Forestry and Land Scotland
Coilltearachd agus Fearann Alba

Bellamore Woodland Creation Land Management Plan 2022 - 2032

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

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

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Property details			
Property Name:	Bellamore		
Grid Reference (main forest entrance):	NX 2268 8686	**Nearest town or locality:**	Pinwherry
Local Authority:	South Ayrshire		

Applicant's Details	.
Title:	Ms
First name:	Carol
Surname:	Finch
Position:	Forest Planner
Contact Number:	07584336505
Email:	carol.finch@forestryandland.gov.scot
Address:	Forestry and Land Scotland, Creebridge, Newton Stewart
Postcode:	DG8 6AJ

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

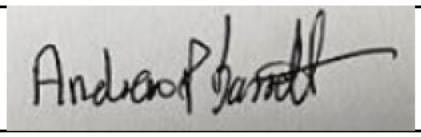
1. I apply for Land Management Plan approval for the property described above and in the enclosed Land Management Plan.

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

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

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

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

Signed, Regional Manager		Signed, Conservator	
FLS Region	South	SF Conservancy	South
Date	22/04/2022	**Date of Approval**	
		Date Approval Ends	

Contents

1.0 Objectives and Summary

1.1 Plan overview and objectives

Plan name	Bellamore
Forest blocks included	New woodland creation site. It will be amalgamated with the FLS White Clauchrie (Block 09) at the next review date (2026).
Size of plan area (ha)	514.4 ha
Location	See Location map (**Map 1**)

Long Term Vision
Carefully managed silvicultural interventions will sustain a healthy and productive coniferous woodland, capable of generating high quality timber products. Existing native broadleaf cover expands outwards from and along the riparian corridor, helping to link habitats throughout the valley and into the White Clauchrie forest block. Priority habitats are protected and sustain resident wildlife. Key peat-forming bog species, such as sphagnum mosses, become more prevalent across the bog sites following restoration efforts. Both the recovering bogs and establishing broadleaf woodland contribute to the national carbon sequestration effort.
Management Objectives
1. To afforest the Bellamore area with productive conifers. 2. To expand the riparian corridor of mature broadleaves. 3. To protect and enhance areas of bog and priority habitats. 4. To sequester carbon through woodland creation and peatland restoration.
Critical Success Factors
• Create a woodland which best utilises the opportunities available on site and contributes to a sustainable supply of timber across the region. • Maintain, enhance, and initiate restoration of priority habitats. • Clearance of non-native conifers and wildlife control to assist with the natural expansion of the native broadleaf woodlands along the riparian corridor. • To enhance the visual amenity of the area.

1.2 Summary of planned proposals

This plan covers the area of Bellamore Farm, an acquisition by Forestry and Land Scotland (FLS) which initially covered 530 ha; this area was reduced to approximately 514 ha following the sale of Bellamore farmstead and its surrounding fields. The local community at Pinwherry requested the property be considered for a community asset transfer (CAT), however this was not taken beyond the first stage and the site was sold on the open market. **Map 3** shows Bellamore farmstead in the southwest and Mark

Farm, a private residence located in the east, is entirely surrounded by the Bellamore plan area. The site runs contiguous to the White Clauchrie forest block (also managed by FLS) and will likely be amalgamated with this block at the next land management plan review due in 2026.

Bellamore farm lies at the head of a valley which hosts agricultural grazing with some small plantation areas of both conifer and broadleaves, in addition to riparian broadleaves. Markhill windfarm and substation lies to the immediate south of the site, White Clauchrie forest lies to the east, and private forestry is situated to the north and west. The farm can be accessed by light vehicles from the west via the village of Pinwherry and heavier vehicles from the east via the existing forest road network.

There will be limited productive conifer planted due to the nature of the site, feasible access routes, topography, and coupe viability. Productive conifers will be predominantly confined to the former agricultural fields which were drained and grazed. There is an apparent large riparian corridor which already contains many mature native broadleaved species. These will be encouraged to colonise the area further, eventually providing a habitat network connecting down the valley to the southwest. The remaining area contains a variety of priority open habitats and there are expansive areas of deep peat. There is potential to sequester carbon through appropriate management of both new woodland and bog habitat.

1.3 Summary of planned operations

Table 1

Summary of operations over the plan period	
Clear felling (gross)	0 ha
Thinning (potential area)	0 ha
Restocking (gross)	0 ha
Afforestation	167.9 ha
Deforestation	0 ha (There will be minor felling for wayleaves and road-side clearance)
Forest roads	2.7 km
Forestry quarries	0 ha

The forest is managed to the UK Woodland Assurance Standard – the standard endorsed in the UK by the *Forest Stewardship Council* and the *Programme for the Endorsement of Forest Certification*. Forestry

and Land Scotland is independently audited to ensure that we are delivering sustainable forest management.

2.0 Analysis and Concept

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

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

Table 2

Preferred management approach Objective	Opportunities	Constraints	Concept
Afforest the Bellamore area with productive conifers	Some areas of the site have easily accessible fields which have been previously drained and fertilised, and will provide good areas for sustainable and productive timber growth.	Large areas of the site contain deep peat and priority open habitats.	Focus productive crop in areas which are easily accessible and fit within the landscape given existing sensitivities. Utilise FLS Open Habitats review to dictate woodland appropriate establishment. Create a road network that will allow for continued maintenance and operations.
Expand the riparian corridor of mature broadleaves	Excellent mature seed sources for tree and ground flora. Areas already showing signs of natural regeneration.	Deer population may affect establishment. Conifer seed sources nearby.	Remove conifer seed sources within corridors. Ensure that planting design will minimise the need for repeated operations to remove conifers. Control deer numbers.

Preferred management approach			
Protect and enhance areas of bog and priority habitats	Large areas of priority habitat are already present with some typical species present.	Some conifer is colonising these areas. Existing drainage channels in bog areas.	Remove existing conifers from areas of deep peat. Engage in drain blocking in areas of bog, re-wet these sites and raise the water table to natural levels to facilitate regrowth of *Sphagnum spp*. Enhance priority habitats identified by the FLS Open Habitats review as potentially benefitting from native broadleaf planting.
Sequester carbon through woodland creation and peatland restoration	Plant and manage woodland and open areas for their carbon capture potential. A mix of fast and slow growing tree species in addition to peatland restoration makes this a promising carbon capture site.	Continuous cover management would be preferable for carbon capture potential, however, the site is better suited to a clearfell system for productive conifer.	Work with partners seeking to invest in a variety of nature-based carbon capture solutions present in the plan area, using the Woodland Carbon Code and Peatland Code to independently verify the site's carbon capture.

Taking into consideration the soils available, aspect of the site, existing tree cover, in addition to the opportunities and constraints offered, six main concept zones were created. These refer to capacity of the area to support forestry or a different habitat. The dominant feature of the forest design is the riparian corridor which runs through the site centre, providing a rich, biodiverse habitat that will be encouraged to expand. The main zones are:

- **Riparian corridors** – an area running predominantly through the central belt of the site along the Muck Water. It contains open ground, mature native broadleaf and some non-native conifer species. There will be some enrichment planting in this area but it is hoped the alleviation of browsing

pressure from deer will increase the level of native broadleaf colonisation from existing seed sources. Upper riparian areas may have scattered broadleaves present and will remain unplanted; in the long-term these area may achieve greater than 20 % canopy cover.

- **Native woodland** – native broadleaves will be planted to enhance these areas with a wider species mix. These will also provide a riparian corridor buffer against colonisation by productive conifers.

- **Productive conifer** – predominantly on former drained agricultural fields which are suitable for planting with productive conifer. These have relatively easy access and are on the flatter areas of the site to aid future operational access.

- **Productive broadleaves** – this small zone contains areas which are suitable for productive forestry; they are enclosed by the native woodland area and are therefore not suitable for conifer establishment.

- **Open habitat** – consisting predominantly of two large areas of blanket bog in the site's north and south which have been identified through survey. They contain extensive areas of deep peat, groundwater dependent terrestrial ecosystems, species-rich flushes and nationally important habitats. Also included are areas of designed open ground around fragmented priority habitats, roads, wayleaves and heritage features.

- **Wet woodland** – these areas will have widely spaced native broadleaves, providing a lightly wooded habitat that differs from other forested areas.

