is shown on **Map 8**.

Stands adjoining felled areas will be retained until the restocking of the first coupe has reached a minimum height of 2m. Where this is not possible (e.g. due to windblow risk), the planned approach to achieving height separation between adjacent coupes is outlined in section 4.1 – Clear felling.

Table 7

Plan area by Species						
Species	**Current**		**Year 10**		**Year 20**	
	Area (ha)	%	Area (ha)	%	Area (ha)	%
Sitka spruce	2615.4	67	2267.5	58	2258.1	58
Other conifers	309.2	8	382.8	10	433.8	11
Native broadleaves	155.4	4	186.3	5	191.2	5
Other broadleaves	14.6	0	9.8	0	9.6	0
Open ground	827.4	21	1075.6	27	1029.3	26
Total	**3922**	**100**	**3922**	**100**	**3922**	**100**

Chart 1

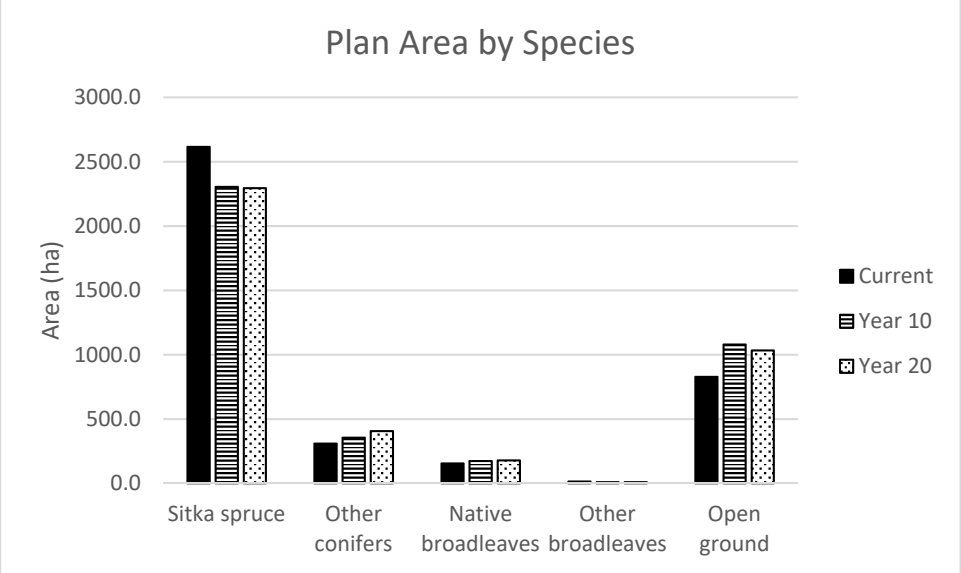
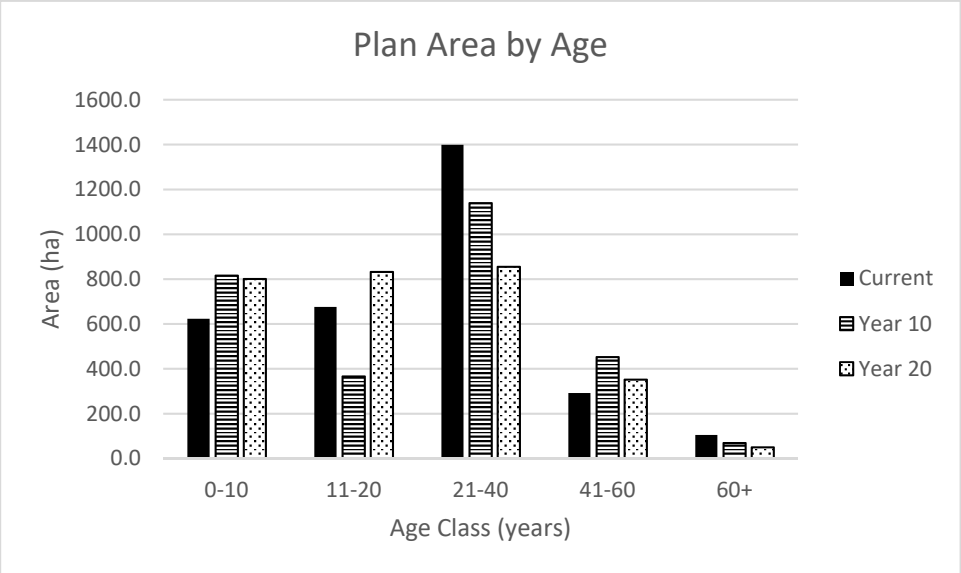


Table 8

Plan area by Age						
Age class (years)	Current		Year 10		Year 20	
	Area (ha)	%	Area (ha)	%	Area (ha)	%
0 – 10	623.2	16	815.8	21	800.8	20
11 – 20	675.8	17	366	9	831.9	21
21 – 40	1398.5	36	1139	29	854.6	22
41 – 60	292	7	452.3	12	351.5	9
60+	104.9	3	69	2	49.8	1
Total		100		100		100

Chart 2



3.7 Road Operations and Quarries

Planned new roads, road realignments, road upgrades, new quarrying, and timber haulage routes are shown on the Road Operations and Timber Haulage map (**Map 7**).

Table 9

Forest Road Upgrades, Realignments, New Roads and New Quarrying				
Phase	Name / Number	Length (m)	Year	Operation
	CA385 Rainshaw Sike	550	2020/21	New road (approved under previous plan)
	C326 Jock's Shoulder	420	2021/22	New road
	Rough Sike	150	2024/25	New road
	Rainshaw Rig	490	2042/43	New road (extension to CA385). **Outwith Plan period – for reference only**.

3.8 Environmental Impact Assessment (EIA)

Any operations requiring an EIA determination are shown in the table below. If required, the screening opinion request form is presented in **Appendix II**.

Table 10

EIA projects in the plan area		
Type of project	Yes / No	Note
Afforestation	No	
Deforestation	No	
Forest roads	Yes	CA385 has already received approval under the previous plan
Forestry quarries	No	Extensions to the quarries at Kilburn Hill (NY 2082 9653) and Fauldbrae (NY 2331 9476) have already received approval under the previous plan

3.9 Tolerance table

Working tolerances agreed with Scottish Forestry are shown in **Appendix IV**.

4.0 Management Proposals – guidance and context

4.1 Silviculture
Clear felling
Coupes for clearfelling during the plan period (refer to Map 4): 04065 (Outer Mid Hill) High elevation coupe with a relatively young crop of SS (P85-94) and a redundant Christmas tree plot of LP (P04). Roading is good. NB - there is a road link into neighbouring private forestry on the coupe boundary. 05053 (Tanlawhill) Mature SS/NS/SP (P46). SP to be retained where possible. Watercourse below escarpment along west boundary. Overhead powerline. Landscape backdrop for neighbours at Tanlawhill. Good roading. 30053 JL (P10) – P. ramorum pre-emptive removal. Good access and roading. 30023 (Tates Bog) Predominantly SS (P72). New road required (planning and groundworks already underway, approved in current plan – road number CA385). 30032 (Hen Knowes) SS/NS (P72). Good roading. 05100 JL (P89) / HL (P96) / SS (P91) – P. ramorum pre-emptive removal. Good access and roading. 05034 SS(P76-88). One of the larger clearfell coupes for the plan period (48 ha). There are already a number of cleared windblow pockets throughout this coupe. Good roading and access. The broadleaf restock proposals in the north-west and south-west of the coupe will be linked with clumps of broadleaves along the upper edges of the adjoining field which the neighbour at Todshawhill is planning to establish. 05064 NS/GF (P47). Windblow and windsnap along the public road caused by removal of coupe 05018 to the west. Traffic management will be required, along with a harvesting facility to allow access off the public road. Consideration was given to retaining some of the currently stable GF and NS to the north of the coupe, but there is a risk of this blowing in the future – a final decision on whether these are removed will be made during the work plan process. Water pipeline recorded along roadside.

