Newcastleton

Land Management Plan

2020 - 2030



|  |  |  |  |
| --- | --- | --- | --- |
| Property Details | | | |
| Property Name: | Newcastleton | | |
| Grid Reference (main forest entrance): | NY 5037 8728 | Nearest town or locality: | Newcastleton |
| Local Authority: | | Scottish Borders | |

|  |  |  |  |
| --- | --- | --- | --- |
| Applicant’s Details | | | |
| Title: | Mr | Forename: | John |
| Surname: | Ogilvie | | |
| Position: | Planning Forester | | |
| Contact Number: | 0131 370 5276 | | |
| Email: | John.ogilvie@forestryandland.gov.scot | | |
| Address: | Forestry and Land Scotland, Selkirk Office, Weavers Court, Forest Mill, Selkirk | | |
| Postcode: | TD7 5NY | | |

|  |  |
| --- | --- |
| Owner’s Details (if different from Applicant) | |
| Name: |  |
| Address: |  |

1. I apply for Land Management Plan approval for the property described above and in the enclosed Land Management Plan.
2. I apply for an opinion under the terms of the Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017 for afforestation / deforestation / roads / quarries as detailed in my application.
3. I confirm that the scoping, carried out and documented in the Consultation Record attached, incorporated those stakeholders which the FC 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 |  | **Date of Approval** |  |
|  |  | **Date Approval Ends** |  |

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1.0 Objectives and Summary

1.1 Plan overview and objectives

|  |  |
| --- | --- |
| Plan name | Newcastleton |
| Forest blocks included | Newcastleton |
| Size of plan area (ha) | 2736 |
| Location | See Location map (**Map 1**) |

|  |
| --- |
| Long Term Vision |
| To complete restructuring of the forest to achieve a healthy and resilient forest that contributes to long term economic, social and environmental benefits. |
| Management Objectives |
| 1. To develop resilience to climate change and optimise carbon capture. 2. To optimise productive potential of the land, for construction quality timber and other products for local and national markets. 3. Increase the structural diversity of the forest. 4. Manage the landscape associated with visitor zones to maintain a welcoming and accessible forest environment. 5. Continue to develop permanent woodland and other habitats for a variety of species, including red squirrel and raptors. 6. Protect the historical and archaeological heritage of the forest. |
| Critical Success Factors |
| * Achieve clearfell and thinning programme to contribute to the Region’s sustainable timber production targets; * Carry out timely thinning and CCF interventions; * Successfully restock challenging sites with poor, nutrient deficient soils; * Successfully establish native broadleaves in riparian zones; * Protect broadleaves and ‘soft’ conifers from deer browsing damage; |

1.2 Summary of planned operations

Table 1

|  |  |
| --- | --- |
| Summary of Operations over the Plan Period | |
| Clear felling | 425.9 ha |
| Thinning | 291.6 ha |
| Restocking | 564.3 ha |
| Afforestation | 0 ha |
| Deforestation | 0 ha |
| Forest roads | 200 m |
| Forestry quarries | 0 ha |

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

2.0 Analysis and Concept

The planning process was informed by collecting information about the woodland, which is presented in **Appendix I**. During the development of this plan we have consulted with the local community and other key stakeholders, and a Consultation Record is presented in **Appendix III**.

The plan’s objectives were analysed against the constraints and opportunities identified during scoping and consultation. Preferred options were then chosen for delivering the objectives, and these proposals are summarised on the Analysis and Concept map (**Map 2**).

3.0 Management Proposals - regulatory requirements

3.1 Designations

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

Table 2

|  |  |  |
| --- | --- | --- |
| Designations and significant features | | |
| Feature type | Yes / No | Note |
| Site of Special Scientific Interest (SSSI) | No |  |
| National Nature Reserve (NNR) | No |  |
| Special Protection Area (SPA) | No |  |
| Special Area of Conservation (SAC) | No |  |
| World Heritage Site (WHS) | No |  |
| Scheduled Monument (SM) | Yes | Langknowe Long Cairn |
| National Scenic Area (NSA) | No |  |
| National Park (NP) | No |  |
| Deep peat soil (>50 cm thickness) | No |  |
| Tree Preservation Order (TPO) | No |  |
| Biosphere reserve | No |  |
| Local Landscape Area | No |  |
| Ancient woodland | Yes | Hillhouse Wood LEPO (not shown on ancient woodland layer) |
| Acid sensitive catchment | No |  |
| Drinking Water Protected Area (Surface) | No |  |

3.2 Clear felling

Sites proposed for clear felling in the plan period are identified as Phase 1 and Phase 2 coupes on the Management map (**Map 3**).