3.0 Management Proposals - regulatory requirements

This land management plan was produced in accordance with a range of government and industry standards and guidance as well as recent research outputs, recognised at the time of its production. A full list of the current standards and guidance which guide the preparation and delivery of FLS Land Management Plans can be found using the link HERE.

It is not anticipated that there will be any departures from UKFS requirements and, wherever possible, guidelines will be met in consultation with Scottish Forestry and other relevant stakeholders.

Installation of renewable energy infrastructure falls under the relevant planning authority; current infrastructure is indicated on **Map 2**.

3.1 Designations

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

Table 3

Designations and significant features		
Feature type	Present	Note
Site of Special Scientific Interest (SSSI)	No	
National Nature Reserve (NNR)	No	
Special Protection Area (SPA)	No	
Special Area of Conservation (SAC)	No	
World Heritage Site (WHS)	No	
Scheduled Monument (SM)	No	
National Scenic Area (NSA)	No	
National Park (NP)	No	
Deep peat soil (>50 cm thickness)	Yes	Extensive across plan area.
Tree Preservation Order (TPO)	No	
Biosphere reserve	Yes	Galloway and Southern Ayrshire Biosphere
Local Landscape Area	No	
Ancient woodland	Yes	LEPO site adjacent to plan area and a suspected undesignated PAWS site within plan area.
Acid sensitive catchment	No	
Drinking Water Protected Area (Surface)	No	
Environmentally Sensitive Area (Scotland)	Yes	South Ayrshire Hills (groundwater) Lendalfoot (groundwater)

Map 2 shows the location of all designated areas and significant features. Deep peat soil types are indicated on the **Map 9**, with surveyed peat depths illustrated on **Map 10**.

3.2 Summary of planned operations

In summary, operations in the first 10 years will consist of:

Planting and establishment operations to include productive conifer, productive broadleaf, enrichment planting and protection of existing natural regeneration to enhance natural colonisation of native species.

Felling operations will fall into two categories:

- Removal of conifer seed sources from broadleaf, riparian, and open areas.
- Clearance for utility wayleaves and forest road construction/upgrades.

To initiate **bog restoration**, re-wetting operations (e.g. drain blocking) are planned.

A detailed operational plan is given in **Appendix V**.

3.3 Proposed clear felling

There is no proposed clear felling within the 10 year period of this plan. There will be small areas of felling inside the riparian-broadleaf zones and around the artificial duck ponds to remove non-native conifers. There will be minor tree felling for forest road construction/upgrading. Clearance for utility wayleaves will be conducted under planning permission submitted to the relevant planning authority.

3.4 Proposed thinning

While there is no thinning planned within the 10 year period of this plan, there will be removal of mature and immature conifers from areas that have been designated as either open ground or broadleaf areas. There will also be minor tree felling for forest road construction.

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

3.5 Other tree felling in exceptional circumstances

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

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

Felling permission is therefore sought for the LMP approval period to cover the following circumstances: individual trees, rows of trees or small groups of trees that are impacting on important infrastructure (as defined below*), either because they are now encroaching on or have been destabilised or made unsafe by wind, physical damage, or impeded drainage.

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

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

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

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

3.6 Proposed restocking

As there is no planned clear felling within the 10 year period of this plan, no restocking is planned.

3.7 Proposed afforestation

The area will be subject to extensive afforestation (167.9 ha) via planting and it is envisioned there will be natural regeneration from existing tree cover at the site. This has been planned after the completion of soil, peat depth, archaeological, hydrological, breeding bird, habitat, and native woodland surveys (enclosed as Appendices). The planting design complies with the recommendations contained within

the FLS Open Habitat Ecologist report (**Appendix IX**) and is restricted to where trees will benefit the wider environment (refer to **Appendix IV** for further detail).

3.8 Species diversity and age structure

The following tables show how the proposed management of the forest will help to maintain or establish a diverse species composition and age-class structure, as recommended in the UK Forestry Standard. For the purposes of the woodland design and presented herein, the open ground elements encompasses heritage features, riparian buffers, in addition to areas of existing minor tree cover (e.g. shelterbelts and within the riparian corridor). The proposed design is shown on **Map 8.**

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

Table 4

Plan area						
Species	**Current Area (ha)**	**%**	**Year 10 Area (ha)**	**%**	**Year 20 Area (ha)**	**%**
Conifers (Sitka Spruce)	0.0	0	100.8	20	100.8	20
Native broadleaves	0.0	0	67.1	13	67.1	13
Open ground (includes existing minor tree cover)	514.4	100	346.5	67	346.5	67
Total	**514.4**	**100**	**514.4**	**100**	**514.4**	**100**

Chart 1

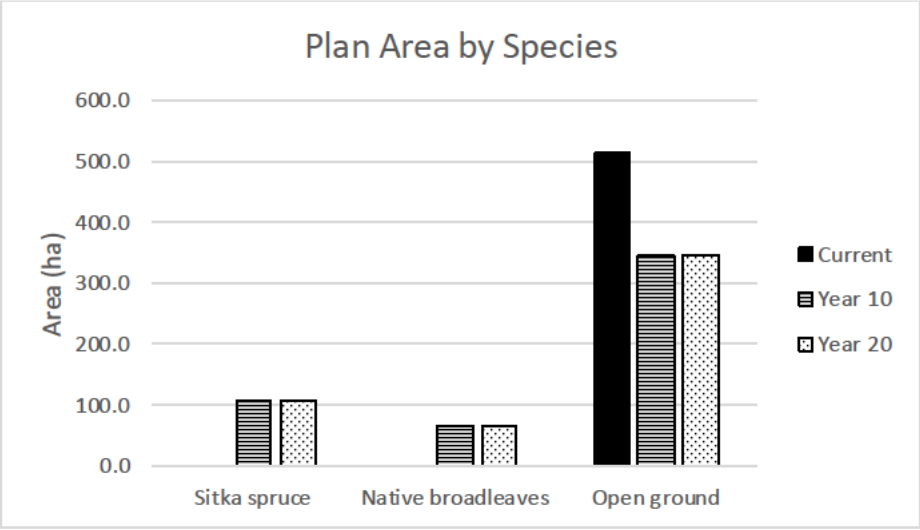
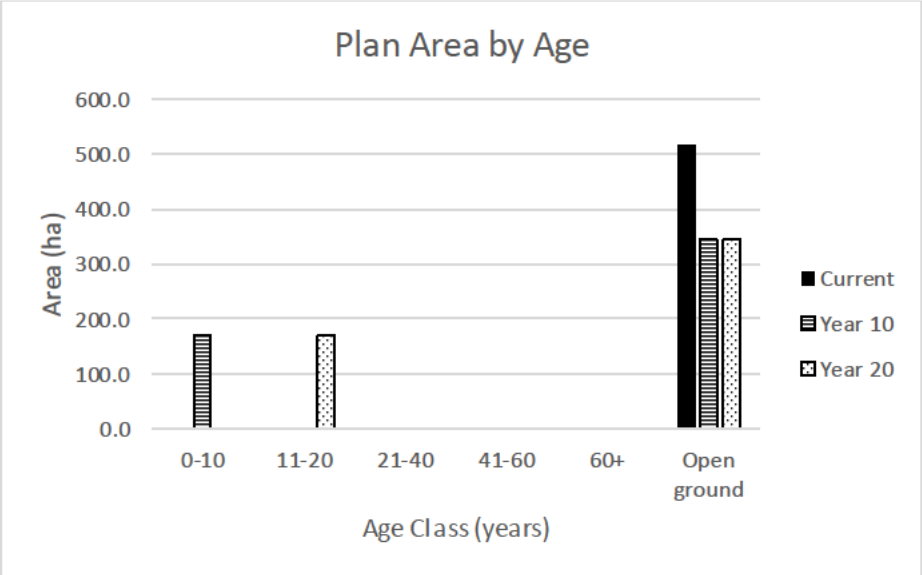


Table 5

Plan area						
Age class (year)	Current Area (ha)	%	Year 10 Area (ha)	%	Year 20 Area (ha)	%
0 – 10	0.00	0	167.9	33	0.00	0
11 – 20	0.00	0	0.00	0	167.9	33
21 – 40	0.00	0	0.00	0	0.00	0
41 – 60	0.00	0	0.00	0	0.00	0
60+	0.00	0	0.00	0	0.00	0
Open ground	514.4	100	346.5	67	346.5	67
Total	**514.4**	**100**	**514.4**	**100**	**514.4**	**100**

Chart 2



3.9 Road operations and quarries

Planned new roads, road realignments, road upgrades, new quarrying, and timber haulage routes are shown on **Map 7**.