05073
JL (P08) – P. ramorum pre-emptive removal. Good access from road, through open space between SS crop

05101
HL (P99-02) – P. ramorum pre-emptive removal. Good access and roading.

05058
JL (P47) – P. ramorum pre-emptive removal. Good access to north part of coupe. The south part of the coupe, along the riverside, can hopefully be accessed from the end of the bottom road. The alternative would be to upgrade the road to the east, further up the hill, but this would require a significant upgrade and take operations closer to a Scheduled Monument. Particular attention must be given to avoiding any diffuse pollution in to the White Esk river. There is a record of an active otter holt within the coupe. There is a Natterer's bat maternity roost (artificial roost) present.

05059 (Kings Pool)
SS (P46-53) / NS (P46) / JL (P46). The coupe could be worked from the south (bottom) road, however this is the entrance drive and servitude right of access for Tanlawhill. The alternative will be to take timber to the top road-end. A public road borders the east side of the coupe, where a water pipeline is also recorded. A BT cable runs along the south of the coupe. Extracting the strip of NS and JL to the west of the coupe will require particular care to avoid diffuse pollution into the Black Esk river.

04004
Large area of windblow SS (P84).

30017
SS (P68). Encroaching windblow on south and west edges. Good road access.

05031
SS (P75-90) / JL (P88). Significant windblow has already been cleared in areas adjacent to the coupe and this is encroaching into the remaining crop. Good roading.

30019
The highest elevation coupe in the plan area. SS(P69). Requires new road (extension of existing road to the south). Steep ground in places. NB - retention of some crop out with the coupe to the north-west, which will be left as minimum intervention for natural processes to develop over time.

30016
SS/NS/GF/HL (P70). Good roading. NB – retention of some NS near riparian zone out with coupe to the east. There was consideration for leaving the GF as long term retention, but the wet soils and existing windblow suggests that this will not stand once the surrounding trees have been felled.

30024
SS (P71). Widespread windblow. Good roading.

04044
SS (P90). Upgrade of access road required (approx. 1km).

05052
SS (P71) / NS. A redundant Christmas tree plot and stand of mature SS. The main rationale for removing this stand is to reduce shading on the public road which often causes a frost pocket and icy conditions. It will also open up views of the valley for passing road users. Access will need to be from the east as there is an overhead powerline running along the south side of the public road to the north of the coupe – this will combine a short section of new road to cross Rough Sike and then a temporary forwarder track. There will be no future requirement to access this coupe for timber removal as it will become MI broadleaves.

05027
SS (P76-92). The coupe is suffering from windblow in places. Good road access.

05037
SS (P66-92). Large coupe. Good road access, although spur would need upgrading if required for access.

04041
SS (P88-91). Coupe edge road in good condition but spurs would require upgrade if needed for access. Good road access.

04057
SS (P92). Good road access

05033
SS (P68-76) / NS and WH (P68). Heritage feature in south end of coupe. Good road access. Some steeper slopes.

05039
SS (P68-87) / JL (P81). Suffering from windblow. Communications aerial within coupe. Good road access. The restocking of this coupe will be delayed to create height separation with adjacent coupe 05037 in the next rotation.

05040
SS (P90). Good road access.

05086
SS (P92-97). Good road access.

Thinning

Refer to Map 5.

Thinning operations have been carried out in some of the more sheltered areas of the forest, using a standard line thin. However, there is significant evidence of late first thinnings which has led to crop instability and windblow. Although there are good opportunities for thinning in the forest, the first intervention must be timely to avoid future problems. As well as the appropriate timing of operations, ground conditions and elevation will have a significant impact on where thinning will be successful. Most of the Castle O'er block (south of the B723) is suitable for thinning, however in the Twiglees and Garwaldshiels blocks (north of the B723), thinning will only be successful in the sheltered valleys. Although pulp and pallet will be the primary products from the forest, it should also be possible to produce quality logs as long as there is timely planning and investment in thinning.

Low Impact Silviculture Systems (LISS) / Continuous Cover Forestry (CCF)

Refer to Map 4.

Two main areas of LISS have been identified in the lower reaches of the White Esk valley. Utilising a selection system, small groups of trees (<0.25ha) will be removed to maximise opportunities for light-demanding broadleaves to establish, whilst maintaining a forest environment. Side light entering the woodland around the felled areas should also encourage regeneration of more shade tolerant conifers. The objective is to maintain a broadleaf / conifer mix with an intimate mixture of species and size classes, focussed along the banks of the White Esk (offering filtered views of the river) and around the foot of Bessie's Hill. There are some fine examples here of veteran Norway spruce, Douglas fir and Grand fir over 70 years old and the LISS objective is to promote natural regeneration or use under planting to develop replacement trees which will become the veterans of the future. Some of the LISS area will be prioritised for broadleaves. The species map indicates the distribution of the desired future habitats.

Long term retention (LTR) / Minimum intervention (MI) / Natural reserve (NR)

Refer to Map 4.

Long Term Retentions (LTR) have been designated at a range of sites distributed through the forest to further improve restructuring and create a wide range of age classes. The total area is 47ha and includes Norway spruce of seed producing age that will benefit red

squirrels. Most of the LTR is located close to riparian zones and areas of minimum intervention, improving habitat connectivity for a range of species.

Timber production is a main objective for these forests, but there are also many opportunities to protect, enhance and create natural habitats through Minimum Intervention (MI). Focussed on riparian corridors, wetlands, and sites where natural processes are already prevalent, 477ha of the plan area is under this type of management.

An additional 30ha has been identified as Natural Reserve (NR) (contributing to a series of sites across the National Forest Estate). To be left unmanaged in perpetuity, these sites offer some of the greatest value for biodiversity.

Tree species choice / Restocking

Refer to Map 6.

The plan aims to maximise the output of a range of quality timber products. Opportunities for productive broadleaves are very limited and so species choice for production is focussed on conifers. The climate and soils throughout most of the forest create challenging conditions for tree growth, with poor wet soils and exposure being the common constraint. Sitka spruce was the species of choice in the first rotation due to its ability to grow well despite the environmental pressures, and this will continue to be the primary species in the forest. However, with the uncertainties of climate change and the increase of pests and diseases it is prudent to increase the diversity of conifers to build resilience for the future (although future climate predictions for the area suggests that Sitka spruce will continue to be suitable for the foreseeable future). The plan sees an increase in other conifers over the next 20 years (Chart 1), and a decrease in Sitka spruce. An ESC analysis highlighted those areas where Douglas fir could be expected to deliver YC16, and where other alternative conifers could give a better return than Sitka spruce (where SS YC is <10). These locations have been used to add more species diversity into the future forest.

All broadleaf planting will be native to the area and should complement and/or enrich 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.

Natural regeneration

Natural regeneration of the desired species in CCF areas will be recruited as the next rotation, and it will be important that thinning/CCF interventions avoid damage to young trees.

There are some sites where Sitka spruce natural regeneration is occurring. These will be monitored and recorded in the FLS sub-compartment database. Where this is the desired species, we will endeavour to use it to establish the required stocking density. If stocking density is too low it will be beaten up by year 5. If the natural regeneration is too dense it may be necessary to clear and restock. Where the natural regeneration is not the desired species or proposed land use (e.g. on managed open ground), it will be considered against the plan objectives and tolerance table and either accepted (with a plan amendment if necessary) or removed. There is currently 21% of open ground in the plan area so there is scope for increased woodland cover without compromising UKFS requirements.

There should be a preference for natural regeneration of broadleaf areas (to maintain provenance and improve the chances of establishment) but where this is unlikely or has not been successful then these areas should be planted/beaten up to the required stocking density and site requirements.

New planting

There is no new planting proposed.

Protection

Deer

There is a significant challenge to establishing broadleaves and soft conifers due to the impacts of deer. One of the critical success factors of the plan is to ensure young trees are protected from browsing damage.