Table 3

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Clearfell Summary by Phase and Coupe Number | | | |  |
| Phase | Coupe Number | Fell Year | Gross Area (ha) | Volume (m3 OBS) |
| 1 | 70002 | 2021/22 | 25.4 | 15219 |
| 1 | 70007 | 2020/21 | 32.9 | 11741 |
| 1 | 70020 | 2021/22 | 11.2 | 5740 |
| 1 | 70052 | 2020/21 | 46.3 | 9814 |
| 1 | 70062 | 2020/21 | 33.4 | 13808 |
| 1 | 70068 | 2021/22 | 17.8 | 5944 |
| 1 | 70090 | 2021/22 | 24.2 | 12705 |
| 1 | 70091 | 2021/22 | 11.7 | 3740 |
| 2 | 70048 | 2026/27 | 6.6 | 1694 |
| 2 | 70055 | 2027/28 | 27.0 | 8030 |
| 2 | 70060 | 2026/27 | 70.4 | 26514 |
| 2 | 70065 | 2025/26 | 27.6 | 7706 |
| 2 | 70072 | 2027/28 | 39.9 | 17997 |
| 2 | 70085 | 2029/30 | 37.3 | 11440 |
| 2 | 70104 | 2029/30 | 14.2 | 3752 |
|  |  |  |  |  |
|  |  | **Total** | 425.9 | 155844 |

Table 4

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Clearfell by Species | | | | | | | | | | | | |
|  |  | Net Area (ha) by Main Species >20% (or MC, MB) | | | | | | | | | |  |
| Coupe Number | Fell Year | DF | EL | HL | JL | LP | NS | SP | SS | MC | MB | **Coupe Total** |
| 70002 | 2021/22 |  | 0.1 |  |  | 0.5 |  |  | 23.1 |  |  | **23.7** |
| 70007 | 2020/21 |  |  |  |  | 7.9 |  |  | 23.9 |  |  | **31.9** |
| 70020 | 2020/21 | 0.4 |  |  |  |  | 5.5 |  | 4.5 |  |  | **10.5** |
| 70052 | 2020/21 |  |  |  |  |  |  |  | 40.2 |  |  | **40.2** |
| 70062 | 2020/21 |  |  |  |  |  |  |  | 28.9 |  |  | **28.9** |
| 70068 | 2021/22 |  |  |  |  |  |  |  | 11.9 |  |  | **11.9** |
| 70090 | 2021/22 |  |  |  |  |  |  |  | 23.2 |  |  | **23.2** |
| 70091 | 2021/22 |  |  |  | 0.5 |  | 0.2 |  | 9.4 |  |  | **10.1** |
| 70048 | 2026/27 |  |  |  | 0.4 |  | 0.3 | 0.1 | 1.6 |  |  | **2.4** |
| 70055 | 2027/28 |  |  |  |  |  |  |  | 26.2 |  |  | **26.2** |
| 70060 | 2026/27 |  |  |  |  | 1.2 |  |  | 62.1 |  |  | **63.3** |
| 70065 | 2025/26 |  |  |  |  | 0.2 |  |  | 20.5 |  |  | **20.7** |
| 70072 | 2027/28 |  |  |  |  |  |  |  | 39.6 |  |  | **39.6** |
| 70085 | 2029/30 |  |  |  |  |  |  |  | 30.8 |  |  | **30.8** |
| 70104 | 2029/30 |  |  |  |  |  |  |  | 12.4 |  |  | **12.4** |
| **Plan Area Total** | | **0.4** | **0.1** |  | **0.9** | **9.8** | **6.0** | **0.1** | **358.3** |  |  | **375.7** |

Table 5

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scale of Proposed Felling Areas | | | | | | | | | | | | | |
| **Total Woodland Area** | | | | 2736 | | | ha |  | | | | | |
| Felling | Phase 1 | % | Phase 2 | | % | Phase 3 | | | % | Phase 4 | % | Long Term Retention | % |
| Net Area (ha) | 180.4 | 6.6 | 195.4 | | 7.1 | 63.0 | | | 2.3 | 232 | 8.5 | 141.3 | 5.2 |

3.3 Thinning

Potential sites for thinning in the plan period are identified on the Thinning map (**Map 4**).