Table 6

Forest Road Upgrades, Realignments, New Roads and New Quarrying				
Phase	Name / Number	Length (km) / Area (ha)	Year	Operation
1	Bellamore East	1.5 km	2022/23	New road
1	Bellamore Spur (East)	0.1 km	2022/23	New road
1	Bellamore West	0.5 km	2022/23	New road
1	Bellamore Garleffin	0.5 km	2022/23	New road
1	Forest road upgrade	0.1 km	2022/23	Upgrade

The forest road linking to White Clauchrie forest block will require upgrading to facilitate stone haulage (for new road construction) and future timber haulage. Plans for this 1.6 km upgrade were submitted to Scottish Forestry as an amendment to the current White Clauchrie land management plan and are pending approval.

3.10 Environmental Impact Assessment (EIA) screening for forestry projects

Any operations requiring an EIA determination are shown in the table below and illustrated on **Map 4**.

Table 7

EIA projects in the plan area		
Type of project	Yes / No	Note
Afforestation	Yes	A total of 167.9 ha.
Deforestation	No	There will be minor conifer removal from native woodland and priority open habitats, wayleave areas, and through existing shelterbelts for new road construction.
Forest roads	Yes	2.7 km collectively.
Forestry quarries	No	Stone will be won from existing quarries on the national forest estate.

4.0 Management Proposals – guidance and context

Management proposals – guidance and context
Silviculture
Clear felling
Clear felling is currently the appropriate management type for productive conifers and broadleaves across the plan area. Should the objective to thin over crop rotation to produce quality stock be successful, the management type may change to a low impact silvicultural system following the first thin.

Management proposals – guidance and context
There are no clear felling operations proposed during the plan period. There will be minor conifer removal from native woodland and priority open habitats, wayleave areas, and through existing shelterbelts for new forest road construction. Refer to **Map 5** for management proposals.
Thinning
Thinning will be limited to the removal of non-native conifers from the existing riparian and priority habitat (e.g. blanket bog) areas, wayleave areas, and through existing shelterbelts for new forest road construction. Where machine access is not viable or preferred, trees will be felled and left as deadwood. In line with the region's thinning policy, all coupes will be considered for future thinning. Where a factor(s) prevents this (e.g. such as a DAMS score above 16), it will be recorded. Refer to **Map 5** for management proposals.
Low Impact Silvicultural System (LISS)/Continuous Cover Forestry (CCF)
Continuous Cover Forestry (CCF) will likely be practiced in the riparian corridor and surrounding area. This will likely be of a minimal intervention type with deadwood left in-situ and fell-to-recycle utilised where there is conifer within the allocated broadleaf areas. As canopy cover is very limited, there are few operations envisioned for the duration of this plan. In the first 10 years of the plan, CCF will be contained within broadleaved areas. Site colonisation will be monitored for the first 5 years and there will be an assessment made to determine whether colonisation has sufficiently progressed or if there is need of intervention to ensure the site develops into the correct habitat type. There will also be the restructuring of species around the two areas which have previously been used as duck ponds for shooting (associated OS grid references: NX 25095 87905, NX 23805 88175, and NX 23935 87125). Non-native conifers and more invasive broadleaves will be removed in line with the area's wider planting design. There will also be scope to remove stems from wayleave areas and from the existing shelterbelts for the purposes of new forest road construction (namely for the Bellamore West forest road).
Long term retentions (LTR) / minimum intervention / natural reserves
There are no forested areas which are currently marked for minimum intervention, natural reserve or LTR. This is subject to change as recent site walkovers have suggested there may be Schedule 1 raptor nesting within the eastern shelterbelt. If confirmed through future surveying, the relevant areas will be considered for management under LTR and/or natural reserve.
Tree species choice
Refer to the Operational Plan in **Appendix V** for details of tree species choice. The comprehensive soil survey (**Appendix VI**), along with the open habitat survey (**Appendix VIII**), have given a good data source for utilising ESC data for species choice within the site. This has

Management proposals – guidance and context
guided the species choice alongside guidance from the FLS native woodland ecologist (**Appendix X**) and FLS open habitat ecologist (**Appendix IX**). Further rationalisations of the species have been made to allow for operational considerations such as small coupe size, limited access, and island coupes created by wayleaves. The main productive conifer will be Sitka spruce which, given the surrounding forest, should grow well on site. There will be no use of alternative conifers within this iteration of the plan. The extensive use of native broadleaves will enhance existing habitats over a large area and provide diversity when amalgamated with the larger White Clauchrie plan (due in 2026). All broadleaf planting will be native to the area and should complement and/or enrich existing naturally growing scrub and woodland, giving ecological value. Refer to **Maps 6** and **8**.
Natural regeneration
The intention is to extend and link existing riparian zones in the plan area and there is a preference for natural colonisation by existing native broadleaves (to maintain provenance and improve chances of establishment). Where this is unlikely or has not been successful then these areas should be planted and maintained to achieve required stocking density across the site. This will help ensure linkage with the rest of the valley, including the larger White Clauchrie forest block and lend essential diverse habitat and species for the wider area. Through the delivery of this plan FLS will manage natural regeneration to ensure that, where practicable, it does not significantly impose a negative impact upon the objectives of the plan: • To ensure that there is minimal colonisation of the riparian area by existing or planted conifers: non-native conifers will be removed around the riparian zone and, where the productive areas are close to the riparian zone, productive broadleaves will be used instead of conifers. • Natural regeneration will be managed so that any impact upon designated, protected or promoted habitats, species, landscapes and catchments within or adjacent to the LMP area is minimised and, where possible, mitigated. The advice of the Galloway Fisheries Trust and comments from SEPA will be taken into account when planning management of natural regeneration.
New planting
The plan area should contribute to national goals for woodland creation in addition to contributing to national climate change policy. The split between native broadleaf, productive conifer and open habitat is skewed towards native broadleaf and open habitat due to competing policies for carbon sequestration and woodland creation. Establishment of productive conifer areas will help towards the production programme i south Scotland, utilising mainly Sitka spruce or improved Sitka spruce with ground preparation (mounding). The concentration of productive conifer areas with a higher yield class will also add to national and regional softwood production targets. Within the broadleaf areas there are smaller areas of productive broadleaves. These will strike a balance between growth and possible colonisation of the surrounding areas.

Management proposals – guidance and context
The detailed planting mix is shown in the operational planting plan provided in **Appendix V**. As this will be new afforestation, there is the obvious impact of having an even aged crop. With the smaller areas available for productive conifer, combined with long-term retention for broadleaves, natural colonisation of the site, and the use of open space, the negative impacts of even-age forested areas will be mitigated as far as possible in a single rotation. The site will be amalgamated with the larger White Clauchrie plan area before full rotation length of the trees planted in the Bellamore area. This is expected to offset any lack of diverse age structure in White Clauchrie forest block. The planting design (**Map 8**) has been drawn up to ensure that priority habitats and species listed in the PEA report, Haycock and Associates Ltd habitat survey and FLS open habitat report are not unduly affected by afforestation proposals (see **Appendices VII**, **VIII** and **IX** respectively). A thorough review was undertaken by the FLS open habitats ecologist detailing areas that should be left unplanted, are plantable with mitigations in place, and are plantable with any species. The table presented in **Appendix IV** demonstrates the design's conformance to planting prescriptions and mitigations presented by this report. Prior to afforestation operations, areas of priority habitat will be marked out by competent individuals to ensure tree micro-siting and compliance with the report's recommendations.
Protection
With the establishment of a large number of broadleaf trees, there will be the need for deer control; this will be primarily through culls. Deer control will also be key to the level of enrichment planting for the proposed riparian corridor. Currently there are deer hefted to the surrounding Glake and Clanmore forests. The proposed colonisation of the large riparian corridor by existing mature broadleaf species with limited enrichment planting will be an ongoing process and small interventions will occur as required. To facilitate successful establishment, a coordinated approach will be needed across wildlife management and delivery teams. Where there is need for ATV tracks which are outside forestry operations, the relevant permissions will be applied for with the local planning authority. Deer fencing will be considered as a last resort.
Road operations
Operational access will be facilitated by the creation of 2.7 km of internal roading. Up to 150 m of the existing forest road will be upgraded at NX 2403 8783 to build height to meet the new forest road. Roading operations will involve the construction of new bridges. These roads will conform to UKFS guidelines and SEPA construction licences will be sought where necessary. The forest road linking to White Clauchrie forest block will require upgrading to facilitate stone haulage (for new road construction) and future timber haulage. Plans for this 1.6 km upgrade