The plan sits within the Eskdalemuir Deer Management Unit (DMU). Roe deer are the prevalent species, but Fallow and Sika have also been recorded.

The main objectives within the DMU are:

- To enable re-stocking to take place without the need for deer fencing and to achieve the appropriate stocking density at year five.
- To maintain impact levels in accordance with FLS local policy of less than 10% on all commercial tree species.
- To maintain a sustainable deer population.
- To monitor the Sika population and limit their spread from the north east.
- To monitor the Fallow population and limit their spread from the west.

Currently the three year average browsing impacts across this DMU are within target objectives.

The population dynamics in this DMU have changed considerably between 2001 and 2017. Neighbouring forests have commenced significant restocking, which has had the effect of reducing immigration. The knock on effect of this, coupled with heavy culling has been that

the standing population has been reduced. However, as crops grow on the surrounding land, re-stock sites on the FLS estate will again become more vulnerable.

The annual Roe deer cull target up to 2024/25 will be stable at 390. This figure has been chosen based on population modelling to ensure the objectives of the DMU are met.

Selection of areas for restocking with soft conifers and broadleaves was based primarily on site conditions, but also on ease of access for protection. Most sites are close to forest roads and are not hidden by older stands.

There are also areas within the forest where natural regeneration of broadleaves is desired, but is currently suffering from browsing damage. Although condition monitoring is primarily targeted at productive restock sites, these areas of broadleaves must also be checked, and any necessary action taken to ensure their establishment.

Pests and Diseases

Larch will not be planted during the period of this plan due to the presence of Phytophthora ramorum. This position will be reviewed at the next revision of the plan. Restocking of larch felled areas will follow current best practice and policy on timing and species choice.

Dothistroma has been recorded in the forest. Scots pine has been included in the future species mix, primarily chosen for landscape and biodiversity value, and this may be compromised by the disease. However, all of the sites to be planted in the next 10 years are relatively small and easily accessible for monitoring.

Fire

FLS continues to work closely with the 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.

Road operations and Timber haulage

Map 7 shows the existing forest road network, planned new roads, main egress points, and agreed Timber Transport Routes.

There are 3 new roads proposed for construction during the plan period.

Rainshaw Sike (CA385) 550m

Access for coupe 30023. Approved through an amendment of the previous plan. EIA consent was not required and is valid until 12/07/2024.

Jock's Shoulder (C326) 420m
Access for coupe 30019.

Rough Sike 150m
Access for coupe 05052 will need to be from the east as there is an overhead powerline running along the south side of the public road to the north of the coupe. This short section of new road will facilitate the crossing of Rough Sike. A temporary forwarder track will then connect to the coupe. There will be no future requirement to access this coupe for timber removal.

Rainshaw Rig 490m
An extension to CA385 to access coupe 30002. Construction is planned beyond the period of this plan so this is for reference only.

Timber haulage will utilise the B723 and B709 (and potentially the Eskdalemuir Bypass). All these routes are agreed routes in conjunction with the Agreed Routes Map. (NB – the minor road to the west of the White Esk is excluded / severely restricted).

We will continue to support and invest in the Eskdalemuir timber transport by-pass - a 4km stretch of forest road taking most of the local timber traffic around the village of Eskdalemuir. The creation of this route was supported by the Strategic Timber Transport Scheme.

4.2 Biodiversity

UKFS 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 17%.

Designated sites

There are no designated sites for nature conservation.

Native woodland

The plan seeks to protect and enhance existing areas of native woodland. New planting is located where there will be maximum habitat connectivity, and where it will enhance the landscape. For example, the open space of the Castle O'er hill fort will be fringed with native broadleaves and clumps of Scots pine to soften the transition into Sitka spruce whilst avoiding a 'ring' effect.

Ancient woodland / Plantation on Ancient Woodland sites (PAWs)

The small areas of long-established woodland of plantation origin (LEPO) in the lower White Esk valley are all under minimum intervention or LISS management. There are some fine examples here of veteran Norway spruce, Douglas fir and Grand fir over 70 years old and the

LISS objective is to promote natural regeneration or use under planting to develop replacement trees which will become the veterans of the future.

There are no PAWs in the plan area.

Protected and priority habitats and species

All forest management operations involve a planning process before work commences which includes checks for wildlife and important habitats. Work plans will be adjusted if necessary to avoid disturbance, and opportunities to further protect species or enhance habitats will be identified.

Red squirrel

Conservation of this species is a main objective of the plan, but can only be successful if there is a reliable food supply. Of particular importance is Norway spruce, a tree species regularly utilised for feeding (and sometimes drey building). Maximum seed production occur when trees are over 50 years old, and so 50ha of trees over this age have been identified and retained in areas of LISS, LTR, NR and MI. These are distributed throughout the forest. There will also be an increase in the proportion of Norway spruce over the next 20 years, with new planting creating opportunities for future LTR. The areas of CCF such as around Bessie's Hill will contribute to a long term food supply

FLS has a single licence to cover forest management activities that may affect red squirrels on the national forest estate (NFE). This is in accord with the Scottish Biodiversity Strategy's aim to resolve species management issues. All works within the Plan area will follow the assessment and mitigation actions set out as conditions of this licence.

Raptors

NRs and stands of LTR throughout the forest will offer nesting sites for raptors including goshawk, buzzard, and potentially golden eagle. Opportunities for further LTRs should be considered during the delivery of this plan.

Black grouse

There are records of black grouse from areas to the north of the site. As much of the site is surrounded by plantation there is little potential for woodland edge habitat improvements, however a low-density native broadleaved mix is proposed linking the valley with the open ground on Jocks Shoulder.

Flora

There have been recent discoveries of Holy grass (*Hierochloe odorata*), a Nationally Rare species, along the lower reaches of the Black Esk river. These were associated with unplanted narrow edges of river bank and flood plain on bends in the river below steep unstable river bluffs. These transient habitats are important for a range of plant species and have accordingly been identified as minimum intervention.

Priority habitats

Although none of the priority habitats identified in the plan area are designated as 'important' for management considerations, most of them have none the less been incorporated into networks of open ground or native woodland, ensuring protection and improving ecological connectivity. After felling operations, planting schemes will be designed around any priority habitats that are revealed. This includes species rich groundwater dependent terrestrial ecosystems (GWDTEs), which will also be protected during road building and any other forest operations using the current best practice.

Open ground

Managed open ground contributes to more than 10% of the plan area over the next twenty years, and there is an expectation that resources will be allocated to maintaining it as open. This is primarily focussed on Scheduled Monuments and other important aspects of the historic environment. A combination of techniques will be used to maintain this condition, including conservation grazing, vegetation management and scrub removal. All activities will carefully follow prescriptions agreed with Historic Environment Scotland (HES).

An additional 7% of the plan area is identified as successional open, where natural regeneration will be tolerated. Much of this is located on hill tops, upper margins and along riparian zones of side tributaries, where deer control will be very challenging. Monitoring of these areas will allow us to identify any significant changes, and Scottish Forestry will be notified if these require amendments to the plan.

Fallow clearfell sites will contribute to transitional open space throughout the forest.

Dead wood

Opportunities for retaining or creating deadwood will be identified during the planning of all felling and thinning works, favouring areas with the highest deadwood ecological potential. Valuable deadwood and deadwood areas will be marked on contract maps. Areas of NR will offer some of the best opportunities for the development of standing and fallen deadwood. Where it is safe to do so, standing mature dead trees will be retained as these offer excellent potential for wildlife, including bat species such as Noctule which is recorded locally.

Invasive species

Grey squirrel

We will continue to support efforts to deter this species spreading into the red squirrel stronghold. No large-seeded broadleaf tree species will be planted during restocking – due to their preference as a food source for grey squirrels. We will also work with 'Saving Scotland's Red Squirrels' to directly control grey squirrels.