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. The thin years and net areas listed in the table are provisional and may be adjusted once pre-thinning assessment has been carried out.

Table 6

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Thinning by Species | | | | | | | | | | | | | |
|  |  | Net Area (ha) by Main Species >20% (or MC, MB) | | | | | | | | | | |  |
| Thinning Coupe Number | Thin Year | CP | DF | EL | HL | JL | LP | NS | SP | SS | MC | MB | **Total** |
| 70010 | 2029/30 |  |  |  |  |  |  |  |  | 26.9 |  |  | **26.9** |
| 70011 | 2022/23 |  |  |  |  |  |  |  |  | 57.8 |  |  | **57.8** |
| 70013 | 2023/24 |  |  |  |  |  |  |  |  | 22.2 |  |  | **22.2** |
| 70034 | 2021/22 |  |  |  |  |  |  |  |  | 12.1 |  |  | **12.1** |
| 70042 | 2024/25 |  |  |  |  | 4.9 |  |  |  | 17.9 |  |  | **22.8** |
| 70049 | 2024/25 |  |  |  |  |  |  | 18.0 |  | 7.6 |  |  | **25.6** |
| 70079 | 2027/28 |  |  |  |  |  |  | 5.0 | 10.1 |  |  |  | **15.1** |
| 70081 | 2023/24 |  |  |  |  | 8.1 |  |  |  | 4.0 |  |  | **12.1** |
| 70083 | 2021/22 |  |  |  |  |  |  | 4.2 |  | 16.6 |  |  | **20.6** |
| 70095 | 2021/22 |  |  |  |  |  |  |  |  | 65.2 |  |  | **65.2** |
| 70100 | 2021/22 |  |  |  |  | 2.6 |  | 4.0 |  |  |  |  | **6.6** |
| 70101 | 2021/22 |  |  |  |  |  |  | 1.0 |  |  |  |  | **1.0** |
| 70102 | 2023/24 |  |  |  |  | 1.4 |  | 1.5 |  | 0.7 |  |  | **3.6** |
| **Plan Area Total** | |  |  |  |  | **17** |  | **33.7** | **10.1** | **231** |  |  | **291.6** |

3.4 Other tree felling in exceptional circumstances

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

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

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

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

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

The maximum volume of felling in exceptional circumstances over the plan area covered by this approval is 40 cubic metres per calendar year.

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

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

3.5 Restocking

Proposed restocking is shown on the Future Habitats and Species map (**Map 5**).

