Scottish Forestry
Coilltearachd na h-Alba

Woodland Creation Operational Plan

Project Proposal

Business Reference Number:		FGS Case Number: (if known)	
Application name:	**Stidriggs Woodland Creation**		

Introduction

The Woodland Creation Operational Plan allows you to show that you have carefully considered all of the relevant impacts and effects that the work you are proposing might have on the environment, and where appropriate the measures you intend to take to mitigate any adverse effects.

The Operational Plan, including the issues log at Annex 2, can be used to record any pre-application work completed ahead of submitting your woodland creation application (e.g. discussions with stakeholders, site assessment results, etc.).

The Woodland Officer will take account of the details you have given in this Plan when they assess your application and it will also help them to decide on a score for your application.

General Details

You must complete this Woodland Creation Operational Plan and submit it with your Forestry Grant Scheme Woodland Creation application.

The amount of supporting information you give will depend on the scale, location and nature of your application. You should give sufficient detail so that we can properly assess the work you propose. Your local Scottish Forestry (SF) Conservancy office will be able to provide you with further advice about this.

Please note that the Woodland Officer who will assess your application may request further information or clarification about the details you give in this Operational Plan, especially those that may have an environmental impact on the site.

When you have completed your Woodland Creation Operational Plan, save the document to your computer and then upload to your on-line application.

Business Details

What type of entity is the business that is applying for grant?

To assist us monitor who is benefitting from our grant schemes, we would ask that you select one of the following business types that best describes your business entity:

- Farm Business – Owner
- Farm Business – Tenant
- Crofter – including Crofting/Grazing Committees
- Forestry Business
- Investor – including Private/Trusts/Pension Funds
- Mixed Rural Estate
- Small-scale Forestry Owner (your woodland ownership is less than 20ha)
- Conservation Company/Charity/NGO/Carbon Investor
- Developer
- Temporary Owner

Please select your most appropriate Business Type from the dropdown list:
Mixed Rural Estate

General Assessment

The information in your Operational Plan should be based on a thorough assessment of the site. Please complete the following:

Describe the management objectives for the site.

The primary objectives are:-

- **To produce timber in the medium and long term through the establishment of productive coniferous woodland.**

Secondary objectives are:-

- **To combat climate change through carbon sequestration on a medium scale**
- **To enhance the landscape through the establishment of a well-designed and diverse woodland**
- **To protect and enhance biodiversity values through the safeguarding of existing interest and the establishment of native woodland, in tandem with a peatland restoration project**
- **To protect both features of archaeological significance and their setting**
- **To provide low-key recreational opportunities.**

Provide a description of the planting site.

Location and Context

The proposed woodland creation scheme occupies the majority of Stidriggs Farm, which is owned by Annandale and Lochwood Estates, and is farmed under a short duration limited tenancy by the tenants of Newfield Farm, which is also owned by Annandale and Lochwood Estates. The parts of the farm outwith the proposed woodland will be retained in agricultural use or form part of a peatland restoration project

Stidriggs farm steading lies 2.5 km south west of Beattock, and 5 km south west of Moffat, in Dumfries and Galloway.

The land lies on rising ground to the immediate west and south of the Kinnel Water, which is separated from by a shallow ridge of higher ground. Moffat lies near the head of Annandale, and the valley carries the M 74 and main west coast railway line.

The farm is bounded to the west by extensive woodland cover in the form of the Forest of Ae and Beattock Forest, both of which are managed by Forestry and Land Scotland, while Broadshaw Forest, owned by Annandale Estate, lies to the southwest.

Newbank Farm lies to the east of Stidriggs, which is also tenanted from Annandale Estate.

Stidriggs farmhouse is vacant, while there are a handful of houses in fairly close proximity to

Stidriggs.

The farm steading is accessed from the U 316 public road, which connects to the A 701 (Moffat-Dumfries) road. The Timber haulage Road which serves the Forest of Ae runs along the southern boundary of the site.

The woodland creation proposal will be progressed through the Scottish Rural Development Programme. As part of the process a range of specific surveys have been completed and consultation with stakeholders has been undertaken. The information gathered during the survey and assessment exercise has been used to inform the detailed designed proposals.

It should be noted that many of the surveys covered a much larger area than is contained within the proposal, and that the results of the soils, ecology, and archaeology surveys were instrumental in deciding the location and extent of the proposal.

In addition to the Operations Plan, Components Table, Issues Log and Annex 1, the following documents are included in the application:

Maps and Appendices

Map 1	Location, Context & Viewpoints	1:25,000 scale
Map 2	Constraints & Opportunities	1:10,000 scale
Map 2a	Habitats and Birds/EPS (confidential version)	1:10,000 scale
Map 2bi	Archaeology - North	1:7,500 scale
Map 2bii	Archaeology - South	1:7,500 scale
Map 3	Soils/ESC	1:10,000 scale
Map 4	Concepts Map	1:12,500 scale
Map 5	Woodland Design	1:10,000 scale
Map 6	Fencing and Gates (with roadline)	1:10,000 scale
Map 7	Options and Operations	1:10,000 scale
Appendix 1	Soils Report	Andrew McQueen Silviculture
Appendix 2	Ecological Assessment	Cameron Ecology
Appendix 3	Archaeological Survey	Calluna Archaeology
Appendix 4	Visual Perspectives (including Scheduled Monument Intervisibility and Setting)	MHLS
Appendix 5	Private Water Supply Assessment (confidential version)	EnviroCentre

Appendix 6	Agricultural Impact Assessment (in preparation - confidential version)	MHLS
Appendix 7	Deer Management Plan (in preparation)	SW Ltd./MHLS

Extent

Stidriggs Farm extends to ~461 ha. The proposed woodland application extends to 268.92 ha in total, which includes 203.39 ha of planting, 23.15 ha of grant-eligible open ground, and 42.38 ha of 'other land'. The other land comprises of deep peat (14.5 ha), existing woodland (5.23 ha), and 'excess' open ground (22.65 ha). This latter category includes a corridor of land which will be used for road construction

As noted above, some land with Stidriggs will remain in agricultural use, while it is expected that the balance of land will form part of a peatland restoration project.

Land Use

Stidriggs is farmed under a Short Limited Duration Tenancy by the tenants at Newbank Farm, which lies to the immediate east of Stidriggs. It is understood that they have farmed the land at Stidriggs for the past 40 years or so.

The farm is operated as an upland stock reading unit (for both cattle and sheep). The large majority of the ground is in rough grass, but around 18% of the land is in improved or semi-improved pasture, including land used for silage production. In terms of Land Capability for Agriculture, over 80% of the farm land is LCA 5, and over 15% is LCA 6. Roughly 3% is LCA 4. The steading offers basic stock handling facilities but is largely unused, with the land being farmed from Newbank.

The woodland application area extends to 268.92 ha. Two areas on the farm have been identified for definite retention in agriculture. These are:-

1. Fields of improved and semi-improved pasture to the north and south of Stidriggs farm steading, extending down to the Kinnel Water, and taking in Stidriggs Hill Fort as well as the farmhouse and steading (35.29 ha)
2. A couple of fields, mainly in good quality grass, lying south of the Timber Haul Road, and north of Ingleston (11.5 ha)

In addition three further areas have been identified as containing land potentially suitable for peatland restoration. These include:-

1. Haw Moss – bog habitats, in the east of the site, adjoining Newbank Farm (39.83 ha)
2. West of Knockilsine Hill - modified bog next to next to the Forest of Ae (17.33 ha)
3. North-west of the Farm – a mosaic of bog and other habitats, including acid grassland, extending down to the Kinnel Water (88.09 ha)

It is anticipated that agricultural stock will have to be removed from all three of these areas if the peatland restoration proceeds, even although there are large areas on mineral soils in area 3. However, It is likely that once the peatland restoration has been completed that some form of agricultural grazing will be available, and actively encouraged on areas 2 and 3. Area 1 is small, with very limited grazing potential, and is isolated from other grazed land.

Based on the above assumptions, it is estimated that 414 ha of the farms 461 ha will be removed from agriculture in the short term, albeit it that only 268.92 ha will be included in the application area.

The table below sets out Land Capability for Agriculture for the farm, and for the area which will definitely be retained in agriculture.

Analysis of Land Capability for Agriculture

LCA	Within farm boundary		Removed from agriculture			Retained in agriculture		
	(ha)	%	(ha)	% of removed	% of Total	(ha)	%	% of Total
4	14.0	3.0%	2.7	0.7%	19.6%	11.3	24.1%	80.4%
5	371.9	80.7%	336.4	81.2%	90.5%	35.5	75.9%	9.5%
6	75.1	16.3%	75.1	18.1%	100.0%	0.0	0.0%	0.0%
Total	**461.0**	**100.0%**	**414.2**	**100.0%**		**46.8**	**100.0%**	

In summary, around 80% of the land within the farm, and within the application area, is LCA 5, with only 3% of the farm's land being of higher quality (LCA 4). All of the LCA 6 land will be removed from agricultural use, along with 90% of the LCA 5 land, while over 80% of the LCA 4 land will remain in agriculture.

Pastoral agriculture is the predominant land use in the wider area, notably within Annandale where high quality farmland is located by the river, but forestry is a significant land use, particularly on the land to the west of Stidriggs. The higher ground here is dominated by large-scale productive forests, including the Forest of Ae and the Beattock Forest complex, both of which are managed by Forestry and Land Scotland (FLS). Annandale and Lochwood Estates are also major woodland owners, primarily to the south of Stidriggs.

The table below sets out a crude breakdown of woodland cover within a 7.5 km radius of Stidriggs. The overall total figure is broken down into three simple categories, which broadly reflect the level of detail available on the National Forestry Inventory(NFI) data; namely 'coniferous', 'broadleaved', and 'felled'. The exceptionally high component of 'felled' woodland reflect two major factors. Firstly there has been extensive felling associated with two large windfarms (with power generation also being another notable land use in the area) and secondly the FLS-managed forests have reached their peak production phase, which extensive felling being required to avoid windblow issues among over-mature crops. It is also thought that the NFI has not been fully updated.

While much of this felled ground will have been, or will be, restocked to productive woodland, there will be an overall increase in open ground both associated with the windfarm's infrastructure and functioning, and with the required diversification of the Sitka spruce-dominated forests. This latter factor will also result in an increase in species diversity, with a higher proportion of diverse conifers and native broadleaves.

There have been a few small and medium scale woodland creation schemes in recent years; these figures are shown under the 'recent planting' heading.