Management proposals – guidance and context
were submitted to Scottish Forestry as an amendment to the current White Clauchrie land management plan and are currently pending approval. The new forest road and spur (Bellamore East) has been routed to limit interaction with private water supplies, including the flushed area referenced in Forest Research's report (**Appendix XIII**), and priority habitats (**Appendix IX**). To avoid significant negative impact, the road will be constructed to maintain natural water flow in the relevant areas (e.g. permeable roading via floating sections and/or regular piping). Refer also to **4.0 Water – Drinking Water** and **Biodiversity – Protected and priority habitats/species.** **Map 7** shows the existing forest road network, planned new roads, main egress points, and agreed Timber Transport Routes.
Biodiversity
Designated sites
There are no SAC's or SSSI's at the site. See below for details of priority habitats and species.
Native woodland / Ancient woodland / Plantation on Ancient Woodland sites (PAWs)
The main feature of the site is the existing riparian habitat adjacent to the Muck Water. This has excellent potential to develop into a biodiverse and rich habitat with a large and diverse seed source for mature broadleaves with existing lichen and ground flora associations. The expansion of this area is a key management objective. This area should require little in the way of enrichment planting and it is hoped the alleviation of pressure from browsing will allow a natural colonisation of these species. The use of broadleaves, areas of wet woodland within the rivers flood plains and removal of grazing animals will allow for water quality enhancement. The area is also used by otters, which should be suited to the wide riparian areas and increased foraging opportunities. This area will be monitored and reviewed with interventions to allow for increased tree colonisation and, where necessary, flat planting of tree species missing from expected plant communities. There is an undesignated but possible ancient woodland site (PAWS) identified near to Bellamore farmhouse. Once suitable infrastructure is in place, this will be restored through the gradual removal of conifer and by allowing existing broadleaf to regenerate. This will be monitored for species suitability and growth. If required, minor felling will take place allowing light management for suitable species regeneration. Refer to **Appendix X**.
Protected and priority habitats and species
All forest management operations involve a planning process before work commences which includes checks for wildlife and important habitats. Work plans will be adjusted if necessary to avoid disturbance, and opportunities to further protect species or enhance habitats will be identified. **Priority species** FLS has a single licence to cover forest management activities that may affect red squirrels on the national forest estate (NFE). This is in accord with the Scottish Biodiversity Strategy's aim to

Management proposals – guidance and context
resolve species management issues. All works within the plan area will follow the assessment and mitigation actions set out as conditions of this licence. The site's Preliminary Ecological Assessment (PEA) (**see Appendix VII**) gives a list of species that can be encouraged and protected in the area, showing there are a number of species which depend on the combination of open and riparian habitats. With respect to species such as otter and badger: the design incorporates appropriate buffers and these species will be protected as per the UKFS and NatureScot (previously SNH) guidelines (e.g. 'Forest Operations and Otters in Scotland' and 'Planting Near Badger Setts'). In addition, Schedule 1 raptor are potentially nesting within the plan area. The site will be surveyed during upcoming breeding seasons and, should their presence be confirmed, the relevant forested areas will be considered for long-term retention and/or natural reserve. There are some areas which have steep ground and areas of erosion due to movement in the route of Muck Water burn. This loss of area is not important due to the wide riparian zone but may alter the habitat available for species such as sand martin. We will attempt to stabilise areas with targeted planting in the riparian corridor and immediately surrounding areas. **Priority habitats** Maintenance of the existing open habitat areas has proved to be a key design factor and has considerably reduced the area considered for planting. All habitats identified as unsuitable for planting by the FLS Open Habitats report (**Appendix IX**) have been excluded from the design. Where planting is suitable but restricted by the presence of priority habitats, mitigations will comply with those recommended in this report and will involve identification of priority habitats by competent individuals ahead of afforestation operations commencing (refer to **Appendix IV**). As per Forest Research's findings in **Appendix XIII**, there is a small flush near to the scheme boundary with the forest above at NX 2504 8831. At the time of Forest Research's visit, this appeared to be relatively dry, becoming moister as it extended downslope, running close to the field boundary. It was thought that this minor flush may have originally contributed to Mark Farm's private water supply but its small size suggests that it would not have been reliable, which may have led to the shift to the nearby stream. A minor ditch or drain is found lower down the hillslope flush leading to the water tanks but is not connected to these. As per Forest Research's recommendations, the flush is not thought to be significant in terms of the private water supply. While planting on the flush will not affect the private water supply, the wetland habitat will be buffered for the purposes of protecting biodiversity. The new forest road and spur has been routed to limit interaction with the flushed area. To avoid significant negative impact, the road will be constructed to maintain natural water flow in the relevant areas (e.g. permeable roading via floating sections and/or regular piping). As per **Appendix IX**, the new forest road has been routed to limit interaction with priority habitats within the vicinity of NX 2405 8786 and NX 2413 8798. To avoid significant negative impact, the road will be constructed to maintain natural water flow in the relevant areas (e.g. permeable roading via floating sections and/or regular piping). Refer also to **4.0 Open ground**, **Road operations**, and **Soils – Deep peat**.
Open ground

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There are extensive areas of open ground across the site. These were identified in the Haycock and Associates Ltd habitat survey (**Appendix VIII**), with results of soil surveying presented in **Appendix VI** and peat depth survey results shown in **Map 10**. The main area to the north contains a mixture of upland heath and blanket bog, and has a peat depth which is considerably greater than 50 cm. The area to the south, both east and west, contain blanket bog and areas which may be suitable for habitat restoration by drain blocking. Nothing in the proposed plans would prejudice the outcomes of any habitat restoration: all planting will adhere to the planting prescriptions and mitigations presented in the FLS Open Habitats report (**Appendix IX**) and as detailed in **Appendix IV**. Areas of deep peat deemed unmappable (<0.25 ha) will remain uncultivated and stocking will be increased elsewhere to maintain appropriate stocking densities across the plan area. Any habitat restoration of expansive peat areas will be taken forward along with the national and regional strategy for peatland restoration. Where the open land has been designated, we will endeavour to remove any surrounding conifer seed source and natural colonisation. However, where the canopy cover is <20 % and the ground damage to the area would be considerable or operations would be excessively costly, limited conifers will be allowed to remain.
Dead wood
Opportunities for retaining or creating deadwood will be identified during the planning of all felling and thinning works, favouring areas with the highest deadwood ecological potential. Valuable deadwood and deadwood areas will be marked on contract maps. Where it is safe to do so, standing mature dead trees will be retained as these offer excellent potential for a range of species.
Invasive species (INNS)
Japanese Knotweed is present in an area to the south of the farmhouse. Where it occurs within the plan area, it will be eradicated in line with FLS invasive non-native species (INNS) policy.
Historic Environment
There are no scheduled monuments present within the plan area. As detailed by the archaeology survey (see **Appendix XI**), there are numerous undesignated heritage features across the site, including drystane dykes and historic field systems of local importance. Refer to **Map 2**. Our key priorities for archaeology and the historic environment are to undertake conservation management, condition monitoring and archaeological recording at significant historic assets; and to seek opportunities to work in partnership to help to deliver Our Place in Time: the historic environment strategy for Scotland (2014) and Scotland's Archaeology Strategy (2015). Significant archaeological sites will be protected and managed following the UK Forestry Standard (2017) and the FCS policy document Scotland's Woodlands and the Historic Environment (2008). Harvesting coupes, access roads and fence lines will be surveyed prior to any work being undertaken in order to ensure that upstanding historic environment features can be marked and avoided. At establishment and restocking, work prescriptions remove relevant historic environment features from ground disturbing operations and replanting. Where appropriate, significant historic assets are recorded by archaeological measured survey, see active conservation management and may