4.3 Historic Environment

Designated sites

Refer to **Map 12**.

Our key priorities for archaeology and the historic environment are to undertake conservation management, condition monitoring and archaeological recording at significant historic assets; and to seek opportunities to work in partnership to help to deliver Our Place in Time: the historic environment strategy for Scotland (2014) and Scotland's Archaeology Strategy (2015). Significant archaeological sites will be protected and managed following the UK Forestry Standard (2017) and the FCS policy document Scotland's Woodlands and the Historic Environment (2008). Harvesting coupes, access roads and fence lines will be surveyed prior to any work being undertaken in order to ensure that upstanding historic environment features can be marked and avoided. At establishment and restocking, work prescriptions remove relevant historic environment features from ground disturbing operations and replanting. Where appropriate, significant historic assets are recorded by archaeological measured survey, see active conservation management and may be presented to the public with interpretation panels and access paths. Opportunities to enhance the setting of important sites and landscapes will be considered on a case-by-case basis (such as the views to and from a significant designated site).

The Regional Historic Asset Management Plan includes conservation management intentions for designated historic assets on the National Forest Estate. Details of all known historic environment features are held within the Forester Web Heritage Data 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 should be checked both on FLS's internal historic environment records and also with the Council's HER prior to the commencement of forestry activities. Any upstanding features should be clearly marked, both on the ground and on operational maps. Care should be taken to avoid any damage to surviving structural elements.

The White Esk valley is one of the finest surviving Iron Age landscapes in Scotland. Iron Age society was predominantly a pastoral economy, and this is reflected in the nature of the surviving earthworks and enclosed settlements, set within a complex system of linear earthworks linking the main hillfort of Castle O'er to satellite forts such as Bessie's Hill. Castle O'er was occupied over several centuries, and the later (central) enclosure saw occupation during the early centuries of the first millennium AD during the period of Roman rule. The direct entrance, punched through the earlier earthworks, is reminiscent of similar hillforts in southern Wales, where the relationship between Romans and native tribes is thought to have been very similar. The scooped settlements (the simple large round enclosures that populate the surrounding area) are later features, dating to the centuries after the Roman withdrawal. The Regional Historic Asset Management Plan will inform and direct resources

and investment to ensure ongoing conservation management of the surviving features. Any trees and scrub vegetation compromising significant Scheduled Monuments will be removed (including in the designated impact zones).

We have identified three Scheduled Monuments for particular attention due to their importance, ease of access, and significance in the local landscape.

Castle O'er (hillfort)
Priorities for management: conservation grazing.
The small car park and waymarked access trail will be retained. Site interpretation will be refreshed and updated. The future planting design and species choice on the surrounding ground out with the scheduled area will create more natural shapes and diversity, avoiding a 'wall' of forest. The programme of low density conservation grazing will be maintained within the scheduled area.

Over Rig
Priorities for management: conservation management and tree removal.
A programme of low density conservation grazing will be pursued within the scheduled area.

Bessie's Hill (hillfort and settlement)
Priorities for management: conservation management and maintaining open space, improving views.
FLS have already invested in opening up the sightlines between the settlement and the hillfort, and we will continue to remove natural regeneration here. The setting of the hillfort will be enhanced by controlling regenerating trees and opening up views. The small car park and waymarked access trail will be retained. Site interpretation will be refreshed and updated.

The local community continue to promote a 'Prehistoric Trail' to encourage visitors to explore the area and its heritage. The three priority sites (mentioned above) feature in this trail, with Castle O'er hillfort being the 'jewel in the crown' and it is important that planning for any future access and interpretation works recognises the importance of the trail to the community.

We will continue to work with HES, the D&G Council archaeologist, and the local community to protect, monitor, record and promote the local historic environment within the plan area.

Other features
The area is rich in other undesignated heritage sites, especially around the White Esk valley. Precautions to avoid damage to these features are outlined in the previous section. Some recorded sites have been completely destroyed by the first rotation of tree planting and

unfortunately are now beyond repair. It is considered appropriate to restock these sites after felling.

4.4 Landscape

The design of the forest reflects the change of scale between small intimate river valleys and large scale summits and ridgelines. Coupe size generally increases in the large scale landform to the north of the plan area, with shape reflecting summit and ridgeline size and scale. Coupe boundaries avoid cutting across or running along ridgelines, although this has been unavoidable in some places due to the constraints of restructuring. Restocking will create opportunities for introducing more sympathetic coupe shapes. In the lower reaches of the White Esk where the enclosure increases to the south, there is value in the mature tall conifers which create a different woodland experience and offer filtered views of the river. These will be managed under continuous cover forestry systems to retain this feature of the landscape.

Particular attention has been given to the setting of Scheduled Monuments, using open space and a mix of tree species to create a sense of place which respects the setting of the archaeological sites and surrounding landform. The protection and promotion of these nationally important heritage assets is a key objective of the plan.

Key locations for broadleaves have been selected to complement the existing landscape character. These have been rationalised to target resources more efficiently for successful establishment.

The landscape impacts of the design and management of the forest on settlements adjacent to the forest have been considered carefully. Where possible, adjustments have been made to enhance settings and minimise future disturbance.

4.5 People

Neighbours and local community

Several neighbours have taken an active interest in the development of the plan and their aspirations have been incorporated where they do not conflict with the objectives of the plan and are consistent with FLS's approach to land management.

See the section on 'Historic Environment' for information on the community's interest in promoting local heritage.

Public access

The car parks and formal waymarked trails at Bessie's Hill and Castle O'er will be retained. Interpretation panels at these sites will also be refreshed and updated.

Visitors are welcome to explore FLS land, 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 have to manage their land and water responsibly in relation to access rights and FLS will only restrict public access where it is absolutely necessary, and will keep disruption to a minimum.

4.6 Soils

Protection and Fertility

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. Brash mats (or alternative measures) will be used to protect sensitive soils. Felling residue will usually be left on site to allow nutrient recycling, with consideration for the practicalities of restocking.

Cultivation

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.

Deep peats

Soil types associated with deep peats are common throughout the plan area (Map 2). Decisions on restocking these sites have been based on the current best practice. In the absence of fertiliser application (FLS's preferred position), establishment of pure stands of Sitka spruce at these sites to achieve a growth rate that allows a positive greenhouse gas balance (i.e. YC >8) may be challenging. The use of Lodgepole pine (north coast provenance) as a nurse crop will therefore be considered where this will enable the Sitka spruce to achieve the desired growth rate. There are several sites where the peat type and condition of the current crop suggests that yields will remain low, and here the prescription is to convert to peatland edge woodland (e.g. Twiglees Moss, and north of Kilburn Hill). Some deep peat areas that are already in open space or minimum intervention will remain this way. Consideration should be given to coupe 30039 for potential restoration

4.7 Water

Drinking water

All private drinking water supply points (and pipes) are recorded as a layer in our Forester Web GIS (included in Map 2). This is consulted during the work plan process for all forest operations to ensure their protection. Affected neighbours will be consulted prior to any works commencing. Features will be clearly marked on all contract maps, as well as on the ground. The design of the future forest has incorporated an open space or broadleaf buffer of at least 50m around these supply points to minimise future disturbance.

The Black Esk reservoir is a public drinking water supply. All forestry activities undertaken in the source water catchment will meet the precautions set out in the 'Guidance on Forestry Activities near Scottish Water Assets'. The predominant future habitat around the reservoir and the main watercourses will be broadleaves under minimum intervention management, creating a buffer to further enhance water quality. In the current and projected climate, there is no risk of forestry significantly reducing water quantity. An appropriate risk assessment will be carried out to investigate the potential for the extension of the quarry at Kilburn Hill to have an impact upon the nearby Kilburn Lockerbie private water supply (Black Esk reservoir).
Watercourse condition
All forestry operations will meet the requirements of the UKFS Guidelines on Forests and Water. FLS have no control over the existing responsible pressures for water quality condition (i.e. reservoir dam creating barrier to fish migration).
Flooding
There are no specific flood prevention considerations within the plan area at this time (see Description of Woodlands). The scale and timing of felling in the forest, along with an increasingly diverse age structure is likely to have a beneficial impact on downstream flood risk and may contribute to flood alleviation.