Assessment of Woodland Cover

Woodland Type	Areas on NFI	Recent Planting	Total Woodland	% of 7.5 km radius
Broadleaved	860	39	899	5.09%
Conifer	2,025	222	2,247	12.72%
Felled	3,243	n/a	3,243	18.37%
Totals	**6,128**	**261**	**6,389**	**36.18%**

Total woodland cover in the 7.5 km radius is estimated as being around 36%, but as noted above, this figure assumes that all of the felled woodland will be restocked, which will not be the case (for the reasons noted above). The large percentage of 'felled' woodland makes in difficult to give an accurate figure for the proportion of coniferous cover, but it is recognised that the large majority of the restocking of felled woodland will be of coniferous species.

There are a handful of residential properties within 500 m of the site. Two are served by private water supplies that rise within the site, although one, at Stidriggs, is uninhabited.

Topography

The farm occupies ground to the south and west of the Kinnel Water, and east of higher ground occupied by the Forest of Ae. The farm's northern boundary lies on the river, but generally the eastern boundary lies on rising ground above the river. The site itself is largely set back from the river, and it takes in noticeably undulating ground, punctuated by oval-shaped hills and ridges generally orientated on a north-south axis. The hills are fairly steep, notably on their northern and eastern sides. These hills include:-
Knockilsine Hill - the largest and highest hill (at 307 m above sea level), dominating the west central section of the site
Little Knockilsine Hill - a subsidiary summit to the south-east of Knockilsine Hill, rising to 301 m in the centre of the site
Middle Rig - a shallow hill in the south-west, at 285 m above sea level
Knockbuith Hill – takes the form of a ridge protruding north from the centre of the site, falling steeply towards flat ground by the Kinnel Water. It has a flat summit, at 250 m above sea level
League Hill - a rounded hill in the south-east. Although it rises to only 272 m above sea level, it is key local landmark, due to its isolated location and the presence of a radio mast on its summit
Willie Wilkin's Craig - a small, unremarkable dome rising to 262 m above sea level with long, steep slopes to the east (mainly outwith the site)
Stidriggs Hill – while not named as such, this hill is marked by the presence of Stidriggs Hill Fort. Although only 240 m above sea level, and really just a subsidiary summit of Willie Wilkin's Craig, Stidriggs Hill falls sharply to the east and north and forms a prominent feature as seen within the Kinnel Water valley.

These hills are separated by a series of interlinked shallow valleys and hollows, including noticeably flat tracts of ground on Haw Moss and south of the Kinnel Water; both of these areas are outwith the site. Gradients rarely exceed 20%, and are generally much shallower.

As noted, the site's highpoint is on Knockilsine Hill, at 307 m above sea level while the low point, on the northern boundary by the Kinnel Water, is roughly 190 m above sea level.

On the far (eastern side) of the Kinnel Water, a long, low ridge of ground separates the Kinnel Water Valley from Annandale. West of the site the land rises gradually into the Lowther Hills, which reach over 600 m above sea level on the South Lanarkshire border.

Soils

Soils and peat depth surveys were undertaken by Andrew McQuen Silviculture (see Appendix 1 and Map 3). The soil survey entailed an examination of the Hutton soil survey map, and the excavation of soil pits supplemented by angering, to determine soil type. Areas where there was the potential for peat depth to exceed 50 cm were peat probed, with a more intensive probing being undertaken where part depth was found to exceed 50 cm

A range of soil types were recorded:-

Brown earths - two large areas of brown earths were recorded, on Stidriggs Hill and League Hill, while much smaller pockets were recorded on some of the other hills. Soil moisture regime (SMR) was fresh, and soil nutrient regime (SNR) was generally 'poor', with some 'medium' and some 'poor-very poor '(where podzolisation was evident). Vegetation cover primarily comprises of semi-improved grass

Mineral Gleys - these soils occurred extensively in the north- notably on Knockbuith Hill and Willie Wilkin's Craig, and the land sloping towards the Kinnel Water, with smaller (and sometimes unmappable) pockets elsewhere. SMR was generally 'moist-very moist', and SNR 'medium'. It is likely that some of these soils have been tile drained, and consequently they may become wetter as the drains fail. Semi-improved grasslands and marshy grasslands are the most common vegetarian types.

Peaty Gleys - the most common soil type, occurring over flatter and lower ground throughout except for the north-east, supporting wet heath and marshy grassland. SNR varies between very poor and poor-very poor, and SMR between 'very moist' and 'wet'

Peaty Podzols - podzolic soils are present on the hills and ridges in the central and southern parts of the site. Most have a peaty A horizon, but some are more akin to ironpan soils, and lack a defined peaty layer. SMR varies from 'moist' to 'wet', and SNR is generally 'poor-very poor'. There is a strong correlation between the podzolic soils and acid grassland vegetation.

Alluvial Soils – A small area of alluvial soils is present in the northernmost part of the site, adjacent to the Kinnel Water. SMR is thought to be 'fresh' and SNR to be medium. Improved grassland is encountered on these soils.

Rankers – Small areas of ranker soils were recorded, but were too small to map. These shallow soils occurred on and around hill summits in the main.

Deep Peat - many of the hollows lying between the hills and ridges in the central and southern sections of the site contain deep peats, most notably on Haw Moss and to the west of Knockilsine Hill, as well as round the Eyre Burn, by the Kinnel Water. Smaller pockets occur throughout the site. Most of the deep peat supports bog and mire habitats. The larger areas of deep peat are excluded from the application area, and peat restoration opportunities are being actively pursued.

Drainage

Stidriggs lies with the River Annan catchment, with all of the site draining into the Kinnel Water, which is a major tributary of the Annan.

The Kinnel Water forms the northern boundary to the farm, and the site has a very short frontage onto the river (albeit at 20 m distance). A number of small tributaries flow north or eastwards into the Kinnel Water, including the Eyre Burn, Fauld Burn, Green Burn, Whirly Burn, Slota Burn, Cotland Burn and League Burn. In the south of the site, the Inner Burn, Barntimpen Burn and Special Burn

flow southwards to join the Broadshaw Burn, which is a tributary of the Kinnel Water. None of the aforementioned burns are generally wider than 1 m, and within the site itself they are insignificant features. The Kinnel Water is ~5-8 m wide in places as it flows past the site.

SEPA's Water Classification Hub indicates that the Kinnel Water has been in 'good' ecological condition for the past three years, having previously been rated as 'poor'. The Broadshaw Burn has a similar pattern. Both watercourses rise in the Lowther Hills. The Kinnel Water supports populations of salmon, brown trout and grayling.

There are no significant areas at high likelihood of flooding within the site, but the area south of the Kinnel's confluence with the Annam Annan is at high risk of flooding.

Cultural Heritage

Stidriggs Farm contains both numerous and extensive features of archaeological interest, including four Scheduled Ancient Monuments (SAM's), and almost 40 features listed on Canmore and the Council's Historical Environment Records. The HER also identifies a number of 'Archaeological Interest Areas', and the northern/north-eastern quarter of the farm as being within an 'Archaeologically Sensitive Area'. The wider locality also contains a high level of interest, including features which have a relationship to ones within the site, notably prehistoric hill forts and settlements

In view of the level of known interest, Calluna Archaeology were commissioned to undertake an archaeological survey and assessment. A copy of the Report is contained as Appendix 3. It should be noted that the survey covered the entire farm.

The broad results of the archaeology survey, coupled with those of ecological and agricultural considerations, lead to the removal of large parts of the farm, and areas of archaeological significance, from the application area.

The Archaeological Report identified 130 features, including the 4 SAM's and 38 features recorded on Canmore and in the HER. The table below lists all 130 features and gives their Canmore and HER numbers alongside a brief description and a note of their significance. It should be noted that a handful of sites are outwith of the farm boundary, and that the 'Archaeologically Sensitive Area' has been assigned a number. The report identifies and maps an 'Extended Area of Archaeological Activity', which covers the northern 60% of the farm.

Archaeological Features

Site No.	Canmore ID	HER no.	Significance	Description
01			Regional	Archaeologically Sensitive Area (Beattock Hill)
02	87595	MDG9777	National	Cairnfield (8 cairns)
03	87594	MDG9772	National (SAM)	Scooped settlement
04	87596	MDG9778	National	Cairnfield (22)
05	73070	MDG8909	Regional	Burnt mound
06	48403	MDG314	Regional	Burnt mound
07	72481	MDG8864	Other	Field boundary, bank
08	72825	MDG4675	Local	Four cairns

09	66376	MDG9327	Regional/ Local	Cairns, buildings & enclosures
10	48431	MDG341	National	Iron Age Building; cairn; settlement; scooped settlement
11	81034	MDG9312	Local	Medieval/19th century building; enclosure
12	81032	MDG6705	National (SAM)	Medieval/19th century; cultivation terrace; building; rig & furrow; cairn; enclosure
13	81035	MDG9328	Local	Earth bank and cultivation
14	74374	MDG6760	Regional	Burnt mound
15	74372	MDG5432	None	Burnt mound
16	74373	MDG6759	Regional	Burnt mound
17	357274	MDG27371	Unknown	Building (medieval/post-medieval)
18	81031	MDG9326	Regional	Cairn (kerbed?)
19	357222	MDG27376	Regional	Hut circle
20	74370	MDG8932	Regional	Burnt mound
21	68360	MDG8916	Other	Enclosure; rig & furrow
22	90163	MDG10073	Local	Stidriggs Farm
23	90176	MDG10082	Local	Cairns
24	73732	MDG 7235	Regional	Burnt mound
25	66344	MDG6725	National (SAM)	Settlement; fort
26	78837	MDG 9202	Local	Rig & furrow
27	73736	MDG7157	Regional	Burnt mound
28	73742	MDG7158	Local	Cairnfield
29	73717	MDG8910	Regional	Burnt mound
30	74376	MDG5430	Regional	Burnt mound
31	66347	MDG6728	National (SAM)	Burial cairn?
32	73735	MDG7170	Regional	Burnt mound
33	73734	MDG7184	Regional	Burnt mound
34	66360	MDG6741	Regional	Enclosure; building; scooped settlement
35	73733	MDG7236	Regional	Burnt mound
36	73719	MDG7284	Regional	Burnt mound
37	73721	MDG7281	Local	Structure
38	73722	MDG7253	Regional	Burnt mound
39			Local	Cairn/?building
40			*Local*	Track
41			*Local*	Cairn
42			*Local*	Quarry
43			*Local*	Drystone wall
44			*Other*	Earth bank
45			*Local*	Cairn (clearance)
46			*Local*	Cairn (clearance)
47			*Local*	Sheepfold
48			*Local*	Cairn (clearance)
49			*Local*	Cairn (clearance)
50			*Local*	Cairn (clearance)
51			*Local*	Cairn
52			*Other*	Earth bank
53			*Other*	Earth bank
54			*Regional*	Circular enclosure
55			*Local*	Sheep shelter
56			*Other*	Earth bank