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be presented to the public with interpretation panels and access paths. Opportunities to enhance the setting of important sites and landscapes will be considered on a case-by-case basis (such as the views to and from a significant designated site). The Regional Historic Asset Management Plan includes conservation management intentions for designated historic assets on the National Forest Estate. Details of all known historic environment features are held within the Forester Web Heritage Data and included within work plans for specific operations to ensure damage is avoided. Significant historic environment features will be depicted on all relevant operational maps. Areas of historic environment interest should be checked both on FLS's internal historic environment records and also with the Council's HER prior to the commencement of forestry activities. Any upstanding features should be clearly marked, both on the ground and on operational maps. Care should be taken to avoid any damage to surviving structural elements.
Landscape
The plan area lies within the South Ayrshire (unnamed record) local landscape area., while NatureScot (formerly 'SNH') National Landscape Character assessment gives two landscape character types (LCT) with the majority of the area described as Plateau Moorland – Ayrshire (LCT 78). Proposals for Bellamore farm reflect the aims and objectives given in the Ayrshire and Arran Forest and Woodland Strategy (2014). Specifically, under the "Aims and Objectives" of the strategy: • Helping communities, the timber sector and the natural environment adapt to the changing climate. • Increasing and matching timber production and processing capacity. • Improving woodland biodiversity while protecting important non-woodland habitats and species. With regards to land categorisation, the Ayrshire and Arran Forestry and Woodland Strategy is missing from the Scottish Forestry Map viewer and is therefore hard to assess. However, using the FGS Target Central Scotland Green Network FWS, the areas proposed for afforestation are given as "Potential", with the areas left as open space given as "Sensitive". For areas intended for softwood forests, the plan meets the desire for "Offering an alternative sustainable land use to under-used or abandoned marginal farmland" and the areas intended for native woodland expansion are provided by the extended riparian zone. Furthermore, the expansion of the forest "avoids areas of high carbon soil". The visual amenity of the site will be protected by utilising native broadleaves, wide rides in areas where views can be maintained and open space. This will ensure the feel of the head of the valley is maintained. A key aspect is to maintain the open view from the north and to avoid blocking it through linking of the two neighbouring conifer plantations.
People
Neighbours and local community

Management proposals – guidance and context
In line with governmental directives on property disposals, the property was offered for community asset transfer before sale. This was explored by the local community but was ultimately rejected by them. Neighbours and interested stakeholders have been consulted during the development of the plan and their aspirations have been incorporated where they do not conflict with the objectives of the plan and are consistent with FLS's approach to land management. Also refer to **4.0 Drinking Water** below.
Public access
Visitors are welcome to explore FLS land, and will only be asked to avoid routes while certain work is going on that will create serious or less obvious hazards for a period (e.g. tree felling). Scotland's outdoors provides great opportunities for open-air recreation and education, with great benefits for people's enjoyment, and their health and well-being. The Land Reform (Scotland) Act 2003 ensures everyone has statutory access rights to most of Scotland's outdoors, if these rights are exercised responsibly, with respect for people's privacy, safety and livelihoods, and for Scotland's environment. Equally, land managers have to manage their land and water responsibly in relation to access rights and FLS will only restrict public access where it is absolutely necessary, and will keep disruption to a minimum. The plan area is not considered a core recreation area. While informal access is possible via the public road, which is regularly used by walkers and service vehicles (e.g. Royal Mail), there are no current visitor zones within the site and no current plans to develop any. Public access will be maintained through the public road for vehicle access and the forest road network for pedestrian and other non-motorised access.
Renewables, utilities and other developments
As illustrated on **Map 2**, there are several power lines (under/over ground) intersecting the site and connecting with the substation in the south. These will be buffered as per best practice guidance. There are currently two known renewable energy proposals that could introduce further cabling across the Bellamore site to connect with Mark Hill substation should they gain planning permission. These are associated with the proposed Clauchrie and Knockodhar wind farms.
Soils
Ground preparation
Ground preparation will comply with the Cultivation of Soils for Forestry guidelines (bulletin 119). The aim is to provide a suitable planting location for tree establishment and growth while minimising visual and hydrological impacts. All areas will have individual (discontinuous) mounding where machine access is possible and appropriate. Manual planting will be utilised in areas unsuitable for machine access, such as riparian native woodland and where known habitats and species are in need of protecting. Where known protected species are present, mechanical ground preparations will not be conducted within the recommended buffers as per NatureScot (previously SNH) and UKFS guidelines.

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Deep peats

Refer to **Map 9** and **Map 10**.

Deep peat is extensive across the site, with 10a and 10b peat types typically associated with raised bog habitats. Lowland raised bog and blanket bog are UK BAP priority habitats and therefore there is a presumption to restore these areas.

Restoration efforts associated with the extensive areas of degraded blanket bog in the north and south will involve drain blocking to re-wet and raise the water table to natural levels, thus facilitating regrowth of Sphagnum and other bog species.

As per the FLS Open Habitats report (**Appendix IX**) afforestation operations will be preceded by probing for and marking out areas of deep peat and associated hydrological boundaries to avoid any detrimental impact via appropriate micro-siting of planted trees. The table presented in **Appendix IV** details how the planting proposals respond to the recommendations of the aforementioned report with respect to deep peat. Areas of deep peat deemed unmappable (<0.25 ha) will remain uncultivated and stocking will be increased elsewhere to maintain appropriate stocking densities across the plan area.

Water

Drinking water

Known private water supplies for Bellamore farm, Mark farm, and the nearby properties at Docherniel farm were ground truthed and assessed by a hydrologist on 10th September 2021, with representatives from FLS, Scottish Forestry, Forest Research, and South Ayrshire Council present, in addition to property owners/occupiers. The resulting Private Water Supply report (**Appendix XIII**) details these supplies and associated catchments. As per the report's recommendations, the woodland design has incorporated an open space or broadleaf buffer around these supplies. These will be monitored and maintained to minimise future disturbance.

Bellamore Farm
Abstracts from catchment at NX 2328 8720, connecting to the tanks downhill at NX 2323 8703 and NX 2322 8702. The pipe route is indicative and based on information that is currently available. As agreed with attending stakeholders during the abovementioned site visit, to avoid additional ground disturbance, the pipeline will be ground truthed ahead of operational commencement and measures taken to protect it. The new forest road (Bellamore West) runs below the supply's catchment and the pipeline will be routed under the road at the time of construction. The pipeline and PWS will be protected as per **Appendix XIV** and subject to further assessment as part of the FLS work planning process.

Mark Farm
Abstracts from the burn at NX 2488 8828, connecting to the enclosed tanks downhill at NX 2495 8799 and NX 2494 8798. The pipe route has been mapped from the abstraction point to PWS tanks; the route is indicative between the PWS tanks and the residential property (where no planting is proposed). The new forest road (Bellamore East) runs below the supply's catchment and the pipeline will be routed under the road at the time of construction. The pipeline and water