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Appendix I: Description of Woodlands

Topography and Landscape	Elevation ranges from 155m at King's Pool, to 530m on the upper slopes of Jock's Shoulder. The landform is typical of the Southern Uplands, with simple, gently rolling hills dissected by the larger valleys of the White and Black Esk rivers. Slope gradient is mostly <45%, with only a few sites where this is exceeded (e.g. Yard's Plantation east of Castle O'er village). There are no landscape designations for the Plan area. Map 11 shows the SNH Landscape Character Types relevant to Castle O'er: • Narrow Wooded River Valley LCT 160 • Foothills with Forest LCT 176 • Southern Uplands with Forest LCT 178 <u>Narrow wooded river valley</u> The narrow wooded river valleys are small to medium scale landscapes with enclosing slopes of broadleaf woodland, conifer plantations, upland grazing and moorland. Views are generally along the valley floor and of pasture, woodland groups, shelter belts, scattered residential properties and farm building with conifer plantations beyond. To the north of the Castle O'er settlement the narrow valley encloses a flat valley floor used for pasture. To the south the enclosure increases as the river valley narrows and the coniferous forest comes down the valley sides to meet the river. The mature Norway Spruce and Larch along the roadside allow filtered views to the river below. The footprint of Victorian woodlands and plantations still remain within the Castle O'er Forest Block along the lower reaches of the White Esk valley between Bessie's Hill and King's Pool. <u>Foothills with Forest</u> The foothills are an undulating mix of landscape scales from the small scale intimate river valleys of the Black Burn and the Black Esk which flow north/south through the Forest to smooth the medium to large scale gently sloping foothills of Greystone Knowe and Dinnings Heights. The river valleys here are more V shaped with a smaller valley floor than the White Esk except where the Black Esk valley opens out at the reservoir.

	There are scattered settlements, isolated farms and residential buildings along roads and watercourses, such as Sandyford, and isolated residential buildings along the B723 and the Black Esk. Southern Uplands with Forest This is a large scale landform with higher and steeper slopes that rise from the valley floor above the Black Esk and its northern tributaries. This area of the forest encompasses the northern reaches of the Black Esk catchment and the head of the valley is surrounded by a series of summits and ridgelines creating an enclosed landscape with internal views. The Southern Upland Way passes very close to the north of the Forest but it is located in the next valley with intervening conifer plantation. Forestry is the dominant land cover and the Castle O'er block itself sits within a larger context of surrounding conifer plantations. The summit of Jock's shoulder is the only location within this LCT where the forest block of Garwaldshiels adjoins open ground.
Geology and Soils	All of the Plan area is underlain by sedimentary bedrock, with mudstones and sandstones to the north, and wacke to the south. Superficial deposits include silts, sands and gravels in the valley bottoms, glacial till across many of the lower slopes, and accumulations of peat. Soils reflect the geology and high rainfall of the area, with peats (including blanket bog and small areas of sphagnum bog), surface-water gleys and ironpans dominating. Brown earths are scarce, mostly concentrated in the south of the Plan area around Castle O'er and the White Esk valley. Soil types in the forest are shown on Map 9
Climate	The nearest weather station is at Eskdalemuir. In 2019 the lowest mean daily temperature was -1.3C and the highest was 19.5C, and the total monthly rainfall ranged between 62 mm and 134 mm. ESC figures: Moisture deficit range: 44 – 136 Accumulated temperature range: 969 – 1493 Climate description: warm and moist in the sheltered valleys; cool and wet on the higher ground

Hydrology	**Map 2** shows all watercourses, open water, and recorded water supplies. The forest sits in the Solway Tweed river basin district. <u>Water quality</u> Two rivers pass through the forest: **River:** White Esk **Condition:** Good **River:** Black Esk **Condition:** Poor **Impacted condition / Responsible pressures (and activity):** • Access for fish migration / barrier to fish migration (public water supply) <u>Flooding</u> The SEPA Flood Risk Management Strategy for the Solway Local Plan District identifies a Potentially Vulnerable Area (PVA) at Langholm. The main catchment for the PVA is the River Esk, within which the Plan area is located. This catchment contains 48% forest cover (of which 9% is managed by FLS). Dumfries and Galloway Council have recently carried out a review of the options for the Langholm Flood Protection Scheme, including the possibilities of Natural Flood Management. However, this option has currently been discounted. Post event information to address the main concerns from a community engagement event in June 2019 explained: ***Natural Flood Management (NFM), Forestry and Upstream Storage*** *All of these options have been extensively investigated, modelled and costed but none were found to offer sufficient impact on the potential flood levels in Langholm. Improvements to NFM and forestry practices will continue in future and will add to the overall benefit to mitigate against flood risks. They are however a long term action which could potentially reduce the level of flooding in Langholm during less extreme storm events however at this stage they could not achieve the level of protection required.* <u>Water supplies</u> The Plan boundary falls partly within a drinking water catchment where a Scottish Water abstraction is located. Black Esk reservoir supplies Black Esk Water Treatment Works and it is essential that water quality and quantity in the area is not compromised by any land management activity. There are also a number of private drinking water extraction points and associated pipes in the Plan area.

Windthrow	Map 10 illustrates the DAMS measurements for the Plan area. The lowest figures are 11 in the White Esk valley, rising to 19 on the exposed summits to the north. Although thinning is achievable in much of the Plan area, there is evidence of windthrow in some recently thinned areas.
Adjacent land use	Private forestry, rough grazing, enclosed pastures and arable fields, reservoir (public water supply).
Public access	There are two short FLS waymarked walking trails at Castle O'er and Bessie's Hill. They provide access to the hill forts and archaeological features. Open responsible access for walking, horse riding and cycling is enjoyed throughout the forest, mostly by locals. The forest roads are popular with car rally organisers, and several well established events are held annually. There are no core paths within the Plan area. The local community have invested resources in promoting and interpreting the archaeology of the wider area, with the establishment of the 'Eskdale Prehistoric Trail' in the 2000s, and the installation of brown tourist road signs. The 'Trail' has been recently refreshed with new fingerposts, but much of the original interpretation is now in a poor condition. Map 2 shows the location of the formal trails.
Historic environment	The area is of national importance for its historic environment and has many Ancient Monuments, both Scheduled and undesignated. Historic environment records for the forest are shown in Appendix V and on Map 12. Of particular importance is the White Esk valley, and its legacy of Iron Age hill forts and associated prehistoric features. There are ten scheduled monuments within the Plan area.
Biodiversity	The following are of particular importance for the Plan area: <u>Red squirrel</u> The Plan area sits within the Eskdalemuir red squirrel stronghold. It was identified by Scottish Forestry and other partners as having the potential to sustain resilient and healthy populations of red squirrels over the long-

	term, with suitable planning and management. The Esk Valley is also identified as a Priority Area for Red squirrel Conservation (PARC) by 'Saving Scotland's Red Squirrels' where control of non-native grey squirrels is most important. Golden eagle The South of Scotland Golden Eagle Project is working to reinforce the small number of birds that survive in Southern Scotland, by translocating chicks and releasing them in the Moffat Hills. It is hoped that they will interact with the few resident Eagles and provide more incentive for wandering birds to remain in the South. The plan area offers potential opportunities for nesting and roosting sites. Fish Both the White Esk and Black Esk support runs of sea trout and salmon. These species depend on good water quality. Flora There are several places along the Black Esk where a Nationally Rare grass (Holy grass *Hierochloe odorata*) has been found. It is known from only 18 hectads in Britain and 1 in Ireland. As well as this species there are other nationally rare or scarce species along the river. Ancient woodland The Ancient Woodland Inventory shows areas of Long-established woodland of plantation origin (LEPO) around the settlement of Castle O'er. First edition OS maps reflect this with local place names including Cottage Plantation and Yards Plantation. See Map 2. Priority habitats Available survey data records the following priority habitats in the plan area: blanket bog; upland flush, fen & swamp; upland heathland; upland birchwood; wet woodland; upland mixed ashwood. None of these sites were designated as 'important' for management considerations.
Invasive species	Grey squirrels are present in the White Esk valley.