57			*Local*	Cairn (clearance)/?quarry
58			*Other*	Earth bank, enclosure
59			*Local*	Cairn (clearance)
60			*Local*	Cairn (clearance)
61			*Local*	Circular feature/quarry?
62			*Regional*	?Burial cairn
63			*Local*	Cairn (clearance)
64			*Local*	Sheepfold
65			*Local*	?Cairn
66			*Local*	Cairn
67			*Local*	Cairn
68			*Local*	Quarry
69			*Local*	Sheep pen
70			*Other*	Earth bank
71			*Local*	Revetted wall
72			*Local*	Cairn
73			*Regional*	Burial cairn
74			*Local*	Cairn
75			*Local*	Linear cairn/?building
76			*Local*	Cairn
77			*Local*	Cairn
78			*Local*	Cairn
79			*Local*	Cairn (robbed?)/stook base?
80			*Local*	Oval-shaped enclosure
81			*Local*	Cairn (clearance)
82			*None*	Drain
83			*Local*	?Building
84			*Local*	?Building
85			*Local*	?Building
86			*Local*	?Building
87			*Local*	Cairn (excavated?)
88			*Other*	Enclosure
89			*Local*	?Building
90			*Local*	Old quarries
91			*Local*	Cairn (clearance)
92			*Local*	Drystone wall
93			*Other*	Earth & stone bank
94			*Local*	Cairn (clearance)
95			*Local*	Cairn (clearance)
96			*Other*	Earth & stone bank
97			*Local*	Cairn (clearance)
98			*Local*	Cairn (clearance)
99			*Local*	Footbridge
100			*Local*	Cairn (clearance)
101			*Local*	Drystone wall
102			*Local*	?Corn-drying kiln
103			*Regional*	Drove road
104			*Local*	Cairn (clearance)
105			*Other*	Earth bank
106			*Local*	Cairn/?building

107			*Local*	Cairn (clearance)
108			*Local*	Cairn (clearance)
109			*Local*	Cairn (clearance)
110			*Local*	?Building
111			*Other*	Enclosure
112			*Other*	Earth & stone bank
113			*Regional*	?Hut circle
114			*Regional*	Large cairn
115			*Local*	?Building
116			*None*	Gate
117			*Local*	?Cairn
118	81036	MDG9329	*Local*	Robbed cairn
119			*Other*	Earth & stone bank
120			*None*	Drainage ditch
121			*Local*	Sheep shelter
122			*Regional*	Circular feature/?hut circle
123			*Regional*	Burnt mound
124			*Other*	Rig and furrow
125			*Local*	Cairn (clearance)
126			*Local*	Cairn (clearance)
127			*Local*	Large earth-banked enclosure
128			*Local*	Old gravel pit
129			*Local*	Cairn
130			*Local*	Cairn
131			*Regional*	Possible site of 18th century settlement

Most of the scheduled and recorded features relater to prehistoric settlement and defensive features, and to medieval settlements and agricultural activities.

The aforementioned analysis of the farm's suitability for woodland creation resulted in the exclusion of three of the four SAM's being excluded from the application area. Initial discussion with Historic Environment Scotland indicated that they had concerns about the impacts on designated sites, particularly in terms of the intervisibility of related features within and outwith the site. However, following the production of intervisibility analysis, and visual perspectives, followed by a site visit with the Council's Archaeologist, HES confirmed that they were content. Following the site visit and an assessment of the archaeological report the Council Archaeologist provide further comments regards the significance of certain features.

Ecological Interest

Designations

There are no known statutory designated sites of conservation interest either on the site or in the surrounding area. Stidriggs Wood is classed as being 'Ancient, of Semi-Natural Origin'.

Habitats

Given the size of the site, and the preponderance of semi-natural habitats, Cameron Ecology were engaged to carry out a Phase 1 and NVC habitat survey (along with other ecological survey and assessment work). It should be noted that the surveys covered the entire area of Stidriggs Farm, as

well as a buffer zone around the property.

A full copy of the survey and assessment Report is contained as Appendix 2. The table below sets out the habitats recorded within the farm as a whole and within the application area. The application area has a higher proportion of marshy grassland, and a lower proportion of improved grass, blanket bog and modified bog, than the farm as a whole. This is largely as there was an effort to retain most of the good ground in agriculture, and to exclude areas of bog which may be suitable for peat land restoration (and unsuitable for planting)

Within the application area, marshy grassland is by some way the most common habitat, covering 42.5% of the areas and there are sizeable tracts of improved, semi-improved and unimproved acid grassland, together covering 34.2%. Wet heath occurs frequently, as does bracken, and there are fair-sized tracks of blanket and wet modified bog within the application area, although these are unsuitable for planting.

Analysis of Habitats within the Application Area

Phase 1 code	Habitat Type	Main NVC types/notes	Farm (ha)	% of Farm	App. site (ha)	% of Site
A1.1.1	Semi. Nat. woodland	W11, W7	8.8	1.9%	6.7	2.4%
A1.3.2	Mixed plantation	W10, W7	0.4	0.1%	0.0	0.0%
A2.1	Scrub	bog myrtle	0.1	0.0%	0.0	0.0%
B1.1	unimp. acid grass	U4a	68.9	15.0%	50.6	18.3%
B1.2	semi. Imp. acid grass	U4b	27.4	5.9%	12.7	4.6%
B3.1	unimp. netral grass	M23a	0.7	0.1%	0.0	0.0%
B4	imp. grass	MG6	43.2	9.4%	19.7	7.1%
B5	Marshy grass	M25, M23a, M23b	172.2	37.4%	117.5	42.5%
B6	semi. Imp/ grass	U4b	11.5	2.5%	11.5	4.2%
C1.1	Bracken	U20c	6.9	1.5%	4.4	1.6%
C1.2	Scat. bracken	U20a	18.4	4.0%	9.2	3.3%
D2	Wet heath	M15b	33.2	7.2%	27.0	9.8%
E1.6.1	blanket bog	M17	14.3	3.1%	1.3	0.5%
E1.7	modified bog	M20, M17, M15	42.3	9.2%	12.0	4.3%
E1.8	Dry bog	H12	5.5	1.2%	1.5	0.6%

E2.1	Acid flush	M6c, M6d, M15	4.8	1.0%	1.6	0.6%
G1.1	Running water		0.7	0.2%	0.0	0.0%
J4	Tracks/other		1.4	0.3%	0.5	0.2%
Total			**460.7**	**100%**	**276.3**	**100%**

A habitats are shown in detailed within the Ecological Report, and in summary on Map 2a -Ecology.

The Report identifies the following three habitats as being 'unsuitable' for planting. These are mapped on Map 2 – Constraints.

Sensitive Habitats

Habitats	NVC Types	Location
Peatlands	Including M17, some M15 and M20 as well as flushed area (M6, M15a).	Most of the peatland habitats are outwith of the application area.
Species rich wet grasslands	Mainly species rich M23a, with small areas of unimproved natural grassland (MG1c).	Most of these areas are in the north of the farm, and on Haw Moss – both of these areas are outwith the application boundary.
Native Woodland	Includes Stidriggs Wood (NVC W11) and wooded fringes of Kinnel Water (NVC W7).	Stidriggs Wood is within the application area but the woods by the Kinnel Water are outwith.

It is worth noting that deep peat is present beneath some marshy grassland and wet heath habitats as well as below blanket and modified bog.

The report also identifies habitats of lesser value, where native woodland planting and some retention of open ground would be ecologically beneficial. These include less-diverse wet grasslands (M23a) and Molinia-dominated grasslands, often next to peatlands, with concentrations around the Whirly and Barntimpen Burns, and north of Haw Moss. These areas are shown as being 'amber' on the Report maps.

The Report also identifies five opportunities for habitat enhancements, as set out below:-

1. Peatland restoration – peat habitat is being degraded by drainage and regeneration of Sitka spruce
2. Native woodland management – Stidriggs Wood is lacking the recruitment of successor trees and shrubs
3. Native woodland expansion – notably next to Stidriggs Wood, and where bracken, underlain by bluebells, occurs
4. Native woodland connectivity- linkage between Stidriggs Wood and the Kinnel water woodland strip is recommended
5. Creation of ponds/scrapes – this could benefit waders and other wildlife.

Existing Woodlands

Stidriggs Wood is the only woodland of note on the property. It occupies the northern and eastern flanks of Stidriggs Hill, below Stidriggs Hill Fort, and above the Kinnel Water's floodplain. The woodland is fragmented, but covers around 5.2 ha in total. It is classed as an 'Ancient, semi-natural woodland', and is somewhat unusual in that respect in that it is situated on an open hillside rather than being confined to step sided gully.

A few veteran oaks are present, along with more numerous and younger birch, with hazel, ash and willow also being present. The ground flora includes ancient woodland indicators, such as bluebell, wood avens, and germander speedwell. However, bracken is dominant in many of the frequent glades. As the woodland is open to grazing and to deer, the natural regeneration that does occur isn't able to develop.

In addition there are small fragments of woodlands around the farm steading, by a stretch of the Kinnel Water, and along the Whirly Burn, while Sitka spruce is regenerating on some of the bog habitats, notably by the Kinnel Water and Eyre Burn.

Birds

Cameron Ecology undertook a Breeding Bird Survey to assess the site's value to breeding birds, entailing 4 visits during spring and early summer of 2023, and incorporating a black grouse survey.

In total 52 species were recorded on or near the property as a whole, 42 of which were thought likely to be breeding.

Of these, 21 are either red or amber listed in the Birds of Conservation Concern list (BoCC) (7 red and 14 amber). These species are detailed in the table below, together with some commentary. It should be noted that the numbers are generally based on maximum counts from across the 4 visits rather than the number of breeding territories.

Breeding Birds Results

Species Name	No. of regs.	BOCC	Comment
Cuckoo	3	R	Several individuals noted
Curlew	9	R	Two territories interpreted from the data as shown in Figure 3 (both outwith site)
Dipper	1	A	Not recorded in desk study, present on watercourses
Grey Wagtail	3	A	Watercourses - various locations
Kestrel	2	A	Hunting over open ground

Lesser Redpoll	4	R	Scrubby areas to north
Linnet	3	R	In bog myrtle in NE
Mallard	2	A	Not recorded in desk study
Meadow Pipit	-	A	Commonest open ground bird. Not recorded individually.
Mistle Thrush	5	R	Spending time in open ground on hillsides
Reed Bunting	9	A	In and around wet grassland areas
Rook	2	A	Farm buildings
Skylark	138	R	Shown in Figure 4
Snipe	9	A	Shown in Figure 3 (5 territories)
Song Thrush	1	A	Forest edges
Sparrowhawk	2	A	Display flights from 2 males noted in raptor surveys - both over forestry to N
Tawny Owl	1	A	heard only - forestry to W
Wheatear	8	A	around walls throughout
Whinchat	3	R	3 territories, shown on Figure 4

Willow Warbler	9	A	abundant in forest edges
Wren	14	A	Stidriggs Wood

Many of the 33 green-listed breeding birds are associated with woodland and scrub, and were recorded in Stidriggs Wood or on the edge of the Forest of Ae. Species of note include blackcap, jay, long-tailed tit, nuthatch and siskin.