Management proposals – guidance and context
supplies will be protected as per **Appendix XIV** and subject to further assessment as part of the FLS work planning process. There is a deep borehole on the Mark Farm property at NX 24952 87924. As per **Appendix XIII**, the borehole water supply is unlikely to be significantly affected by woodland creation on the adjacent hillslopes. As per **Appendix XIII**, there is also a small flush near to the scheme boundary with the forest above at NX 2504 8831. At the time of Forest Research's visit, this appeared to be relatively dry, becoming moister as it extended downslope, running close to the field boundary. It was thought that this minor flush may have originally contributed to Mark Farm's private water supply but its small size suggests that it would not have been reliable, which may have led to the shift to the nearby stream. A minor ditch or drain is found lower down the hillslope flush leading to the water tanks but is not connected to these. As per Forest Research's recommendations, the flush is not thought to be significant in terms of the private water supply. While planting on the flush will not affect the private water supply, the wetland habitat will be buffered for the purposes of protecting biodiversity. The new forest road and spur has been routed to limit interaction with the flushed area and regular culverting will be installed during construction to maintain water flow downhill. **Docherniel Farm and Hazelbank Cottage** Water supply catchment (approximately at NX 2193 8704) and tank (NX 2244 8695) do not interact with the Bellamore plan area. All known private drinking water supply points, tanks and pipes are recorded as a layer in our geographic information system (GIS) (included in **Map 2**). GIS is consulted during the work planning process for all forestry operations to aid their protection. Features will be clearly marked on all contract maps, as well as on the ground, and relevant neighbours will be consulted prior to any works commencing. All PWS will be protected as per FLS South Region's Pollution Control Plan, **Appendix XIV – Risk assessment of proposed forestry activities interacting with PWS**, and subject to further assessment as part of the FLS work planning process. All operations will comply with UKFS Forestry and Water guidelines, Forestry & Water Scotland Know the Rules booklet and, where necessary, additional pollution prevention measures will be established.
Watercourse condition
The Muck of Water is in good overall condition. This will be the focus of the riparian zone, with it and surrounding tributaries being appropriately buffered. All forestry operations will meet the requirements of the UKFS guidelines on Forests and Water.
Flooding
There are no known areas of flood concern within the Bellamore plan area. However, there is minor overlap with the Barrhill flood risk catchment (target area 95) cited in SEPA's recent Flood Risk Management Consultation (July 2021). Currently, objectives for this target area are focussed on improving understanding of surface water and river flooding in Barrhill, in addition to avoidance of inappropriate development that could increase flood risk. As there will be no clear felling activity during this plan period and, also owing to the scale of the site in the context of the wider catchment, it is not anticipated that any operational activity will

have a measurable effect within the catchment. Planned bog restoration and afforestation are likely to have a small but beneficial impact on downstream flood risk.

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Appendix I Description of Woodlands

Description of woodlands
General description
The landform has a dominating feature of the valley floor, through which the Muck Water runs. Immediately surrounding the valley is scattered native woodland, with drained fields on the lower slopes, giving way to more marginal agricultural areas to the north and south of the site. The site is flanked by two mature conifer forests (private) to the north-east and north-west, and neighbours the FLS White Clauchrie block in the east. Windfarm infrastructure also surrounds the site, with associated overhead/underground cabling crossing the plan area. The site has farmland along the valley to the west of the plan area, with mixed grazing, small broadleaf copses which are usually found in riparian areas and small conifer plantations. The initial impression of the plan area was that large areas were suitable for productive conifer planting, however, the soil survey revealed large areas of peat greater than 50 cm in depth. The areas suitable for productive conifer are further reduced where priority open habitats, Ground Water Dependant Terrestrial Ecosystems (GWDTE) and native woodland areas have been identified. Combined, these surveys have significantly reduced the area suitable for productive conifer to a smaller proportion of the overall site than initial surveys had suggested. Utilisation of the existing mature broadleaf trees along the riparian corridors, combined with the removal of stock and control of deer numbers, will extend the habitat value of the area and link to the larger broadleaf area outside of the plan area along the valley which connects the Muck water to the Duisk River.
Topography and Landscape
The NatureScot (formerly 'SNH') National Landscape Character assessment gives two landscape character types (LCT) with the majority of the area described as Plateau Moorland – Ayrshire (LCT 78) with the key characteristics of: • Topography is comparatively level with extensive plateaux rising to soft contoured ridges. • Underlain by basalts to the east and greywackes to the south-west. • Covered by blanket bog, heather and grass moorland, with extensive mosses and peatland forming an important component of this landscape type. • Frequent extensive areas of coniferous forest of uniform age which, in places, have significantly modified the original character of these areas in terms of colour, texture and views. • Largely undeveloped with a sparse network of roads. • Wind farm development on the north-eastern margins. • Open, exposed and rather remote landscape, wild in character, although this is lessened in places by the presence of wind turbines and associated infrastructure. • Views are open and medium to longer distance depending on undulations in the local topography. The second area covers a small area above the farmhouse and is characterised as Pastoral Valleys – Ayrshire (LCT 72) with the key characteristics of: • Narrow, intimate medium to small scale valleys with steep slopes and relatively flat bottoms cut into the foothills and moorlands of the Ayrshire uplands.

Description of woodlands
• Strongly contained by adjacent uplands with occasional higher and more pronounced summits. • Diverse land cover dominated by broadleaf woodland including shelterbelts, riparian woodland and policy woodlands separating the valley into small parcels of pasture. • Network of tree-lined winding roads. • Number of hill forts, hilltop cairns, castles and strongholds, and mansion houses, resulting in a rich heritage and a strong sense of timelessness. • Settlement comprises a dispersed scatter of houses and farms. • Well settled, intricately patterned landscape which has a rural, picturesque quality. • Views tend to be short to medium distance, focused along the valley in the direction of travel with the surrounding upland landscape forming the enclosing, often dramatic, ridgeline in views. More pronounced 'landmark' hills form key foci. Open views are available from elevated roads and where floodplain is more open. • Popular walks and hill views provide elevated views over this landscape.
Geology and Soils
The underlying bedrock geology is comprised of sedimentary rock belonging to the Dalreoch and Kirkholm Formations, separated by a fault running southwest to northeast, and formed in the Ordovician period. The bedrock is typically overlain by superficial alluvium in the valley bottom and glacial till/moraine or diamicton on hillsides. A comprehensive soil survey was undertaken to enable the design; a copy of the report is given in **Appendix VI**. Soil types and peat depth points are shown respectively in **Map 9** and **Map 10**.
Climate
The south west of Scotland has a predominantly mild windy oceanic climate influenced by the Gulf Stream. Guidance on Climate Change suggests that the Region can expect an increased frequency of extreme weather events with the climate remaining wet and mild. Whilst there will be little impact on this LMP block with regard to primary species choice (mainly broadleaf) there may be future threats towards the maintenance of wildlife habitat networks.
Hydrology
Map 2 shows all watercourses and recorded water supplies. Bodies of surface waters (as identified by SEPA) in the plan area: **Name:** Muck Water **Overall Condition:** Good The Muck water runs through the middle of the LMP area, creating a deep valley floor with meandering flood plains to either side of the water course. There are three small man-made ponds in the area (OS grid references: NX 25095 87905, NX 23805 88175 and NX 23935 87125). These will not be maintained and will eventually fill in, becoming boggy areas. In practice, these will be buffered appropriately and managed in accordance with UKFS Forestry and Water guidelines.

Description of woodlands
Known private water supplies associated with neighbouring residences are listed below. These will be buffered as per UKFS Forestry and Water guidelines and as detailed in **4.0 – Drinking Water**. Refer to **Appendix XIII** and **Appendix XIV** for further details of these water supplies. **Bellamore Farm** Abstracts from catchment at NX 2328 8720, connecting to the tanks downhill at NX 2323 8703 and NX 2322 8702. The pipe route is indicative and based on information that is currently available. As agreed with stakeholders at the time of Forest Research's attendance at the site, the pipeline will be ground truthed ahead of operational commencement. The new forest road (Bellamore West) runs below the supply's catchment and the pipeline will be routed under the road at the time of construction. The pipeline and PWS will be protected as per **Appendix XIV** and subject to further assessment as part of the FLS work planning process. **Mark Farm** Abstracts from the burn at NX 2488 8828, connecting to the enclosed tanks downhill at NX 2495 8799 and NX 2494 8798. The pipe route has been mapped from the abstraction point to PWS tanks; the route is indicative between the PWS tanks and the residential property (where no planting is proposed). The new forest road (Bellamore East) runs below the supply's catchment and the pipeline will be routed under the road at the time of construction. The pipeline and water supplies will be protected as per **Appendix XIV** and subject to further assessment as part of the FLS work planning process. There is a deep borehole on the Mark Farm property at NX 24952 87924. As per **Appendix XIII**, the borehole water supply is unlikely to be significantly affected by woodland creation on the adjacent hillslopes. As per Forest Research's findings in **Appendix XIII**, there is also a small flush near to the scheme boundary with the forest above at NX 2504 8831. At the time of Forest Research's visit, this appeared to be relatively dry, becoming moister as it extended downslope, running close to the field boundary. It was thought that this minor flush may have originally contributed to Mark Farm's private water supply but its small size suggests that it would not have been reliable, which may have led to the shift to the nearby stream. A minor ditch or drain is found lower down the hillslope flush leading to the water tanks but is not connected to these. As per Forest Research's recommendations, the flush is not thought to be significant in terms of the private water supply. While planting on the flush will not affect the private water supply, the wetland habitat will be buffered for the purposes of protecting biodiversity. The new forest road and spur has been routed to limit interaction with the flushed area and regular culverting will be installed during construction to maintain water flow downhill.
Land use
This land was acquired by FLS (formerly 'Forest Enterprise Scotland') in 2018. Previous to this it was an agricultural holding. 1st Edition OS maps indicate that this area has a long agricultural history. Site use was historically farmland with small conifer shelterbelts. There is a current short-term grazing let in place on areas which will be converted to mainly productive conifers. There will be a review of the open area to establish if they would benefit from conservation grazing but this will not be undertaken within the first 5 years of the plan.