Woodland composition	The current species composition of the forest is illustrated on Map 8. Most of the Plan area is wooded and now in its second rotation. Areas of first rotation forestry remain mostly within Garwaldshiels. Sitka spruce is the dominant tree species. Yield class is significantly influenced by the local climate, elevation and soils. SS YC ranges between 2 and 24, with an average of 15.
Plant health	Larch trees infected with Phytophthora ramorum were first recorded in 2018. To date FLS have received ten Statutory Plant Health Notices in the plan area (as at 20/2/20). Dothistroma needle blight has been recorded in the Plan area.

Appendix II: EIA screening opinion request form

Overleaf if required

Scottish Forestry
Coilltearachd na h-Alba

Environmental Impact Assessment
Screening Opinion Request Form

Please complete this form to find out if you need consent from Scottish Forestry, under the **Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017**, to carry out your proposed forestry project. Please refer to Schedule 2 Selection Criteria for Screening Forestry Projects under Applying for an opinion. If you are not sure about what information to include on this form please contact your local Conservancy office.

Proposed Work

Please put a cross in the box to indicate the type of work you are proposing to carry out. Give the area in hectares and where appropriate the percentage of conifers and broadleaves

Proposed Work	select	Area in hectares	% Conifer	% Broad-leaves	Proposed work	select	Area in hectares
Afforestation	☐				Forest roads	☒	0.48
Deforestation	☒	2.7	100		Forest quarry	☐	
Location of work		Jock's Shoulder (NT 1821 0204); Rainshaw Sike (NY 2051 9916); Rough Sike (NY 2111 9379)					

Description of Forestry Project and Location

Provide details of the forestry project (size, design, use of natural resources such as soil, and the cumulative effect if relevant).
Please attach map(s) showing the boundary of the proposed work and other known details.

This is a proposal to build three forest roads to allow access for timber harvesting of trees and future restocking / maintenance. It is a permanent structure. The private way will be constructed to meet the specification detailed in the 'Timber Transport Forum - design and use of structural pavement of unsealed roads 2014' (TTF Guidance) and the requirements of the UK Forestry Standard. The 'Forest roads' figure above shows the total area of road construction.

All trees will be removed within the road corridor (standard road width of 4.3m plus 15m on both sides). The 'Deforestation' figure above shows the total area of felling required.

The location of the planned roads is shown on 'Map 7: Road operations and Timber Haulage' of the Castle O'er LMP revision.

Provide details on the existing land use and the environmental sensitivity of the area that is likely to be affected by the forestry project.

The existing land use is forestry. There are no known environmentally senstive areas within the project area.

Description of Likely Significant Effects

Provide details on any likely significant effects that the project will have on the environment (resulting from the project itself or the use of natural resources) and the extent of the information available to assist you with this assessment.

Forester Web was consulted to identify any designations or sensitivities which might affect the project. It is unlikely that the project will lead to any significant effects.

Include details of any consultees or stakeholders that you have contacted in order to make this assessment. Please include any relevant correspondence you have received from them.
Specific consultation on these projects was deemed unnecessary. These works form part of the Castle Oer LMP revision and consultation was carried out as a part of this process.

Mitigation of Likely Significant Effects
If you believe there are likely significant effects that the project will have on the environment, provide information on the opportunities you have taken to mitigate these effects.
n/a

Sensitive Areas	
Please indicate if any of the proposed forestry project is within a sensitive area. Choose the sensitive area from the drop down below and give the area of the proposal within it.	
Sensitive Area	Area
Select...	
Select...	
Select...	
Select...	
Select...	

Property Details			
Property Name:	Castle O'er		
Business Reference Number:		Main Location Code:	
Grid Reference: (e.g. NH 234 567)	NY 2014 9359	Nearest town or locality:	Eskdalemuir
Local Authority:			

Owner's Details				
Title:	Mr	Forename:	Robin	
Surname:	Fuller			
Organisation:	FLS		Position:	Planning Forester
Primary Contact Number:	0131 370 5820		Alternative Contact Number:	
Email:	robin.fuller@forestryandland.gov.scot			
Address:	Forestry and Land Scotland, Ae Office, Ae Village, Parkgate, Dumfries			
Postcode:	DG1 1QB		Country:	Scotland
Is this the correspondence address?			Yes	

Agent's Details			
Title:		Forename:	
Surname:			
Organisation:		Position:	

Primary Contact Number:		Alternative Contact Number:	
Email:			
Address:			
Postcode:		Country:	
Is this the correspondence address?		Select...	

Office Use Only	
GLS Ref number:	

Appendix III: Consultation record

Consultee	Date contacted	Date of response	Issues raised	FLS response
Scottish Forestry	Attended scoping meeting on 27/11/19	27/11/19	1. Consider species replacement for larch, and achieving 10% other conifers across the plan area 2. How will broadleaves be protected and established? 3. Consider pros and cons of establishing broadleaves vs open habitats	Refer to 'Tree species choice' and 'Protection' in section 4.0.
SEPA	9/12/19			
SNH	28/11/19	6/12/19	Satisfied that there will not be any detrimental impacts on the range of national or international designations for which Scottish Natural Heritage (SNH) carries responsibility	N/A
HES	28/11/19	18/12/19	There are ten scheduled monuments within the Plan area. Threats from encroaching vegetation should be addressed through the Plan, and HES are happy to offer management advice. Specific comments: 1. Two scheduled monuments missing from the map (Over Rig; Deil's Jingle North). Difficulties	Refer to 'Historic environment' – 'Designated sites' in section 4.0. Mapping has been updated to address observations. The term "work with HES" has been used throughout the plan.

			distinguishing monuments on Concept map due to similar colour schemes. 2. Recommend use of the term "Work with" rather than "Support" in Design Brief Outcome 2.	
Scottish Water	28/11/19	3/12/19	1. A review of our records indicates that the site boundary falls partly within a drinking water catchment where a Scottish Water abstraction is located. Scottish Water abstractions are designated as Drinking Water Protected Areas (DWPA) under Article 7 of the Water Framework Directive. Black Esk reservoir supplies Black Esk Water Treatment Works (WTW) and it is essential that water quality and water quantity in the area are protected. 2. A review of our records indicates that there is Scottish Water assets in the area, namely a 24" raw water main. This should be confirmed however through obtaining plans from our Asset Plan Providers. We would request that the "Guidance on Forestry Activities Near SW Assets" is taken into account. It should be noted	Refer to 'Drinking water' in section 4.0.

			that the proposals will be required to comply with Sewers for Scotland and Water for Scotland 3rd Editions 2015, including provision of appropriate clearance distances from Scottish Water assets.	
ConFor	28/11/19			
South of Scotland Timber Transport Officer	28/11/19			
Galloway Fisheries Trust	28/11/19			
RSPB	28/11/19			
Butterfly Conservation Scotland	28/11/19	13/1/20	No comments at this stage	N/A
Saving Scotland's Red Squirrels	28/11/19	7/1/20	Keen to see what the management proposals will be with regards to 'maintaining the integrity of the area as a red squirrel stronghold'.	Refer to 'Biodiversity' – 'Protected and priority habitats and species' in section 4.0.