Raptors recorded on the farm include tawny owl, buzzard, red kite, kestrel and sparrowhawk. Wader interest was confined to curlew and snipe (2 and 5 pairs respectively), and the BTO wader sensitivity mapping did not show any particular sensitivities for the area. Curlew and snipe territories are shown on Map 2a.

No signs of Black grouse were recorded and there are no known leks in the locality.

Protected Species and Other Species

Cameron Ecology undertook a walkover protected species survey in tandem with the habitats survey.

Thirteen badger setts were recorded. Virtually all of them were located in the north of the site or in Stidriggs Wood. Six are located within the application area, including 3 within Stidriggs Wood, and outwith the proposed application boundary (see Map 2a -Confidential version).

An otter spraint was found by the Kinnel Water, and the report concludes that otters will forage along the river and elsewhere on site, including along minor watercourses and around any pools. No signs of water voles were observed.

A range of butterfly species were observed, as were frogs and common lizards. Brown hares and foxes were also recorded.

Roe deer were recorded, and Fallow deer were seen within the Forest of Ae on several occasions. Hares are present in low numbers, but no signs of rabbits were noted.

Landscape Interests

Designations

There are no known landscape designations affecting Stidriggs.

Description and Analysis

The site itself is characterised by the presence of numerous hills and ridges; for the most part the slopes are gently, but steeper slopes are evident in the north and north east. The hollows between the hills are ;largely hidden from view. The presence of linear shaped improved grass fields, and

pockets of semi-improved grass on some ridges, contrasts with the appearance majority of the site, which supports wet heath, marshy grassland and bog habitats.

Given the lack of trees and filed boundaries, there is a general lack of enclosure, but the landscape is more intimate and enclosed in the north, around the farm steading.

Stidriggs Wood, an ancient, semi natural woodland, forms a prominent and attractive feature in the more visible north-east of the site, but otherwise woodland cover on site is very limited. A number of archaeological features, including hill forts and settlements, are clearly visible on site, providing focal points of interest

While the site has somewhat neglected air, the only significant visual detractor is the radio mast in the south-east of the site.

In terms of landscape setting, the farm nestles into the large scale plantations within the Forest of Ae and Broadshaws Forest, which envelop the site to the south, west, and north. These plantations occupy higher ground in the main, and despite ongoing restructuring, they still exhibit very limited visual diversity. The numerous turbines on Harestanes and Minny Gap Wind farms are often visible above the Forest Of Ae.

The landscape to the east of the farm is more intimate and diverse, with pastoral agriculture being the predominant land use. Improved grass fields, with trees and hedges, are common between the Kinnel Water and the sites eastern boundary, but more open moorland is predominant on the low lying land north-east of Stidriggs.

<u>Guidance</u>

Stidriggs lies within NatureScot's 'Foothills- Dumfries and Galloway Landscape Character Type (175) which equates to the 'Foothills' Landscape Character Area (LCA), as defined by the Dumfries and Galloway Landscape Assessment (Land Use Consultants, 1998).

There is no guidance given in NatureScot's classification, and the latter document is light on woodland-specific guidance, although it notes the following:-

"Forestry could enhance or at least be appropriate in this landscape. However, the predominant land use is agriculture and should remain so. There is however varying capacity within the identified foothills units to accommodate forestry and woodlands.

Planting applications should be assessed against the desirability of preserving the dominance of the agricultural landscape by leaving medium to large scale open areas enclosed within an open pattern of forest i.e. of medium scale, but of linear informal configuration rather than isolated blocks. This might allow a relationship with ridges and valleys.

Important access and views to high ground should however be kept open. Many foothills areas contain significant archaeological remains. Any further planting should respect this leaving significantly large areas unforested to allow fully appreciation and understanding of the significance of the sites.

The more sheltered valley and depressions of this landscape type support and offer opportunities for semi-natural woodland management and for broadleaf planting. Support should be given for proposals that realise these opportunities."

In reflection of the above, the relevant summary guidelines state:

- *seek to maintain large and open areas of land within forest, and to retain the general dominance of agricultural land uses*
- *seek to achieve an open framework of forest and woodland related to the incised landforms*
- *seek to provide management for semi-natural woodlands and encourage broadleaf woodland planting in valleys integrated with new or existing forests*

The 'Landscape Design Guidance for Forest and Woodlands ' (DG Council, FCS, SNH, 1998) does give more detailed guidance for the 'Foothills' LCA, as well as identifying opportunities and constraints, as noted below:-

Opportunities and Constraints
○ *Opportunities for increasing woodland cover are variable, with moderate potential in some areas. Open agricultural land, however is an important feature in some parts of the Foothills Landscape and should remain the dominant land use.*
○ *Planting should be avoided in areas where there are particularly striking examples of strong field patterns, with stone dykes and line of trees, and in vicinity of important archaeological sites.*
○ *Sheltered valleys and depressions offer opportunities for establishing a predominantly broadleaved and mixed woodland, including the management of existing woodlands. Native broadleaves should be introduced in strategic locations where they will most benefit conservation and amenity.*
Design Guidance
○ *Design and restructure forests to reflect the underlying landform with large-scale, simple shapes and forest margins that taper at open ground.*
○ *Recognise transitions between large-scale upland landscapes, where simple extensive forest units would be appropriate, and smaller landscape patterns at lower elevations, where field enclosures dominate.*
○ *It is appropriate to use a relatively low number of species within the extensive forest units in upland zones but at lower elevations, and on internal and lower forest margins, a more varied mix of species is desirable.*
○ *Areas of forest and areas of open agricultural land should be sufficiently extensive to reflect the broad scale of the underlying landform; smaller woodland and a more diverse pattern of woodland cover on lower slopes will enhance lower forest margins and help to emphasise local landscape character.*
○ *Retain opportunities for extensive, panoramic views, particularly from well – travelled roads and footpaths.*

Visibility

Despite its size, Stidriggs is generally of low visibility. This in in part due to its elevated located above the Kinnel Water, and to higher ground being present to the west. Further, there are a limited number of visual receptors, and these are generally low-key. The location is essentially rural, and

the land to the west and north is virtually unpopulated. Even where visual receptors are theoretically present, intervening woodlands and trees frequently limit visibility.

While there is a scattering of houses on the eastern fringes of the site, none have clear views of the site, and there are no settlements of any size with views onto site. While Annandale forms a major transport corridor, there are no views of the site available from the M74 and the west coast railway.

Where available, visibility is largely confined to the eastern most slopes, and the area around Stidriggs Hill and Wood.

The table below provides a description of key and potential viewpoints:-

Viewpoint Descriptions

Viewpoint/ Grid ref.	**Comments**
The U 316 NY 072996	Clear views over the eastern parts of the site are available from the U 316 road as it descends towards the Kinnel Water. The central skyline is formed by League Hill and Knockilsine Hill, topped by turbines on Harestanes windfarm, with the more distant and higher Lowther Hills visible to the north. Stidriggs Wood is visually prominent, as is the mast on League Hill but most of the site appears to be relatively uniform and open.
The U316/ Annandale Way NT 067988	The south-eastern part of the site is visible from the road, which forms part of the Annandale Way, with League Hill and the slopes of Willie Wilkin's Craig forming the skyline, with no longer distance views being available. The site, and the land is the foreground is dominated by open fields of improved and unimproved grasslands, with very limited enclosure, aside from a network of dykes. The margins of Stidriggs Wood are visible to the north.
Crooked Road/Southern Upland Way NS 063018	The elevated position of the road allows middle distance views onto the northern part of the site, although intervening topography and trees often restricts visibility of the site. The improved grass fields in the lower parts of the farm contrasts with the rough moorland vegetation on the rounded hills above. The hard linear edge of the Forest of Ae frames the site to the west, and numerous wind turbines are visible on the skyline above. Views down the Kinnel Water valley are framed by woodlands, including the remaining fragments of Stidriggs Wood, but generally there is limited enclosure.
West and South	Visibility from the west and south is very limited. The Forest of Ae blocks any views from the west, and hills and woods limit views from lower ground to the south. There is a general absence of visual receptors, most notably to the west.
North and East	There are few visual receptors to the north, with views from the M 74, the railway, and Beattock being prevented by intervening topography and trees. Limited and long-distance views are available from elevated ground to the east, with the Forest of Ae, Harestanes windfarm and the Lowther Hills dominating any such views

Landscape perspective images have been produced to show the impact on key views (see Appendix 4).

Adjoining Woodlands

Stidriggs Farm shares its long boundaries with the Forest of Ae (in the west and north-west and with Broadshaw Forest in the west and southwest. These properties are manged by Forestry and Land Scotland and Annandale and Lockwood Estes respectively.

However, the proposed application site shares limited boundaries with woodland on neighbouring ground. Where existing woodlands do border the application site they are generally composed of mid rotation Sitka spruce. The neighbouring properties Land Management/Long -Term Forst Plans indicate that continuation of Sitka spruce in these locations is the intended management options.

Public Access

The Annandale Way runs for 90 km from the hills above Moffat to Annan, on the Solway Firth. The path passes the site , running next to Stidriggs Wood for a short distance before following the U 316 southwards. The route is a core path (ROYA/439/2). The path itself doesn't cross into the site, but clear views on the site are available from the stretch to the north of the Kinnel Water.

Another core path links the Annandale Way (KIRR/260/1) at the entrance to Stidriggs) to Thornhill, and runs from the site entrance eastwards, passing by Eyre settlement before existing the site and crossing into the Forst of Ae. For most of its length through the site the path runs on a roughly surfaced track.

A section of the Southern Upland Way (core path UNNO/504/16) runs along the 'Crooked Road', some 2.5 km north of the site. The route connects to the Annandale Way just to the west of Beattock, and the elevated sections provide clear views over the site

There is no data available on the numbers of walkers using the Annandale Way, and the cross-site route appears to have very low levels of usage.