Description of woodlands
Both Mark and Bellamore farmsteads are understood to be non-commercial. To the southeast of the plan, there are neighbouring farms and small areas of forestry, both broadleaf and conifer. (The two forested areas to the north east and north west of Bellamore are known as Glake and Clanmore respectively. The larger FLS owned White Clauchrie forest block lies contiguous to the south east.) In all the other directions, the plan area is surrounded by conifer forest, energy infrastructure or windfarms. A key issue in afforesting the Bellamore area is the land use change from agriculture to forestry. Consultation with the Scottish Government Rural Payments and Inspections Division (SGRPID) (evidenced in **Appendix XII**) determined no significant impact within both district and regional contexts, while the loss of Bellamore farm as a commercial stocking was deemed not insignificant within a local context. To mitigate the land use change, large areas will remain as open, rough ground and allow for the important open habitat communities to endure. Options for long term management include conservation grazing and peatland restoration. These will be in line with regional and national strategy. In addition, short term grazing leases have been agreed with the local farming community to maintain open habitats prior to tree planting.
Public access
Public access is maintained via the public road for vehicle access and the forest road network for pedestrian and other non-motorised access as shown on **Map 2** and **Map 7**.
Historic environment
Heritage features are numerous throughout the site and identified by the archaeology survey undertaken in 2018 – refer to **Appendix XI** and **Map 2.**
Biodiversity
Designations, priority species and habitats, and riparian areas are documented in **Appendices VII** and **VIII.** **Priority Habitats** The Haycock & Associates survey (**Appendix VIII**) and FLS Open Habitats report (**Appendix IX**) detail the intricate mosaic of priority habitats across the site, including groundwater dependent terrestrial ecosystems and areas of deep peat including two expansive areas of blanket bog (north and south of the site). Unmappable areas of priority habitat, including deep peat and GWDTE, occur across the site. As per Forest Research's findings in **Appendix XIII**, there is a small flush near to the scheme boundary with the forest above at NX 2504 8831. At the time of Forest Research's visit, this appeared to be relatively dry, becoming moister as it extended downslope, running close to the field boundary. It was thought that this minor flush may have originally contributed to Mark Farm's private water supply but its small size suggests that it would not have been reliable, which may have led to the shift to the nearby stream. A minor ditch or drain is found lower down the hillslope flush leading to the water tanks but is not connected to these. As per Forest Research's recommendations, the flush is not thought to be significant in terms of the private water supply. While planting on the flush will not affect the private water supply, the wetland habitat will be buffered for the purposes of protecting biodiversity. The new forest road and spur has been

Description of woodlands
routed to limit interaction with the flushed area and regular culverting will be installed during construction to maintain water flow downhill. **Priority Species** Otter, badger and bird species (including sand martin) are known to take up residence on/near the site. Refer to the PEA (**Appendix VII**) for full details. Schedule one raptor may also be nesting in the existing conifer shelterbelts; future surveying by the FLS Environment team should confirm this. **Ancient Woodland / PAWS** As per the Native Woodland report (**Appendix X**), there is an undesignated PAWS site near Bellamore farmhouse. **Open ground** Open ground is extensive throughout the plan area and typically associated with wayleaves, roads, and priority habitats such as blanket bog. There is an open - lightly wooded feel to the riparian corridor which should be maintained/enhanced to benefit biodiversity and linkage with habitats beyond the site's boundary.
Invasive species
Japanese Knotweed was present in an area to the south of the farmhouse. Where it occurs within the plan area, it will be eradicated in line with FLS invasive non-native species (INNS) policy.
Woodland composition
The future species composition of the forest is illustrated on **Maps 6** and **8**. It is expected that the plan area will be amalgamated with the larger White Clauchrie forest block at the next LMP review (2026).
Plant health
The main risk affecting the forest block is deer, with Red and Roe present on site and in surrounding forest blocks. The primary method utilised for control of deer numbers will be culling and will be undertaken in line with regional deer management practices. Where culling itself does not result in sufficient plant protection, deer fences will be considered. As the area will fall within the *Phytophthora ramorum* management zone and *Hymenoscyphus fraxineus* is present in the local area; planting will not include Larch or Ash. *Hylobius abietis* will be minimised with the utilisation of post-felling fallow periods.
Infrastructure
There are a series of farm residences running along the valley from the village of Pinwherry, which is the nearest settlement. Bellamore farm lies at the head of the valley, connected by a minor tarmac road to Pinwherry and by forest road to the larger White Clauchrie LMP area. There is the residential farm of Mark on the east of the site, with the Bellamore farm and surrounding fields forming the other residential property on the site. It is understood both Bellamore and Mark farmsteads are currently maintained in non-commercial capacities. On the south side of the site there is Mark Hill windfarm, which is a large windfarm containing a key substation for the wider renewable developments in the area. There is also a variety of

Description of woodlands
underground and overhead electricity cables on site. The Tralorg windfarm lies 12 km to the north and has an underground export cable running through the site with associated wayleave. There are currently two known renewable energy proposals that may introduce further cabling across the site to connect with Mark Hill substation should they gain formal planning permission. These are associated with the proposed Clauchrie and Knockodhar wind farms. Refer to **Map 2** for details of site features.

Appendix II Consultation record

Stakeholder name	Organisation	Statutory	Date(s) consulted	Response
	NatureScot (formerly 'SNH')	Yes	25.10.2019	Yes
	SEPA	Yes	25.10.2019	Yes
	Scottish Forestry	Yes	25.10.2019 onwards	Yes
	Historic Environment Scotland	Yes	25.10.2019	Yes
	AFT	No	04.11.2019	No
	Biosphere	No	04.11.2019	Yes
	Pinmore and Pinwherry Community Council	Yes	04.11.2019	No
	South Ayrshire Council	Yes	25.10.2019 11.05.2021 onwards	No Yes: detailed current and future concerns relating to private water supplies in the area. *Site visit investigating private water supply catchments conducted alongside Forest Research, Scottish Forestry and relevant neighbours. Design amended as per on-site discussion and Forest Research's recommendations. Refer to* ***4.0 – Drinking Water, Appendices I, XIII*** *and* ***XIV.***
Neighbours/Landowners	Glake Forest/Pinmore forest	No	04.11.2019	Yes
Neighbours/Landowners	Knockodar Forest	No	25.10.2019	Yes
Residential neighbours	Various	No	25.10.2019 20.05.2021 onwards	Yes: detailed current and future concerns relating to

Stakeholder name	Organisation	Statutory	Date(s) consulted	Response
				private water supplies, forest roads/quarries, amenity, and biodiversity. *Refer to **section 4.0** for relevant management details. Information and illustrations of (future) landscape issued to relevant neighbours. Site visit investigating private water supply catchments conducted alongside Forest Research, Scottish Forestry and South Ayrshire Council. Design amended as per on-site discussion and Forest Research's recommendations. Refer to **4.0 – Drinking Water**. Also see **Appendices I, XIII and XIV**.*
	West of Scotland Archaeology Service	No	08.11.2019	Yes
	Forest Research	Yes	11.05.2021 onwards	Advice sought on interaction with private water supplies. *Site visit investigating private water supply catchments conducted alongside Forest Research, Scottish Forestry and relevant neighbours. Design*

Stakeholder name	Organisation	Statutory	Date(s) consulted	Response
				amended as per on-site discussion and Forest Research's recommendations. Refer to ***4.0 – Drinking Water****,* ***Appendices I, XIII*** *and* ***XIV.***

Appendix III Tolerance table

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

NOTES:

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

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

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

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

Table of Working Tolerances Specific to Larch

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

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

Appendix IV How the design responds to the FLS Open Habitats report

Using the Haycock and Associates survey results (**Appendix VIII**), the FLS Open Habitats report (**Appendix IX**) identifies areas suitable for planting, suitable for planting but requiring mitigation, and unsuitable for planting. The table below shows how the planting design responds to the ecologist's recommendations for areas suitable for planting but requiring mitigation as priority habitats will be present. On the report's map (**Appendix IX, pp. 11 - 12**): hatched red areas have a minor priority habitat element and are therefore mostly suitable for planting with any tree species, orange coloured areas have a major element of priority habitat present and are suitable for enhancement planting with native broadleaves, and green areas contain a variable amount of priority habitat that is suitable for enhancement planting of native broadleaves. All operations will comply with the prescriptions and mitigations advised in the FLS Open Habitats report and will typically include peat probing, marking out of priority habitats and tree micro-siting by competent individuals to avoid detrimentally impacting priority habitats.