			the Esk Valley Priority Area for Red squirrel Conservation (PARC) was recently revised.	
Visit Scotland	28/11/19			
British Horse Society of Scotland	28/11/19			
D&G Council – archaeology	28/11/19		Historic Environment issues are addressed under Outcome 2 and Outcome 3 in the plan. These emphasise work on the designated scheduled monuments, many of which form part of the Eskdale Prehistoric Trail, and proposals to enhance their access, interpretation and landscape setting are welcomed. The management proposals should follow the UKFS on the Historic Environment. Areas of historic environment interest should be checked both on FLS's internal historic environment records and with the Council's HER prior to the commencement of forestry activities.	Refer to 'Historic environment' in section 4.0.
D&G Council – outdoor access	28/11/19			

D&G Council – roads	09/12/19	7/1/20	Please note that any timber to be extracted will likely utilise the B723,B709 or the Eskdalemuir Bypass. All these routes are agree routes in conjunction with the Agreed Routes Map. (NB – the minor road to the west of the White Esk is excluded / severely restricted)	Refer to 'Road operations and Timber haulage' in section 4.0.
Eskdalemuir Community Council	28/11/19		Nick Jennings is the Chair of the CC, who is also a neighbour with FLS, and has been assisting us with the wider community consultation exercise.	Refer to 'People' – 'Neighbours and local community' in section 4.0.
Chris Miles – County plant recorder		5/12/19	There are several places along the Black Esk where a Nationally Rare grass (Holy grass *Hierochloe odorata*) has been found. As well as this species there are other nationally rare or scarce species along the river. I trust these can be taken account of in your design plan.	Refer to 'Biodiversity' – 'Protected and priority habitats and species' in section 4.0.
Community consultation event at Eskdalemuir Hub (28 attendees)	14/12/19		Mature trees next to public road at Sandyford (NY 2066 9364) – creates frost pocket on road where there have been several vehicle accidents; also shades property on opposite side of road and effects TV signal; resident thought they may have been left for red squirrels but she has never seen one.	This stand of trees has been identified in the plan for felling in 2025/26

			The resident at Kilburn mentioned that the Ash trees near him were showing signs of disease.	Tree health will continue to be monitored throughout the plan area as part of FLS policy.
			Chris Miles – Holy grass sites along the Black Esk river. Floodplains and escarpments should not be planted as they are botanically and biologically important	See above
			Desire to establish a long distance cycle loop around the wider area, partly utilising our forest road network.	FLS encourages local people and communities to get involved with the use and management of Scotland's national forests and land. We will continue discussions about this idea.
			The formal trails are well used by the local community and they would like to see them remain. They often use them when they have visitors.	We are committing to retaining the formal waymarked trails at Bessie's Hill and Castle O'er and refreshing the on-site interpretation.
			The impact of timber transport and the behaviour of drivers is much better these days. The main problem used to be convoying and excessive speed but these are rare now. One local resident said that it was actually nice to see them as they are a part of the working landscape.	We will continue to work with contractors and the Timber Transport Forum to minimise the impact of timber traffic on the local community.
			Several neighbours mentioned water supplies on our land to make sure we were aware of them.	Refer to 'Drinking water' in section 4.0.

			The forests offer perfect opportunities for pony riding.	We will continue to welcome visitors who wish to use the forest for responsible recreational access.
			There are some big trees near the houses at Castle O'er which should be protected for their aesthetic value.	This area has been identified in the plan for continuous cover forestry. There is specific mention of these trees in section 4.0 ('Silviculture' – 'Low Impact Silviculture Systems / Continuous Cover Forestry'
			One attendee asked about the use of chemicals, and aerial spraying.	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. If they are absolutely necessary, FLS will use chemicals responsibly in keeping with UK certification standards.
			Several attendees highlighted the value of leaving areas of open space within the forest – especially where this protects biodiversity or enhances the landscape.	Refer to 'Biodiversity' – 'Open ground' and 'Protected and priority habitats and species' in section 4.0.
			There should be consideration for links and connectivity between the hill tops and down the riparian corridors – allowing opportunities for natural processes to help 're-wilding'.	Refer to 'Biodiversity' – 'Open ground' and 'Protected and priority habitats and species' in section 4.0. Also 'Silviculture' - 'LTR/MI/NR' also in section 4.0.
			Local communities can access a renewables fund (from Ewe Hill	FLS encourages local people and communities to get involved with the use and management of

			windfarm?) – current ideas that will have 'strategic public benefits' include environmental and access projects, and Black Esk reservoir has been mentioned as somewhere with potential.	Scotland's national forests and land. We will actively engage with local communities and be open to work in partnership if resources allow.
			One attendee believed that there should be a stop to 'tree farming', and would like to see more 'sustainable and balanced' forests.	Scotland's National Forest Estate is managed to the UK Woodland Assurance Standard – the standard endorsed in the UK by the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC). Forestry and Land Scotland is independently audited to ensure that we are delivering sustainable forest management.
			Several attendees commented on our positive approach towards land management planning, and were encouraged to hear that it's not all about money and profit.	The purpose of FLS, in its unique position as both an executive agency of the Scottish Government and largest land manager in Scotland, is to manage forests and land owned by Scottish Ministers in a way that supports and enables economically sustainable forestry; conserves and enhances the environment; and delivers benefits for people and nature.
			There were a few mentions of local flooding in the village of Eskdalemuir.	This has been considered and it was concluded that FLS land and its management is unlikely to contribute to local flooding problems.
Other community correspondence			Would it be possible to reinstate the King's Pool riverside walk – and to create new waymarked paths in the area?	At the present time our resources will be focussed on maintaining the facilities at Bessie's Hill and Castle O'er to a high standard. There are no plans to re-open the King's Pool walk, which was closed

				due to riverbank erosion. We will continue to welcome visitors who wish to use the forest for responsible recreational access.
			The increase in grey squirrels needs to be addressed	Refer to 'Biodiversity' – 'Invasive species' in section 4.0.
			Pre-historic monuments need protection from forestry	Refer to 'Historic environment' in section 4.0.
			Permanent areas of native hardwoods would benefit the area	Refer to 'Biodiversity' – 'Native woodland' in section 4.0.
			Neighbour – Todshawhill Issue: improving native woodland connectivity.	Earlier discussions with this neighbour on their proposals to plant native woodland in the open ground to the south-west of the forest boundary influenced the future species for this location. The broadleaf restock proposals in the north-west and south-west of the boundary coupe (05034) will become linked by the neighbour's proposed planting and improve habitat connectivity along the Black Esk valley.
			Neighbour – Tanlawhill Issue: impact of felling and species choice on the aesthetics of the property; risk of damage to utilities; impacts on wildlife.	Dialogue with the neighbour's agent has identified the main concerns, and FLS has responded accordingly. Aspirations have been incorporated where they do not conflict with the objectives of the plan and are consistent with FLS's approach to land management.

Appendix IV: 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) into current or 2nd 5 year period.	• 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.

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*

TABLE OF WORKING TOLERANCES SPECIFIC TO LARCH

	Adjustment to Felling period	Adjustment to Felling Coupe Boundaries	Timing of Restocking	Changes to Species	Changes to Road Lines
FC Approval normally not required	Fell date for all larch can be moved and also directly associated other species 1.See below	Larch areas can be treated as approved coupes. Other conifers directly associated with larch being felled, may also be removed up to an equivalent of 20% of the area occupied by the larch or 5 ha, whichever is greater. 2. See Below 3. See Below	To be undertaken within 3 years of felling	Replacement as per the agreed restock plan, but where this is not specified or is larch this may be replaced with either another diverse conifer (not SS) or Broadleaves.	
Approval normally by exchange of letters and map. **In some circumstances Approval by formal plan amendment may be required**		Removal of areas of other species in excess of the limits identified above.	Greater than 3 years from felling.	Restocking proposals for other species which do not meet the tolerances identified above.	New road lines or tracks directly necessary to allow the extraction of Larch material 4. See Below

If larch felled under this tolerance table has not been inspected by FCS and found to be symptom free of phytophora then the larch must be treated as infected and full biosecurity and movement licences will be required.