Private Water Supplies

An initial assessment identified the potential for five properties to obtain their water supplies from within the site. In the light of this, EnviroCentre were commissioned to undertake an assessment of these private water supplies, to identify the location and extent of the catchments, and to provide an assessment on the potential impacts of the woodland creation proposal. A full copy of their report is contained in Appendix 4, and where practical, the individual intakes and catchments are shown on the constraints map. The affected properties are detailed below:-

Private Water Supplies

Property	Notes	Intake	Catchment
Stidriggs Farmhouse/steading	House is unoccupied/semi-derelict and steading unused (owned by Annandale Estate). Planned to put property	Intake on north-east flank of Knockbuith Hill	Catchment within site

	onto the mains.		
Newbank Farm	Supply serves house and steading	Intake on east flank of Little Knockilsine Hill (just outwith site)	Catchment within site
Ingleston	Two occupied houses (Owned by Annandale Estate).	Intake to the south-west of houses	Catchment outwith site
Barntimpen	Single house	Intake to south of house	Catchment outwith site

Other Services

A telecommunications mast, operated by Dumfries and Galloway Council sites on the summit of League Hill. Recent correspondence with the Council indicates that the tower is no longer used.

Two short stretches of low voltage electricity powerlines cross the site to serve Stidriggs farmhouse and the telecommunications mast on League Hill.

Provide details of discussions with neighbours, local communities and consultees. For Community Councils and neighbours please evidence who was contacted, date and method of contact used (e.g. meeting, leaflet drop, letter etc.) Where reasonable, you may just identify street names (e.g. larger urban areas).

At an early stage in the project a scoping and consultation exercise was undertaken, with a range of organisations and individuals being contacted, with an explanatory letter and a concepts map being supplied (see Map 4- Concepts) to all recipients, and with specialist reports being supplied where relevant.

Consultees included:-

Statutory Organisations

- Dumfries and Galloway Council – Planning
- Dumfries and Galloway – Archaeologist
- Dumfries and Galloway – Landscape/Biodiversity
- Dumfries and Galloway – Access/Countryside
- Dumfries and Galloway – Landscape/Biodiversity
- Dumfries and Galloway – Roads
- Dumfries and Galloway - Telecommunications
- Timber Transport Officer
- NatureScot
- Scottish Environment Protection Agency
- Historic Environment Scotland

- Scottish Government Rural Payments and Inspections Division
- Scottish Water

Voluntary Organisations

- Kilpatrick Juxta Community Council
- Royal Society for the Protection of Birds
- Galloway Rivers Trust

Neighbours and Others

- Nine neighbouring residential/agricultural properties
- Forestry and Land Scotland (managers of the Forest of Ae and Beattock Forest)

In addition, information on the project, including the Concepts maps and specialist reports were made available for viewing and commenting on Scottish Woodlands Ltd.'s website.

A site meeting was held with the Council Archaeologist and Scottish Forestry staff, primarily to consider archaeological issues raised by Historic Environment Scotland

event held -to be completed

Details of responses received and actions taken are contained within the Issues Log and Annex 1.

You must carry out a site-based assessment of soil and vegetation to match species choice with the particular site. Refer to (ESC-DSS) during this process.

List the site surveys undertaken to inform tree species selection. For example: soil survey, soil depth survey, vegetation survey.

Site surveys undertaken

- Initial desktop survey
- Walkover constraints survey
- Soils and deep peat survey (Andrew McQueen Silviculture)
- Habitats survey (Cameron Ecology)
- Breeding Birds survey (Cameron Ecology)
- Archaeological Survey (Calluna Archaeology)
- Private Water Supply Assessment (EnviroCentre)
- Landscape and viewpoint analysis

See section on 'site description' above for details on these.

Please indicate the climatic suitability of the site for the tree species you have chosen. Use the Scottish Forestry Map Viewer - see the 'FGS Climatic Site Suitability' data.

Suitability for Woodland Creation

In terms of Land Capability for Forestry, the majority of the site lies within land classified as F5 (Land with limited flexibility for the growth and management of tree crops), with the land around Stidriggs and Knockbuith Hills being classed as F4 (moderate flexibility).

The good growth of coniferous trees on land on neighbouring properties also suggests that the site should be capable of producing timber in the medium-long term, and of allowing the establishment of a reasonable range of conifers and native broadleaved species.

ESC Assessment

An Ecological Site Classification (ESC) analysis was run for species suitability on seven locations, covering the full range of soil, drainage and exposure conditions present on site (See Map 3 for locations selected).

The table below includes information on soil types, vegetation, and location of each sample, together with data from the ESC software on soil nutrient and moisture status. In some locations, the default settings for soils moisture and soil nutrient status were amended, based on the findings of the Soils Report (Appendix 1); these changes are indicated by a → symbol between the default and selected data.

Intended management inputs in terms of drainage and fertilizer are shown. The presence of local shelter (for locations near to the Forest of Ae and Broadshaw Forest was not included.

No.	**ESC 1**		**ESC 2**		**ESC 3**		**ESC 4**	
NGR	NY 057999		NY 059994		NY 054993		NY 050991	
Location	near Kinnel Water		above steading		Knockbuith Hill		Knockilsine Hill slopes	
Soil type	cultivated gley		cultivated gley		peaty podzol		podzol	
Veg.	improved grass		improved grass		marshy grassland		acid grassland	
SMR	moist		moist		moist		fresh	
SNR	rich		rich → medium		rich → v. poor		very poor	
Drainage	yes		yes		yes		no	
Fertiliser	no		no		no		yes	
DAMS	14		14		16		14	
Exposure	mod. exposed		mod. exposed		highly exposed		mod. exposed	
	suitability	**YC**	**suitability**	**YC**	**suitability**	**YC**	**suitability**	**YC**
Scots pine	**v. suitable**	12	**v. suitable**	12	**suitable**	10	**v. suitable**	11
N. spruce	**suitable**	18	**v. suitable**	18	**suitable**	13	**suitable**	17
Sitka spruce	**v. suitable**	24	**v. suitable**	24	**suitable**	18	**v. suitable**	18
Douglas fir	**suitable**	15	**suitable**	14	**marginal**	9	**suitable**	13

W. r. cedar	suitable	15	suitable	15	marginal	11	suitable	14
Grand fir	suitable	17	suitable	16	suitable	11	suitable	14
P. silver fir	v. suitable	23	v. suitable	23	suitable	20	v. suitable	23
D. birch	v. suitable	6	v. suitable	6	suitable	5	suitable	6
Silver birch	suitable	7	suitable	7	suitable	5	suitable	7
Sycamore	v. suitable	9	v. suitable	9	suitable	6	suitable	6
Beech	v. suitable	9	v. suitable	9	suitable	6	suitable	7
Sessile oak	v. suitable	6	v. suitable	6	suitable	4	suitable	5
Aspen	v. suitable	10	v. suitable	10	suitable	7	suitable	7
Alder	suitable	8	suitable	8	suitable	6	suitable	6

No.	**ESC 5**		**ESC 6**		**ESC 7**	
NGR	NY 053984		NY 057980		NY 050976	
Location	Little Knockisline Hill		League Hill		South west corner	
Soil type	peaty podzol		brown earth		peaty gley	
Veg.	wet heath		semi imp. grass		wet heath	
SMR	fresh → v. moist		fresh		fresh → wet	
SNR	very poor		very poor → poor		v. poor	
Drainage	yes		no		yes	
Fertiliser	yes		yes		yes	
DAMS	17		17		16	
Exposure	mod. exposed		mod. exposed		highly exposed	
	suitability	**YC**	**suitability**	**YC**	**suitability**	**YC**
Scots pine	suitable	9	suitable	9	suitable	9
N. spruce	marginal	11	marginal	11	suitable	12
Sitka spruce	v. suitable	20	v. suitable	19	v. suitable	21
Douglas fir	marginal	7	unsuitable	6	unsuitable	0
W. r. cedar	marginal	9	unsuitable	8	marginal	10
Grand fir	marginal	9	unsuitable	9	suitable	11
P. silver fir	v. suitable	19	suitable	19	v. suitable	20
D. birch	suitable	5	marginal	5	suitable	5
Silver birch	marginal	5	suitable	4	suitable	5
Sycamore	suitable	7	suitable	7	suitable	6
Beech	suitable	5	marginal	5	marginal	3
Sessile oak	suitable	4	suitable	3	marginal	3
Aspen	suitable	8	suitable	7	suitable	8
Alder	suitable	5	suitable	5	suitable	6

The ESC results indicate that the site is generally suitable for timber production, with yield class predictions for Sitka spruce exceeding 16 in all locations. Species choice is limited over the central , southern and western parts of the site; mainly by exposure, but also by wet soil conditions and low nutrient status. In the north and east conditions are such that a wider range of coniferous and broadleaved species are classed as being 'suitable' or 'very suitable.

In addition, an ESC analysis was undertaken to provide guidance on suitable NVC native woodland types. Sites were selected in locations where native broadleaves may be planted (See Map 3). The

results indicate that parts of the site are suitable for a range of native woodland typers, while NVC suitability is more restricted in the southern parts of the site.

No	A	B	C	D
NGR	NT 052001	NY 063992	NY 054986	NY 047975
Location	north-west	Stidriggs Wood	Knockilsine Hill	South-west
Soil type	alluvial	gley	peaty podzol	peaty gley
Veg.	marshy grassland	semi-imp. grass	acid grass	wet heath
SMR	fresh- moist	moist	fresh- moist	fresh-wet
SNR	poor	rich	very poor	very poor
DAMS	14	13	16	16
Exposure	mod. exposed	mod. exposed	highly exposed	highly exposed
NVC Woodland Type				
W4 – Birch with purple moor grass	suitable	marginal	suitable	suitable
W6 – Alder with stinging nettle	unsuitable	v. suitable	unsuitable	unsuitable
W7 – Alder-ash with yellow pimpernel	marginal	suitable	unsuitable	unsuitable
W9 – Mixed broadleaved with dog's mercury (Upland)	marginal	suitable	unsuitable	unsuitable
W10 – Mixed broadleaved with bluebell/wild hyacinth	unsuitable	suitable	unsuitable	unsuitable
W11 – Oak-birch with bluebell/wild hyacinth	suitable	suitable	unsuitable	unsuitable
W17 – Oak-birch with bilberry/blaeberry (Upland)	suitable	unsuitable	marginal	unsuitable

Woodland Strategy: Describe how your proposal fits with the Local Authority woodland strategy.

The 'Dumfries and Galloway Forestry and Woodland Framework' (2014) identifies a series of opportunities for woodland expansion with the objectives being to identify where new woodlands could make a significant contribution; to target the appropriate woodland type to identified locations; to identify constraints; and to encourage a continuing supply of timber.