Table 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Restocking | | | | | | | |
| Phase | Coupe Number | Gross Area (ha) | Proposed Restock Year | Species | Method \* | Minimum stocking Density (s/ha) | Note |
| 1 | 70070 | 21.2 | 2019/20 | SS/LP | R | 2500 | Felled awaiting restock.  Previous coupe no. 70069. |
| 1 | 70076 | 13.1 | 2019/20 | SS  NS  MB | R  R  R | 2500  2500  1600 | Felled awaiting restock.  Previous coupe no. 70074. |
| 1 | 70006 | 36.0 | 2020/21 | SS/LP | R | 2500 | Felled awaiting restock. |
| 1 | 70009 | 41.6 | 2020/21 | SS/LP  SP/BI  MB | R  R  R | 2500  2500  1600 | Felled awaiting restock. |
| 1 | 70059 | 18.5 | 2020/21 | SS/AR | R | 2500 | Felled awaiting restock.  Alder instead of Lodgepole pine as nurse species |
| 1 | 70103 | 8.0 | 2021/22 | SS  DF/NS | R  R | 2500  2500 | Felled awaiting restock.  *Phytophthora ramorum* SPHN larch felled Dec 2018. |
| 1 | 70002 | 25.4 | 2023/24 | SS/LP  MB | R  R | 2500  1600 |  |
| 1 | 70007 | 32.9 | 2022/23 | SS/LP  MB | R  R | 2500  1600 |  |
| 1 | 70020 | 11.2 | 2022/23 | MB | R | 1600 |  |
| 1 | 70052 | 46.3 | 2022/23 | SS/LP  MB | R  R | 2500  1600 |  |
| 1 | 70062 | 33.4 | 2022/23 | SS  NS  SP/NS  MB | R  R  R  R | 2500  2500  2500  1600 |  |
| 1 | 70068 | 17.8 | 2023/24 | SS  SP  NS  MB | R  R  R  R | 2500  2500  2500  1600 |  |
| 1 | 70090 | 24.2 | 2023/24 | SS  DF/SS  MC/MB | R  R  R | 2500  2500  1600 | Rare opportunity in Newcastleton to restock with DF |
| 1 | 70091 | 11.7 | 2023/24 | SP/NS  MB | R  R | 2500  2500 | Main objective is biodiversity |
| 2 | 70048 | 6.6 | 2028/29 | MB | R/NR | 1600 |  |
| 2 | 70055 | 27.0 | 2029/30 | SS/LP  MB | R | 2500  1600 |  |
| 2 | 70060 | 70.4 | 2028/29 | SS  SS/LP  SP/NS  MB | R  R  R  R | 2500  2500  2500  1600 |  |
| 2 | 70065 | 27.6 | 2026/27 | SS  MB | R  R | 2500  1600 |  |
| 2 | 70072 | 39.9 | 2028/29 | SS  MB | R  R | 2500  1600 |  |
| 2 | 70085 | 37.3 | 2031/32 | SS/LP | R | 2500 |  |
| 2 | 70104 | 14.2 | 2031/32 | NS  SS  SP/BI | R  R  R | 2500  2500  2500 |  |
|  |  |  |  |  |  |  |  |
|  | **Total** | 564.3 |  |  |  |  |  |

\* replant (R) / natural regeneration (NR) / plant alternative area (ALT) / no restocking (None)

3.6 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.

Table 8

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Plan area by Species | | | | | | |
| **Species** | **Current** | | **Year 10** | | **Year 20** | |
| Area (ha) | % | Area (ha) | % | Area (ha) | % |
| Sitka spruce | 1613 | 59 | 1550 | 57 | 1475 | 54 |
| Other conifers | 374 | 14 | 435 | 16 | 511 | 19 |
| Native broadleaves | 154 | 6 | 184 | 7 | 204 | 8 |
| Other broadleaves | 2 | <1 | 2 | <1 | 2 | <1 |
| Open ground | 591 | 22 | 563 | 21 | 543 | 20 |
| **Total** | **2736** |  | **2736** |  | **2736** |  |

Chart 1

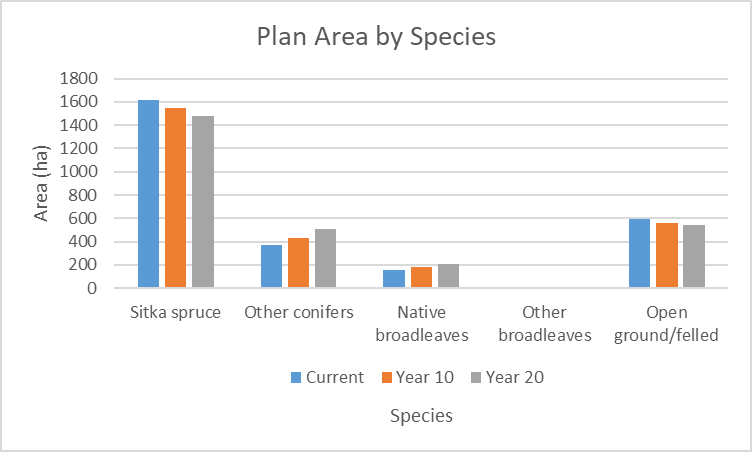
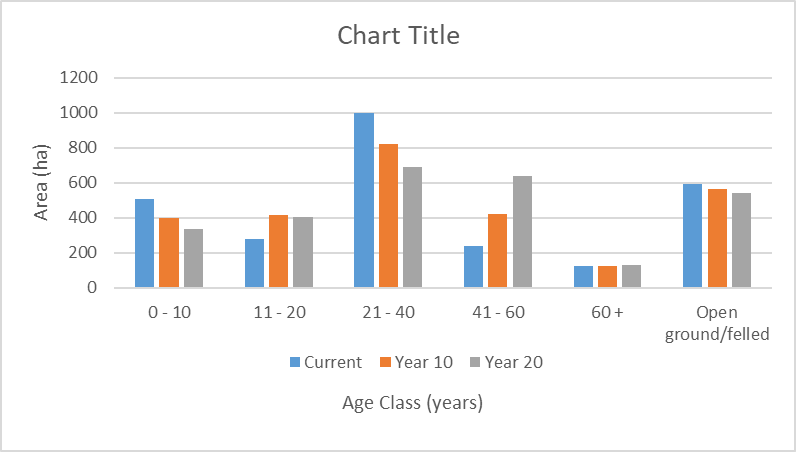