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.

1. The felling date for 1st and 2nd phase coupes within an approved Forest Plan can be brought forward without FC approval where the net coupe area contains at least 40% larch. Where the percentage of larch is less than 40% then the applicant should discuss an amendment with the relevant Woodland Officer. As these will be approved coupes they will not require to go on the Public Register.
2. Example: In a coupe of 15 ha there needs to be 10 ha of larch to remove the whole coupe without contacting FCS.
3. Example: In a coupe of 15 ha that has 4 ha of larch you can fell up to 9 ha of the coupe without contacting the conservancy but it should, in this instance, be a quick turnaround for an amendment to fell the whole coupe
4. Where necessary Prior Approval should be dealt with directly with the relevant Regional Council.

Forestry Commission Scotland
Coimisean na Coilltearachd Alba

LARCH TOLERANCE TABLE APPROVAL

FOREST PLAN

.....

Ref:.....

_____

For and on behalf of
the Forestry Commissioners

Signature .....

Date .....

Appendix V: Historic Environment records

Refer to Map 12

Designation	HES Ref	Name	Feature Description	Grid Reference	Importance	Area (ha)
Scheduled Monument	SM2346	BESSIE'S HILL	FORT	NY250954	National Importance	1.27
Scheduled Monument	SM651	CASTLE O'ER	ENCLOSURE(S), FORT, BEAD(S) (GLASS), SPINDLE WHORL(S)	NY241928	National Importance	2.95
Scheduled Monument	SM4380	BANK HEAD HILL	SETTLEMENT	NY253928	National Importance	0.62
Scheduled Monument	SM4391	YARDS RIG	FARMSTEAD, SETTLEMENT	NY252921	National Importance	0.62
Scheduled Monument	SM4457 / SM4458	DEIL'S JINGLE, CASTLE O'ER ESTATE	LINEAR EARTHWORK(S)	NY254911	National Importance	1.26
Scheduled Monument	SM4541	CASTLEHILL	SETTLEMENT	NY246949	National Importance	0.33
Scheduled Monument	SM10346	BESSIE'S HILL	SETTLEMENT	NY249955	National Importance	0.66
Scheduled Monument	SM4369	THE KNOWE	LINEAR EARTHWORK(S), SETTLEMENT	NY247922	National Importance	0.75
Scheduled Monument	SM12775	OVER RIG	ENCLOSURE	NY245934	National Importance	1.61
Undesignated		CASTLE O'ER	COUNTRY HOUSE	NY249925	Regional Importance	0.13
Undesignated		KNOCK SIKE, MID KNOCK	SETTLEMENT	NY250914	Regional Importance	0.25
Undesignated		CASTLE O'ER FOREST, LOWER RIG	EARTHWORK	NY248913	Regional Importance	1
Undesignated		LOWER RIG	ENCLOSURE	NY248912	Local Importance	0.2

Undesignated		HLA Relict Area	RCAHMS HLA data; TYPE = Plantation; RELIC TYPES Later Prehistoric Later Prehistoric Settlement and Agriculture / Not Applicable Not Applicable / Not Applicable Not Applicable	NY252921	National Importance	1.07
Undesignated		HLA Relict Area	RCAHMS HLA data; TYPE = Plantation; RELIC TYPES Later Prehistoric Later Prehistoric Settlement and Agriculture / Not Applicable Not Applicable / Not Applicable Not Applicable	NY247922	National Importance	1.04
Undesignated		HLA Relict Area	RCAHMS HLA data; TYPE = Plantation; RELIC TYPES Later Prehistoric Later Prehistoric Settlement and Agriculture / Not Applicable Not Applicable / Not Applicable Not Applicable	NY253928	National Importance	1.02
Undesignated		HLA Relict Area	RCAHMS HLA data; TYPE = Plantation; RELIC TYPES 18th-19th Century Plantation Enclosure / Not Applicable Not Applicable / Not Applicable Not Applicable	NY247936	National Importance	1.1
Undesignated		HLA Relict Area	RCAHMS HLA data; TYPE = Plantation; RELIC TYPES 18th-19th Century Plantation Enclosure / Not Applicable Not Applicable / Not Applicable Not Applicable	NY249938	National Importance	5.23
Undesignated		SANDYFORD BRIDGE	ROAD BRIDGE	NY205936	Local Importance	0.01
Undesignated		OLD GARWALDSHIELS	FARMSTEAD	NY194996	Regional Importance	0.08
Undesignated		GARWALDSHIELS	FARMSTEAD	NY197986	Regional Importance	0.06
Undesignated		BLACK BURN	ENCLOSURE	NY236942	Local Importance	0.02
Undesignated		BIRREN KNOWES, TODSHAWHILL	SETTLEMENT	NY235937	Regional Importance	0.35
Undesignated		CASTLE O'ER ESTATE, OLD ROAD	ROAD	NY248941	Local Importance	0.44
Undesignated		CASTLE O'ER ESTATE	LINEAR EARTHWORK	NY246939	Local Importance	1.07
Undesignated		TWIGLEES	FARMHOUSE, FARMSTEAD	NY224940	Regional Importance	0.34
Undesignated		CASTLE O'ER ESTATE	LINEAR EARTHWORK	NY252929	National Importance	2.44

Undesignated		ESKDALEMUIR, BLACK ESK BRIDGE	ROAD BRIDGE	NY252907	Local Importance	0.02
Undesignated		CASTLE O'ER ESTATE	LINEAR EARTHWORK	NY246937	Local Importance	0.94
Undesignated		CLAY MIRES	BUILDING (POSSIBLE)	NY225952	Regional Importance	0.01
Undesignated		CASTLE O'ER ESTATE	TRACK	NY253920	National Importance	0.35
Undesignated		CASTLE O'ER ESTATE	TRACK	NY254919	Local Importance	0.13
Undesignated		CASTLE O'ER ESTATE	CULTIVATION REMAINS	NY253917	Regional Importance	1.19
Undesignated		MARLSIDE	RING ENCLOSURE(S)	NY219942	Regional Importance	0.39
Undesignated		LOCH RIG	ENCLOSURE, PLANTATION (POSSIBLE)	NT192002	Local Importance	1.8
Undesignated		TWIGLEES	ROAD	NY223945	Local Importance	0.83
Undesignated		CASTLEHILL	BUILDING	NY247948	Regional Importance	0.01
Undesignated		CASTLE O'ER ESTATE	ROAD	NY245932	Local Importance	0.48
Undesignated		CASTLE O'ER ESTATE	LINEAR EARTHWORK	NY250934	National Importance	1.71
Undesignated		WHITEFACED KNOWE	ROAD (POSSIBLE)	NY241973	Local Importance	0.03
Undesignated		CASTLE O'ER ESTATE	ENCLOSURE	NY245928	Local Importance	0.1
Undesignated		CASTLE O'ER	LINEAR EARTHWORK(S)	NY238922	National Importance	5.63
Undesignated		HLA Relict Area	RCAHMS HLA data; TYPE = Rough Grazing; RELIC TYPES Later Prehistoric Later Prehistoric Settlement and Agriculture / Not Applicable Not Applicable / Not Applicable Not Applicable	NY249954	National Importance	4.02
Undesignated		HLA Relict Area	RCAHMS HLA data; TYPE = Rough Grazing; RELIC TYPES Medieval/Post-medieval Medieval/Post-medieval Settlement and Agriculture / Not Applicable Not Applicable / Not Applicable Not Applicable	NY230922	National Importance	15.16
Undesignated		HLA Relict Area	RCAHMS HLA data; TYPE = Rough Grazing; RELIC TYPES Later Prehistoric Later Prehistoric Fortified Site / Not Applicable Not Applicable / Not Applicable Not Applicable	NY241928	National Importance	4.53