The Dumfries and Galloway Forestry and Woodland Strategy indicates suitability for arrange of woodland types

Softwood Forest - The large majority of the site is shown as being 'potential' with a small area in the north being 'sensitive'. This sensitive classification, which also covers a large part of the farm outwith of the site, relates to archaeological sensitivities.
Native - Nearly all of the site is shown as being 'preferred', with the archaeologically sensitive area

referred to above being classed as 'potential'.

The Strategy places the site within the 'Upper Annandale' area. The relevant guidance is set out below, together with an assessment of the ways in which the design complies with the guidance given:-

	Priorities for New Woodlands	Compliance
o	*Core timber production area with opportunities for new softwood forests*	The woodland has a strong productive core, with a significant proportion of productive softwood timber species being planted, including Sitka spruce, Norway spruce, Firs, and Scots pine.
o	*There is a lack of good quality riparian woodlands; significant opportunities for native, mixed, and riparian woodland expansion which deliver these objectives and help buffer waterbodies*	The proposals will deliver around 41 ha of native broadleaf woodland and 6 ha of productive broadleaf woodland (of entirely native species). Much of these woodland types will be planted in proximity to minor watercourses, as well as adjoining Stidriggs Wood (an ASNW).
o	*There is the potential for new native woodland on upper catchments where this can be achieved without compromising landscape character or other environmental interest*	In total, 47 ha of native woodlands will be established, while all areas of deep peat and sensitive habitats will be protected and buffered. The broadleaved planting will soften the woodlands appearance in the landscape., notably on its more visible northern margins.

In areas where wildfire is a risk to the woodland describe how you will address the risks and how this has been considered in the woodland design. Refer to Building wildfire resilience into forest management planning for information.

The site lies within Fire Risk zone 3 – this is a relatively low risk.

During the first five years after planting, vegetation control and ride management to aid establishment will reduce wildfire risk.

If applying for the productive conifer options please use the Timber Transport Forum – Agreed Routes Map and confirm the sites timber route classification i.e. agreed, consultation, severely restricted, excluded or no classification.

The farm steading is accessed off the U 316 road, which connects to the A 701 trunk road. The U 316 road is relatively narrow and twisting, and it is classed as a 'Consultation' route on the Timber Transport Map.

There are short stretches of firm track within the site, mostly around the steading, but also extending westwards towards the Forest of Ae.

The timber haul road built to connect the Forest of Ae with the A 701 runs along the southern edge of the site (Annandale Timber Transport Link).

The intention is to use both the existing accesses off the U 316 and the timber haul road for establishment and initial maintenance purposes. In the medium term a forest road will be constructed running north-south between the timber haul road and the existing track near Stidriggs steading. A ~20 m wide corridor has been left open in the design for this purpose, with further open ground located at proposed turning heads and quarries. This ground is shown as 'other land' in the Operations Maps

At the harvesting stage, all timber will be extracted southwards onto the timber haul road, which connects directly onto the A 701. This approach will minimise disturbance to local residents and avoid the potential for damage to the local minor road network.

If applying for the Native Woodland options please use the 'Native Woodland Habitat Network' map in the 'FGS Target and Eligibility' folder on the Scottish Forestry Map Viewer and describe the habitat network zones your application is within i.e. primary, secondary or out with the habitat network.

Only the area around Stidriggs Wood (an ancient, semi-natural woodland) is shown as being within the Native Woodland Habitat Network's primary and secondary zones. The majority of the Native Broadleaves' option lies within these zones.

Sensitive Areas & Potential Impacts

Sensitive Areas:

- National Nature Reserve or Site of Special Scientific Interest (SSSI)
- National Park
- World Heritage Site
- Scheduled Ancient Monument
- National Scenic Area
- Natura sites – Special Area of Conservation (SAC) or Special Area of Conservation (SPA)
- Land on which there is a Nature Conservation Order
- Deep peat soil

Potential Impacts:

- Population & Human Health
- Biodiversity
- Land, Soil, Water, Air, Climate
- Material Assets, Cultural Heritage, Landscape

List any **Sensitive Areas** and any **Potential Significant Impacts** relating to your site, including appropriate mitigation **(refer to Annex 1)**. Detail any surveys completed to inform this assessment. *For complex cases the Issues Log **(Annex 2)** can be used to record this instead.* *(Scotland's Environment Web Land Information Search https://www.environment.gov.scot/maps/land-information-search/ is a useful resource which may help you identify some of the constraints within your site).*
Refer to Annex 1 for an evaluation of the impacts and details of appropriate mitigation.

Please ensure that any maps or survey reports that have been produced to support your application are uploaded to the online application system.

Management Operations

All Applications

Having assessed the site please provide information about how you are going to establish the new woodland.

Ground Preparation: Describe the method that you will use, including dimensions. Where you propose multiple ground preparation techniques then you must identify these on a map.

Ground preparation will comply with the Forestry Commission guidelines 'Cultivation of Soils for Forestry' (Bulletin 119) and the 'Cultivation guidance for upland productive woodland creation sites', and will comply with the 'Forestry and Water Scotland 'Know the rules' guidance.

The aim is to provide a suitable planting location for tree establishment and growth by improving nutrient status, weed suppression, and hydrological improvements, while minimizing visual and negative hydrological impacts.

Site specific issues affecting the proposed cultivation and drainage proposals include:

- A wide range of soils are present, including brown earths, gleys, peaty gleys, podzols, peaty podzols, ironpans and rankers, which present differing challenges
- Weed suppression will be beneficial on fertile soils (e.g. brown earths and gleys)
- Drainage improvements will be beneficial on wet soils (e.g. some gleys, peaty gleys and peaty podzols)
- Nutrient enrichment (by cultivation) will be beneficial on impoverished soils (e.g. podzols, iron pans)
- While gradients are generally gradual, there are steeper areas where excessive runoff and drainage could occur
- Much of the site supports dense, tussocky vegetation including wet heath, bog myrtle, and tussock grasses and rushes
- Bracken is present in some locations
- There are private water supply catchments on site which will require to be protected
- The site drains into the Kinnel Water, which supports salmonid populations
- There are extensive areas of archaeological and ecological interests (including sensitive habitats and deep peat) that require to be buffered from negative impacts arising from cultivation and drainage
- The site is of low visual sensitivity

Cultivation and preparation proposals include:-

- Cutting of dense vegetation may be undertaken prior to cultivation
- Most of the ground will be prepared using a continuous mounder (Enviro-mounder or similar)
- Row spacings may be varied to facilitate inter-row motorised maintenance works
- A centrally-located winged tine will be fitted to the mounder when cultivating podzolic and ironpan soils, but no tines will be used on brown earth or other soils
- Where the tine is used the mounder will be lifted at intervals to ensure that cultivation lines do not exceed 80m length where gradients are shallow and 40m lengths on slopes where gradients exceed 10 degrees

- Other ground, including wet and rocky pockets, will be prepared by hinge mounding or inverted mounding (either by an excavator or by manual means), with ditch mounding being used in more extensive wet areas. Mounds will be raised in wet ground, and inverted on dry ground.
- Bracken within the proposed planting footprint will be controlled prior to planting (with follow up treatment as required). Control will involve the use of approved herbicides and motor-manual cutting. No herbicides will be used within the catchment of the PWS for Newbank. The area eligible for grant support for bracken control extends to 4.25 ha, all within the 'Conifer' option area.
- All machinery will be power-washed prior to leaving site.

Notes:-

- Prior to any cultivation and drainage works commencing, a 'Woodland Creation, Restocking and Drainage Diffuse Pollution Control Plan' will be produced, identifying all sensitive features and the proposed protective and mitigatory measures to be undertaken
- All contractors will be given pre-start tool box talks covering the 'Diffuse Pollution Control Plan' and topics such as steps to be taken if suspected archaeological finds are made, if badger setts are encountered, and the requirement for buffer zone restrictions.
- Only manual cultivation will be undertaken within the PWS catchment serving Newbank
- A badger survey will be undertaken prior to works commencing
- No mechanical cultivation will take place within 20m of any active badger sett (30m during breeding season)
- A Badger Licence will be obtained if required
- No cultivation will be undertaken within 2 m of the canopy of any retained trees
- No cultivation or drainage will be undertaken within the buffers surrounding sensitive habitats (10m), deep peat (20 m for areas >1 ha, 10m for areas <1 ha)), and archaeological features (as per the mitigation shown in Annex 1).
- Machinery will avoid crossing the buffers zones
- The locations of these protected features will be included on digital maps provided to contractors, and features will be marked out on site if required

Drainage: Identify any existing drains/watercourses and provide information relating to new drains.

The site description section provides details on drains, watercourses and private water supply catchments present within the site, as well as information relating to the wider catchment area.

Large parts of the site, notably those on gley and peaty gley soils, exhibit poor drainage

It is anticipated that relatively extensive drainage will be undertaken in areas where drainage is poor (notably in areas proposed for productive woodland). Drainage will also be required to provide drier conditions for maintenance and management access purposes

All ground preparation and drainage will comply with the UKFS Forests and Water guidelines (5th edition) and will adhere to the Water Environment (Controlled Activities) Regulations 2011.

Generally:

- The same precautions applied to cultivation measures above will also be applied to

drainage works.

Specifically:

- New drains will not exceed 2 degrees in gradient
- New drains will terminate well short of any watercourses
- Drain ends will be channelled upslope at their termini
- Silt traps will be constructed to prevent sediments reaching the watercourses
- Drain works will be completed in tandem with other ground preparation works
- Drains will be maintained as required
- No drainage will be undertaken within the PWS catchments, and within the buffer zones around deep peat, archaeological features, and ecologically sensitive habitats
- Culverts will be installed and maintained in compliance with SEPA's General Binding Rules and guidance on culvert installation.

Protection: Describe how the site will be protected. For example: fencing, tree guards/shelters and pest management.

Append a deer management plan if required. You should refer to the Deer Management Best Practice Guide and the Joint Agency statement on deer fencing. You may be asked to submit a checklist from the Joint Agency guidance (May 2010).

In terms of potential grazing pressures, there are roe and fallow deer, hares, and voles present in the locality, and some of the surrounding ground will continue to be grazed by sheep and cattle.

A boundary survey has been undertaken. Most of the existing fences on the external boundaries of the application site are in poor or very poor condition, although a short stretch of fencing by the Timber Transport Link road is in good condition. Large stretches of the application boundary are currently unfenced. There is only a limited amount of internal fencing within the application area.