Table 9

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Plan area by Age | | | | | | |
| **Age class (years)** | **Current** | | **Year 10** | | **Year 20** | |
| Area (ha) | % | Area (ha) | % | Area (ha) | % |
| 0 – 10 | 507 | 19 | 396 | 14 | 334 | 12 |
| 11 – 20 | 278 | 10 | 413 | 15 | 405 | 15 |
| 21 – 40 | 999 | 37 | 821 | 30 | 690 | 25 |
| 41 – 60 | 236 | 9 | 421 | 15 | 638 | 23 |
| 60+ | 125 | 5 | 121 | 4 | 127 | 5 |
| Open ground/felled | 591 | 22 | 563 | 21 | 543 | 20 |
| **Total** | **2736** |  | **2736** |  | **2736** |  |

Chart 2



3.7 Road Operations and Quarries

Planned new roads, road realignments, road upgrades, new quarrying, and timber haulage routes are shown on the Road Operations and Timber Haulage map (**Map 6**).

Table 10

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Forest Road Upgrades, Realignments, New Roads and New Quarrying | | | | |
| Phase | Name / Number | Length (m) | Year | Operation |
| 1 | N301f - N301k | 3000 | 2020/21 | Upgrade (re-surface) |
| 1 | N302c | 1000 | 2020/21 & 2021/22 | Upgrade\* |
| 1 | N312c | 1400 | 2020/21 | Upgrade (re-surface) |
| 1 | N316a – N316c | 4400 | 2020/21 | Upgrade (re-surface)\* |
| 1 | N324 | 350 | 2024/25 | Upgrade (re-build)\* |
| 1 | N331 | 1300 | 2024/25 | Upgrade\* |
| 1 | N332 | 800 | 2024/25 | Upgrade\* |
| 1 | N339c | 100 | 2020/21 | New road/harvesting facility |
| 2 | N313d | 2400 | 2025/26 | Upgrade (re-build)\* |
| 2 | N318 – N318a | 1820 | 2026/27 | Upgrade (re-build)\* |
| 2 | Gall Sike | 100 | 2025/26 | New road/harvesting facility |

\* will require roadside tree felling 3m either side

3.8 Environmental Impact Assessment (EIA)

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

Table 11

|  |  |  |
| --- | --- | --- |
| EIA projects in the plan area | | |
| Type of project | Yes / No | Note |
| Afforestation | No |  |
| Deforestation | No |  |
| Forest roads | Yes | Two new short sections of forest road (100m each) |
| Forestry quarries | No |  |