How the design responds to the Open Habitats report				
Category as per FLS Open Habitat Ecologist report (April 2021)	**Haycock & Associates Ltd survey polygon number**	**Priority habitat(s) present and percentage present (%)** (across whole polygon area as per Haycock & Associates)	**Planting description** (corresponds to the areas indicated in FLS Open Habitat report, not the whole Haycock & Associates polygon)	**Mitigation(s)** (as per FLS Open Habitat Ecologist report, April 2021)
Majority plantable with mitigations. Polygons that can mostly be planted with any tree species, but have unmappable areas of priority habitat within them. Usually UPLAND FLUSHES. **Hatched red** on map.	001	5% Upland, flush fen or swamp	Not planted	Marking of priority flushes by competent individuals identifying areas excluded from planting and including a 25 m buffer. Peat probing should also be carried out by competent individuals for areas that are non-priority 'flush, fen and swamp' (as these can be deep peat) and those multi-component polygons that contain priority upland flush fen and swamp and peatland habitat types. Areas of deep peat deemed unmappable (<0.25 ha) will remain uncultivated

How the design responds to the Open Habitats report				
				and stocking will be increased elsewhere to maintain appropriate stocking densities across the plan area.
	003	<1% Upland, flush fen or swamp	Not planted	
	007	<1% Upland, flush fen or swamp	Conifer (Sitka spruce)	
	012	5% Upland, flush fen or swamp 3% Wet woodland <1% Upland mixed ashwood	Conifer (Sitka spruce)	
	015	<1% Upland, flush fen or swamp	Conifer (Sitka spruce) with minor native broadleaf proportion	
	017	<1% Upland, flush fen or swamp	Conifer (Sitka spruce)	
	018	<1% Wet woodland (Percentages apply to the polygon as a whole).	Conifer (Sitka spruce) with minor native broadleaf proportion	
	023	2% Wet woodland <1% Upland, flush fen or swamp	Conifer (Sitka spruce)	
	025	20% Wet woodland <1% Upland, flush fen or swamp	Conifer (Sitka spruce) and leave watercourse buffer unplanted. Possible natural	

How the design responds to the Open Habitats report			
			regeneration of native broadleaves
	026	5% Upland, flush fen or swamp <1% Wet woodland <1% Coniferous woodland	Conifer (Sitka spruce) and native broadleaves. Possible natural regeneration of native broadleaves
	028	<1% Upland, flush fen or swamp <1% Upland birchwood <1% Coniferous woodland	Not planted. Possible natural regeneration of native broadleaves
	030	15% Wet woodland 15% Upland, flush fen or swamp 10% Eutrophic standing water	Possible natural regeneration of native broadleaves
	034	10% Blanket bog 5% Upland, flush fen or swamp (Percentages apply to the polygon as a whole).	Native broadleaves
	038	20% Blanket bog <1% Upland, flush fen or swamp <1% Coniferous woodland (Percentages apply to the polygon as a whole).	Native broadleaves
	042	<1% Upland heathland	Native broadleaves

How the design responds to the Open Habitats report				
	047	<1% Upland, flush fen or swamp	Conifer (Sitka spruce)	
	057	5% Upland, flush fen or swamp <1% Upland heathland	Native broadleaves	
	059	5% Upland heathland <1% Upland, flush fen or swamp	Native broadleaves	
	060	<1% Upland, flush fen or swamp <1% Wet woodland	Not planted	
	062	5% Upland, flush fen or swamp 5% Upland heathland	Conifer (Sitka spruce)	
	063	<1% Upland, flush fen or swamp	Conifer (Sitka spruce)	
	073	<1% Upland, flush fen or swamp	Native broadleaves. Possible natural regeneration of native broadleaves	
	086	<1% Upland, flush fen or swamp	Conifer (Sitka spruce) with minor native broadleaf proportion	
	121	15% Upland heathland <1% Upland, flush fen or swamp	Native broadleaves	
Parts are plantable with mitigations.	054	No priority habitats surveyed	Not planted	Micro-siting and marking by

How the design responds to the Open Habitats report				
Polygons that are mainly priority habitat that have small areas that could be planted with native woodland to enhance them, but they cannot be mapped and must be identified on the ground and micro-sited. **Orange** on map.				competent individuals identifying priority habitat types and deep peat areas that are excluded from planting. Areas of deep peat deemed unmappable (<0.25 ha) will remain uncultivated and stocking will be increased elsewhere to maintain appropriate stocking densities across the plan area.
	061	90% Upland heathland <1% Upland, flush fen or swamp	Not planted	
	116	55% Upland heathland 5% Blanket bog <1% Upland birchwood	Native broadleaves	
	117	90% Upland heathland <1% Upland, flush fen or swamp	Native broadleaves	
	090	75% Upland, flush fen or swamp <1% Wet woodland	Not planted	
Parts are plantable with mitigations. Areas of priority habitat that could be enhanced by planting low density individuals and groups (a minority element) with native trees. **Green** on map.	009	20% Upland birchwood 15% Upland mixed ashwood 10% Wet woodland 10% Upland heathland <1% Coniferous woodland	Not planted, edged with some native broadleaves; 500 sph to allow for future recruitment and expansion of native scrub.	Micro-siting and marking by competent individuals identifying priority habitat types and deep peat areas that are excluded from planting. Areas of deep peat deemed unmappable (<0.25 ha) will remain uncultivated and stocking will be increased elsewhere to maintain appropriate stocking densities across the plan area.
	035	10% Blanket bog 5% Upland, flush fen or swamp	Native broadleaves within the plantable area of the polygon; 500 sph to allow for future	

How the design responds to the Open Habitats report			
		<1% Coniferous woodland (Percentages apply to the polygon as a whole, not the plantable area indicated in green on FLS Open Habitat Ecologist review map).	recruitment and expansion of native scrub.
	052	No priority habitats surveyed	Not planted
	089	50% Upland heathland <1% Upland birchwood	Native broadleaves; 500 sph to allow for future recruitment and expansion of native scrub.
	102	45% Upland heathland <1% Upland birchwood <1% Wet woodland <1% Inland rock outcrops & scree <1% Coniferous woodland	Native broadleaves; 500 sph to allow for future recruitment and expansion of native scrub.
	113	10% Blanket bog <1% Upland, flush fen or swamp <1% Upland heathland (Percentages apply to the polygon as a whole, not the plantable area indicated in green on FLS Open Habitat Ecologist review map).	Native broadleaves within the plantable area of the polygon; 500 sph to allow for future recruitment and expansion of native scrub.
	115	40% Upland heathland 20% Blanket bog <1% Coniferous woodland	Native broadleaves; 500 sph to allow for future recruitment and expansion of native scrub.

How the design responds to the Open Habitats report				
	118	10% Blanket bog <1% Upland, flush fen or swamp (Percentages apply to the polygon as a whole, not the plantable area indicated in green on FLS Open Habitat Ecologist review map).	Native broadleaves within the plantable area of the polygon; 500 sph to allow for future recruitment and expansion of native scrub.	