In terms of sensitivities, roughly 25% of the proposed planting is broadleaved, and a further 15% is comprises of diverse conifers; both of these elements are vulnerable to deer damage, as well as from other grazing animals. An analysis undertaken showed that erecting deer proof fencing will require a significantly less grant than erecting stock fences (only where they would be required), and using tree shelters to protect broadleaves. The use of deer fencing also greatly reduces the need to use plastic guards, and provides protection for diverse coniferous elements that would otherwise be vulnerable to deer.

In the light of the above, protection proposals will include for the use of deer/stock proof fences (with no rabbit netting), with all broadleaves being protected with vole guards.

Two deer fences enclosures will be created; a smaller one to the north of the core path/track leading past the Eyre settlement and into the Forest of Ae, and larger one south of the path, enclosing the majority of the application area. While this option entails double fencing along 350 m of the track it means that no gates will have to be erected across the track, making both recreational and agricultural/management access easier, and making the enclosures less vulnerable to incursion by stock and deer via gates being left open.

The proposed peatland restoration sites on the eastern and western margins have convolute boundaries, and in order to keep fencing costs, and grant payments, down, it is proposed to enclose these two areas with the southern deer fenced enclosure, which will educe the fence lengths required by 2,800 m

Stidriggs Wood will be enclosed within the southern enclosure , and the exclusion of stock and deer (supplemented by management works) will facilitate natural regeneration within the woodland as well as protecting planting undertaken to expand the woodland.

In some locations fences will be set back slightly from existing trees, stone dykes, and ditches to aid their construction and maintenance.

At the initial stage at least 10 badger gates will be fitted, with indicative locations shown on the Operations Map, notably around Stidriggs Wood and the northern parts of the site. The location of the gates will be decides following a survey of badger runs, and following completion of the fence erection., and gates installed at this stage will be shown on the claim map. Thereafter, the fence lines will be regularly monitored and additional gates fitted as required (with no grant being claimed). It should be noted that the absence of rabbit netting will facilitate badger movements across fence lines.

The fencing and gate requirements are set out below.

Cpt./ Nodes	Option	deer fence (m)	Upgrade to deer (m)	man. gates	s. closing gates	badger gates
north						
A-J	Conifer	1430		A3	A1, A2	ai, aii, aiii
J-A	B'leaves	1220				ji, jii
south						
B-C	N. B'leaves	675		B5	B1,	ci to cvi
C-D	Conifer	2690		C3	C1, C2	
D-E	Conifer	320				
E-F	Conifer	1375		E1, E2, E4	E3	
F-G	Conifer		245			
G-H	Conifer	1425				
H-I	Conifer	1805		H2	H1	
I-B	Conifer	925		12	I1	ii
	total			**8**	**8**	

Stiles, water gates and slip gates will be erected as required.

Vole guards will be fitted to all broadleaved trees, as detailed below: - to be completed

Planting; please provide the following:

- Species to be planted and percentage of each. (Please use the components area table to record hectares planted).
- Describe the nursery stock and planting method to be used.
- Confirm if you will be planting vegetatively propagated Sitka spruce.
- For native woodland creation specify the Seed Source Zone.

Woodland Design

The proposed planting species mixes and their distribution have been chosen taking into consideration the existing site conditions, biodiversity and landscape issues and the stated objectives.

The planting design entails the use of the 'Conifer' , Broadleaves' and 'Native Broadleaves' Woodland Creation options, involving the use of ten species mixes, as detailed below.

Design features include the following:

Prior to the design stage, steps included:-

- Assessment of all of Stidriggs Farm for suitability for woodland creation, including detailed ecological and archaeological survey work, as well as consideration of agricultural issues and peat restoration opportunities. The results substantially reduced the potential application area.
- Within the confirmed site, exclusion of features of archaeological and ecological and interests
- Exclusion of all areas of deep peat
- Inclusion of Stidriggs Wood (an ASNW) in order to safeguard its future
- Consideration of landscape issues

At the design stage, steps included:

- Consideration of soils survey and ESC assessment
- Using Sitka spruce as the main productive species, but with a strong component of other conifers and productive broadleaves
- Focusing diversity on the better soils and more sheltered locations
- Protecting and strengthening Stidriggs Wood by exclusion of gazing and appropriate planting
- Using native woodland creation as means of expanding the forest habitat network
- Creating corridors through the woodland to provide additional recreational routes as well as providing management and ecological access
- Enhancing riparian zones through the planting of native broadleaved woodland and retention of open ground

Planting Specifications

- Broadleaved stock will generally be transplanted or undercut stock, 45-60 cm tall or cell grown stock, 30-45 cm tall.
- Coniferous stock will be generally be 2-3 year old transplanted or undercut stock, 20-40 cm tall, but diverse conifer s may be cell-grown stock, 20-40 cm tall.
- Native broadleaved plants will be grown from seed collected from a suitable provenance

(109, 108 and 107) if possible. Where this is not possible for plants used within the 'Native Broadleaves' option, agreement of acceptable substitutes will be obtained from Scottish Forestry
- Trees and shrubs will be planted using a 'T' or 'L' shaped notch
- Where the broadleaf or mixed woodland mix adjoins a productive conifer mix a buffer zone (~6-12m wide) will remain unplanted to prevent the spruce from overshadowing the broadleaves and to enable the broadleaves to form a wind-firm group for long-term retention. Where these gaps are not already shown as open ground, the planting density within the productive mixes will be increased elsewhere to ensure that the overall required stocking density is attained.
- It is recognised that obtaining suitable planting stock of some species, notably the Pacific silver fir, may be difficult. In the event of a species being unavailable, agreement will be obtained from Scottish Forestry to use a suitable alternative species that will fulfil the same functions as the original species, and in any event full compliance with UKFS requirements will be maintained.

A1) Sitka spruce **124.60 ha** (all 'conifer' option)

Sitka spruce	100 %

- This mix will form the productive core of the woodland
- This mix will be planted at 2 m x 2 m centres or closer, to achieve at least 2,500 stems per hectare at year 5
- This mix will be broken up by rides to create smaller-scale blocks

A2) Sitka spruce /Aspen **1.82 ha** (all 'conifer' option)

Sitka spruce	50 %
Aspen	50 %

- This mix will be planted in sensitive locations on the margins of Mix A1
- This mix will be planted at 2 m x 2 m centres or closer, to achieve at least 2,500 stems per hectare at year 5
- Species will be planted in small, single species groups (50- 75 no), with feathred edges

B) Norway spruce **10.47 ha** (all 'conifer' option)

Norway spruce	95 %
Downy birch	5 %

- This mix will be planted in various locations on damper soils and relatively infertile ground
- This mix will be planted at 2 m x 2 m centres or closer, to achieve at least 2,500 stems per hectare at year 5
- The birch will be planted in small single species groups where this mix adjoins broadleaved mixes or open ground

C1) Fir mix **7.64 ha** (all 'conifer' option)

Douglas fir	47.5 %
Pacific silver fir	47.5 %
Aspen	5%

- This mix will be planted in sheltered locations on fertile, free draining soil
- This mix will be planted at 2 m x 2 m centres or closer, to achieve at least 2,500 stems per hectare at year 5
- The Douglas and Pacific silver firs will be planted in alternate lines
- Aspen will be planted in small single species ground on the margins of the mix

B2) Western red cedar **4.23 ha** (all 'conifer' option)

Western red cedar	47.5 %
Norway spruce	47.5 %
Downy birch	5 %

- This mix will be planted in a sheltered location on fertile, free draining soil
- This mix will be planted at 2 m x 2 m centres or closer, to achieve at least 2,500 stems per hectare at year 5
- The Norway spruce will be planted in alternate lines with the cedar, with a view to establishing the latter as the final crop

D) Scots pine **7.59 ha** (all 'conifer' option)

Scots pine	90 %
Downy birch	10 %

- This mix will be planted relatively free draining ground above the steading
- This mix will be planted at 2 m x 2 m centres or closer, to achieve at least 2,500 stems per hectare at year 5
- The birch will be planted in small single species groups where this mix adjoins broadleaved mixes

E1) Oak/birch **4.40 ha** (all 'broadleaves' option)

Sessile oak	50 %
Siver birch	35 %
Gean	10 %
Aspen	5 %

- This mix will be planted relatively fertile and sheltered ground above the steading
- Trees will be planted at an average of 2 m x 1.6 m spacing or closer to achieve 3,100 stems per ha at year 5
- Oak and birch will be planted in small-medium sized single species groups (~50-150 no.)
- Gean and aspen will be planted in small single groups (~25 no.), on the margins, and with gean in the more sheltered locations.

E2) Aspen **1.38 ha** (all 'broadleaves' option)

Aspen	100 %

- This mix will be planted on fertile and sheltered ground by the Kinnel Water
- This mix will be planted at 2 m x 2 m centres or closer, to achieve at least 2,500 stems per hectare at year 5

F1) Native Broadleaves based on NVC W17 and W7 **8.86 ha** (all 'native broadleaves' option)

Siver birch	25%	drier soils
Downy birch	10%	damper soils
Sessile oak	25 %	drier soils, sheltered locations
Aspen	7.5 %	throughout
Alder	7.5 %	damper soils
Rowan	5 %	throughout, on margins
Gean	2.5 %	drier soils, sheltered locations
Hazel	7.5 %	throughout, on margins
Hawthorn	7.5 %	drier soils, on margins
Crab apple	2.5%	drier soils, on margins

- This mix will be planted in relatively fertile and sheltered locations, including near to Stidriggs Wood
- Trees will be planted at an average of 2 m x 3 m spacing or closer to achieve 1,100 stems per ha at year 5
- Birches and oak will be planted in large, single or two species, groups
- The remaining species will be planted in small, single species groups

F2) Wet woodland based on NVC W4 and W7 **32.40 ha** (0.48 ha 'native broadleaves', 31.2 ha 'conifer', and 0.72 ha 'broadleaves' option)

Downy birch	50 %	damp soils throughout
Alder	15 %	damp soils, more sheltered locations, mineral soils
Rowan	5 %	throughout
Bid cherry	5 %	sheltered locations, mineral soils
Grey willow	15 %	wet ground, exposed locations
Bay willow	5 %	wet ground, sheltered locations, mineral soils
Eared willow	5 %	wet ground, exposed locations

- This mix will be planted in relatively wet, infertile, and exposed locations
- Trees will be planted at an average of 2 m x 3 m spacing or closer to achieve 1,100 stems per ha at year 5
- Birch, alder and grey willow will be planted in large, single or two species, groups
- The remaining species will be planted in small, single species groups

Open Ground **23.17 ha grant aided** (plus 37.15 ha not grant aided (inc. 14.5 ha deep peat))

Grant-aided open ground will be retained for the following reasons:

- to retain and buffer areas of biodiversity interest
- to retain and buffer areas of archaeological interest
- to enhance riparian margins by watercourses
- to respect wayleave requirements
- to create accessible rides for future woodland management and general access

In the main, open ground will be left to develop naturally, but some ride mowing may be undertaken

Other Land **42.38 ha**

The 'Other Land' elements within the application area include:-

- existing woodlands (5.23 ha)
- deep peat (14.5 ha)
- 'excess' open ground (22.65 ha), including land associated with proposed forest road line

Maintenance: Describe the maintenance regime for the site (e.g. monitoring, weeding, beat-up, etc.).

Maintenance

- All fences and gates will be monitored regularly for signs of intrusion and maintained in a stock/deer/rabbit proof condition
- All plants and guards will be maintained in a wind firm position
- All trees will have a 1m² spot maintained in a substantially weed free condition until they are established. This will be achieved by the applications of systemic and residual herbicide and by hand weeding as necessary.
- No herbicides or other chemical swill be used within 50 m of any PWS intakes
- No herbicides or other chemicals will be used within 20 m of watercourses >2 m wide, within 10m of watercourses < 2 m wide.
- Plants will be monitored for signs of disease, nutrient deficiency, and damage, and appropriate action taken as necessary
- Replacement planting will be undertaken to ensure that the required stocking densities are maintained until year 5
- Vole guards will be removed when the trees are fully established
- Drains will be maintained in a functioning condition, and either recycled or disposed of at an

authorised tip.
- The site will be routinely monitored to ensure that the specifications are being achieved, and in order that any unforeseen problems can be identified and dealt with at an early stage

Fertilisation: Where applicable, describe the proposed fertiliser regime e.g. application rate, timing, etc.

The soils and ESC analysis suggests that parts of the site have low fertility, and given this, consideration will be given to the application of fertilizer to the productive woodland planting areas on peaty podzol and mineral podzols, and peaty gleys

Slow release fertilizer plugs may be used at time of planting is being considered. Alternatively, or thereafter, the post-planting application of a granular slow release NPK fertilizer may be considered following an assessment of early growth, and soil and/or foliar analysis. This will permit the fertilizer composition and application rates to be determined, but in any event the minimum amount needed to be effective will be used.

All applications will follow standard good practice, and the 'Forests and Water' Guidelines will be adhered to in order to protect water quality. No fertilizers will be applied with any PWS catchments.

Other: Please include any other silvicultural detail here.

Recreational Use

As noted, the site lies close to the Annandale Way (a well-used core path) and it is bisected by a core path which connects the Annadale Way to Thornhill (cutting through the Forest of Ae), passing by the Eyre settlement. The site adjoins the U 316 (by Stidriggs Wood) and the timber haulage road leading to the Forest of Ae.

There is little known use of the site for recreational purposes, with Strava Maps showing no indication of use of the core path bisecting the site, or any off path access to Stidriggs Hill Fort.

Protection of Existing Routes

The cross-site core path will remain fully open and unfenced, allowing unfettered access to the archaeological interests at Eyre Burn and Fauld Burn, as well as access to the Forest of Ae. The core path corridor will be maintained as open ground, and the surface will be maintained in a usable condition

Enhancement of Recreational Use

All-user gates will be installed to facilitate access to Stidriggs Hill Fort and, in the north of the site, to the Kinnel Water.

The proposed construction of a forest road connecting the timber haulage road to the track which serves Stidriggs Farm steading will create a circular, surfaced route which could be used by walkers, cyclists and horse riders.

Directional signage will be erected at the 'recreational' entrances.

Unfettered access will be available throughout the site.

Woodland Management

Stidriggs Wood occupies the eastern and northern flanks of Stidriggs Hill, below the hill fort. It is recorded as an 'Ancient, Semi Natural Woodland, with the woodland being shown (with a slightly larger footprint) on the 1st edition Ordnance Survey map. The majority of the woodland is open to stock, although there is a ~1 ha section where stock is excluded. All of the wood is open to deer.

The woodland is comprised mainly of birch, with frequent hazel, and rare oak, willow, ash, hawthorn, and alder. Nearly all of the oaks are clearly of veteran status, as are many of the birch. Regeneration is absent in the area open to stock, and rarely present in the fenced area. There are remnants of woodland ground flora throughout, more notably in the enclosed section. Species recorded include bluebell, germander speedwell, wood avens and barren strawberry. The woodland canopy is broken in places, with bracken being dominant within the small glades.

The woodland will be included within the deer-fenced enclosure, which will exclude both stock and deer.

It is proposed to undertake woodland planting around the external margins of the woodland to expand its extent and to foster forest habitat network development; this is on bracken and grass-dominated ground where natural regeneration may not fully succeed in expanding cover.

Within the wood, it is hoped that natural regeneration will occur to both provide successor trees and to expand woodland cover within the glades.

Bracken control will initially be undertaken within the glades to increase the chances of natural regeneration being successful. Any regeneration of non-native species will be removed.

The condition of the woodland will be monitored to assess its development, and further works undertaken as required to ensure is sustainability.

Small Woodlands Loan Scheme (woodlands up to 50 hectares only)

Please read this section if you are interested in receiving a loan based on the capital items in your FGS contract. To confirm your interest in receiving a Loan, you must sign the declaration at the foot of this section.

The Small Woodlands Loan Scheme (SWLS) is designed to assist landowners in implementing woodland creation projects by releasing early capital. The following thresholds apply:

- The maximum Woodland Creation proposal size, approved in your FGS contract, eligible for loan support is 50 hectares and we will pay you a Loan of 50% of the value of the capital items in your FGS contract (not including CSGN supplement values where this is present), rounded up to the nearest £100, up to a maximum value of £40,000 per FGS application.
- To be eligible for a Loan payment, the maximum Woodland Creation proposal grant value, approved in your FGS contract, must be no greater than £250,000.

The loan is recovered by deducting the value from your FGS capital claim.

If both your FGS and Loan applications are successful you will be provided with a loan offer that will detail the value of the loan and set out the terms of the loan. You will be required to sign and return the loan agreement with your FGS contract to accept the loan offer. By signing here you are expressing an interest in receiving a loan however funding is not guaranteed. Funding will be committed at FGS contract approval and is dependent on available budget at that time.

If you wish to be considered for a loan, please first read the SWLS guidance on our website and then sign the following declaration:

- I/we are applying for a Small Woodlands Loan on the capital items contained in the FGS application associated with this Operational Plan
- I/we confirm that our woodland creation proposal is less than 50 hectares
- I/we confirm that we have no Small Woodlands Loan Scheme agreements active at this time
- I/we confirm that should I/we be successful in obtaining a Loan, then I/we will only make one claim for our FGS capital works which, in accordance with FGS terms and conditions, will be once all the capital works, as laid out in the FGS contract's schedule of works, have been completed.
- I/we understand that by signing this declaration, I/we am/are only stating that I/we am/are interested in receiving a loan and, as such, meet all the eligibility criteria required as laid out in our guidance and our Loans terms and conditions.
- I/we understand that by signing this declaration, I/we acknowledge that my/our success in receiving a loan is subject to the funds available in any given year and should there be no dedicated funding available for the SWLS, I/we will continue with the FGS application and will fund the capital works of that application under the terms and conditions of the FGS.
- I/we have the necessary consents/permissions to sign this loan application declaration as evidenced on the administrative system, RP&S, to which this Operation Plan and associated FGS application relates.

- I/we have read, understand and hereby acknowledge that Scottish Ministers may use any of my personal data contained in or relating to this loan application in accordance with the terms of Scottish Forestry's privacy notice and the Rural Payments and Services Privacy Policy.

- I/we, on behalf of the business applying for both a FGS application and a Small Woodland Loan, hereby sign this declaration:

Signed:	
Print:	
Date:	
Would the project have gone ahead without a loan? Please delete as appropriate. (this will not affect your application for loan)	**YES / NO**

Please do not sign this declaration if you do not wish to apply for the SWLS, but please continue to complete the other sections as these are required for your FGS application. Currently all correspondence relating to the SWLS will be via email. Please ensure the email address held in RP&S is correct prior to submitting your application.

Ends section on SWLS

Annex 1

Assessment of Potential Impact

Please use the following guidance to assist with describing any potential significant impacts and any mitigation which is proposed:

- **Population & Human Health:** Detail any discussions which you have had with neighbours, local communities or other stakeholders and explain how this has influenced your proposal. Explain what public access is currently undertaken on the site and what provisions you plan to make to continue or improve this in adherence with the Scottish Outdoor Access Code.

- **Cultural Heritage**: Indicate what survey work has been undertaken and describe how archaeology will be protected.

- **Soil:** Provide an accurate assessment of the soil on site and describe how you will manage the quality of the soil including any effects from erosion and compaction.

- **Water:** Detail the nature of the likely impacts on water bodies or water supplies from your activities and how you will mitigate these impacts.

- **Air:** Detail the nature of the likely impacts on air quality or the impacts on light provision.

- **Biodiversity:** Detail the nature and extent of high value habitats such as those listed on the Scottish Biodiversity List and describe how you will protect these habitats. Detail the nature of the likely impacts on wildlife from your activities and how you will mitigate these impacts. Refer to European Protected Species for guidance.

- **Landscape**: Provide details of how the impact on the landscape has been assessed and how the application has been designed to minimise any impact.

- **Climate:** Provide details on the vulnerability of the project to climate change and how this impact was mitigated.

- **Land:** Does your application have an impact or an effect on prime agricultural land (defined as land use classes 1, 2 and 3.1), or the local land use balance with agriculture? Detail the nature of the likely impacts on agriculture from your activities and how you will mitigate these impacts and integrate with forestry.
  You should refer to the Guidance About Woodland Creation on Agricultural Land, located in the further information and technical guidance section of the FGS woodland creation web page.

- **Material Assets:** Identify and describe all built and natural assets that are relevant to the site and which could be adversely impacted by the proposal e.g. utilities, minerals. Describe any mitigation proposed for these features.

Annex 2 Issues Log

Issue (include date and raised by)	Applicant's Comments	FCS Comments	Agreed Mitigation	Status (Open, Closed)	Significance of Impact (High, Medium, Low)
e.g. Archaeology – Scheduled Monument at NS123456. HES, 23/10/16.	e.g. Scheme design includes OG to buffer Scheduled Monument as per UKFS. John Smith, 25/10/16	e.g. Applicant has taken on board HES feedback and designed the scheme in accordance with best practise. Susan Jones, 27/10/17.	e.g. 20 metre OG buffer around SAM.	e.g. Closed	e.g. Low
Population & Human Health					
Cultural Heritage					
Soil					
Biodiversity					
Landscape					
See Annex 1					
Material Assets					
Water					
	1.				
Air					
Climate					
Land					