3.9 Tolerance table

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

4.0 Management Proposals – guidance and context

|  |
| --- |
| Silviculture |
| Clear felling |
| Most of Newcastleton Forest will continue to be managed using clearfell and restock. The soils and climatic conditions, in particular high exposure (DAMS >16), are such that lower impact management systems are not appropriate.  Coupes for clearfelling during the plan period (refer to **Map 4**):  **70002 Shiel Burn** (2021/22)  Mature Sitka spruce and Sitka spruce/Lodgepole pine on peaty surface water gleys, with several pockets of windblow (10-15%). To be restocked primarily with Sitka spruce/Lodgepole pine, Lodgepole pine as a nurse species on the nutrient poor site. Native broadleaves to be planted along Hog Sike and Shiel Burn.  **70007 Watch Knowe** (2020/21)  Mature Sitka spruce and Sitka spruce/Lodgepole pine on a mosaic of different bog types and peaty surface water gleys, with some windblow along the southern edge (5-10%). A significant area of Sphagnum bog (~5Ha) will not be restocked, and bog restoration will be considered following felling. The remainder of the coupe will be restocked with Sitka spruce/Lodgepole pine, with an area of native broadleaves along the Shiel Burn and Coutstane Linns riparian areas on the northern and southern coupe boundaries respectively.  **70020 Little Harden Burn** (2020/21)  Primarily mature Norway spruce, with some Sitka spruce and Douglas fir, on ironpan and surface water gleys, with a pocket of windblow (~1 Ha) in the south west corner. 100m new forest road will be required in the northern tip of the coupe to gain access across the Harden Burn and enable timber stacking and loading. To be restocked with native broadleaves, with habitat creation and biodiversity as the future objectives. Note the heritage feature (sheep enclosure) within the coupe.  **70052 Gowd Moss** (2020/21)  Mature Sitka spruce including some over 80 years old, on a mosaic of peaty surface water gley and bog, with surface water gley adjacent to the Tweeden Burn. The older Sitka spruce was previously earmarked as long term retention. There are a few taller trees, but most of the stand of trees appears to be of lower ecological value, and likely to blow over if exposed, due to poor, wet soils and tall thin trees. To be restocked with Sitka spruce/Lodgepole pine and native broadleaves along the Tweeden Burn riparian corridor. Given the boggy nature of some of the coupe, the suitability of restocking all of the site with conifers will be reviewed following clearfell, and consideration given to broadleaf bog edge woodland.  **70062 Yearning Sike** (2020/21)  Mature Sitka spruce on surface water gley and peaty surface water gley, with large areas of windblow (~20%), some having been on the ground for several years. To be restocked with Sitka spruce, Scots pine/Norway spruce and native broadleaves, with habitat enhancement and conservation of biodiversity as important objectives. Scots pine and Norway spruce should be planted in groups rather than intimate mixture to ensure both species are successfully established. This links with the Kershope Burn riparian corridor, a key part of the forest riparian habitat network.  **70068 Muckle Punder Cleuch** (2021/22)  Mature Sitka spruce on mainly peaty surface water gley and surface water gley, and small areas of bog and ironpan. To be restocked with Sitka spruce, Scots pine and native broadleaves. Habitat enhancement and biodiversity are future objectives, so a final stocking density of 2,500 stems/ha is not expected in the SP. This also ties in with the Kershope Burn riparian corridor.  **70090 The Linns** (2021/22)  Mature Sitka spruce with considerable areas of windblow, some already cleared, on a mosaic of brown earths, surface water gley and peaty surface water gley. To be restocked with Douglas fir/Norway spruce on the better brown earth, otherwise pure Norway spruce, and native broadleaves in the Newstell Sike riparian area on the eastern coupe boundary.  **70091 The Border Stane** (2021/22)  Mature Sitka spruce with small pockets of Norway spruce and Japanese larch, and significant patches of windblow throughout, on surface water gley. To be restocked with Scots pine/Norway spruce and native broadleaves along the Tweeden Burn riparian corridor. *While the Scots pine/NS should be planted at normal productive stocking density, habitat enhancement and conservation of biodiversity are the main objectives.*  **70048 Gall Sike** (2026/27)  Approximately 50% mature Sitka spruce on both sides of Gall Sike, along with a mixture of Norway spruce, Scots pine, Japanese larch and broadleaves. The intention is to fell as much of the Sitka as is accessible, given the steepness of the sike in places, along with any larch (risk of future infection with *Phytophthora ramorum*), but leave a small proportion of Norway and pine (providing it is safe to do so – tall trees next to the shared boundary will be felled). A new harvesting facility will be required for access from the minor public road, and for stacking and loading timber. The extent and composition of existing broadleaves will be assessed following felling, and as far as possible restocking will be through natural regeneration. The sike is close to surviving ASNW just outside the forest boundary.  **70055 Deep Sike** (2027/28)  Mature Sitka spruce on a mosaic of peaty surface water gley and bog, with one notable area of windblow (~5%). To be restocked with Sitka spruce/Lodgepole pine (Lodgepole as a nurse species) and native broadleaves in the riparian area zone of Deep Sike and Muckle Hind Becks.  **70060 Havering Sike** (2026/27)  Mature Sitka spruce on a mosaic of peaty surface water gley and flushed and unflushed bog, with small pockets of windblow. To be restocked with Sitka spruce, Sitka/Lodgepole pine, Scots pine/Norway spruce and native broadleaves. Habitat enhancement and conservation of biodiversity are important objectives along the Kershope Burn riparian corridor, a key part of the wider forest habitat network.  **70065 Cock Kaim** (2025/26)  Mature Sitka spruce on predominantly peaty surface water gley and some surface water gley. This coupe has been reduced in size to allow for a more extensive buffer around the older (P1953) stand of Sitka/Norway spruce that is designated as long term. To be restocked mainly with Sitka spruce and Sitka spruce/Lodgepole pine.  **70072 Birny Sike** (2027/28)  Mature Sitka spruce on a mosaic of peaty surface water gleys and flushed/unflushed bog. To be restocked with Sitka spruce and Sitka/Lodgepole pine.  **70085 Blinkbonny Height** (2029/30)  Mature (by time of felling) Sitka spruce on unflushed blanket bog/podzolic peaty surface water gley, that was thinned in 2016/17. This felling year will be before the point of maximum mean annual increment, but it is necessary to start felling and restructuring this relatively young part of the forest. To be restocked with Sitka spruce.  **70104 Castle Hill** (2029/30)  A mixed age coupe of Sitka spruce, the main component P1988, but ranging from P1974 to P1995, on a mosaic of brown earth and surface water gley soils with smaller areas of peaty surface water gley and ironpan. The crop was thinned in 2016/17 and is due to be thinned again in 2021/22. To be restocked with Norway spruce, Sitka spruce and Scots pine/birch (on the ironpan).  Coupes already felled, to be restocked:  **70006 (Wilson’s Pike)**  Previous crop of mature Sitka Spruce/Lodgepole Pine, on mainly blanket bog and peaty surface water gley, felled in 2017. To be restocked with Sitka Spruce/Lodgepole Pine.  **70009 (Hunter’s Hill)**  Previous crop of Sitka spruce/Lodgepole pine, on mainly blanket bog and peaty surface water gley with some ironpan, felled in 2018. To be restocked with Sitka Spruce/Lodgepole Pine, Scots Pine/Birch and native broadleaves. Main objective of SP/BI and NMB is habitat enhancement, and as such final productive stocking of 2500/ha is not expected.  **70059 (Yellow Sike)**  Previous crop of Sitka spruce/Lodgepole pine, on blanket bog, felled in 2019. To be restocked with Sitka spruce/alder, the alder replacing Lodgepole as a nitrogen-fixing nurse species. This less usual option is being undertaken as something of a trial. As well as acting as a nurse to the Sitka, leaf litter from alder help improve longer term soil sustainability.  **70070 Coal Sike (previously 70069)**  Previous crop of Sitka spruce, on blanket bog and peaty surface water gley, felled in 2016. To be restocked with Sitka spruce/Lodgepole pine.  **70076 Birny Sike (previously 70074)**  Previous crop of Sitka spruce, on peaty surface water gley and surface water gley, felled in 2016. To be restocked with Sitka spruce, Norway spruce and native broadleaves. The latter part of habitat improvement along the main Tweeden Burn riparian corridor. |
| Thinning |
| Exposed sites (DAMS>16), wet, peaty and often poorly drained soils, and poor growth of the current crop lead to much of Newcastleton (~50%) being unsuitable for thinning. In some potentially suitable stands, the thinning window has also been missed.  Thinning will be carried out where feasible, and it ties in with management objectives  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. The thin years and net areas listed in the table are provisional and may be adjusted once pre-thinning assessment has been carried out.  Map **TBC** shows all potential thinning coupes, but the final thinning area for each coupe may be reduced once the stands have been assessed, and some coupes may be judged not yet ready for a first thin. |
| LISS |
| Previous forest design plans were aspirational in identifying substantial areas to be managed using lower impact silvicultural systems (LISS), mainly continuous cover forestry (CCF) systems, focusing on the main threshold and recreational areas. While some of these areas have been thinned in the past, many have not, and combined with unsuitable soils and more exposed sites, CCF aspirations have been considerably reduced.  There are notable stands of previously thinned Norway spruce that provide habitat and food source for red squirrels as well as potential raptor nesting sites. Ground conditions and risk of windblow from further thinning have led the decision to retain these long term retentions, but no longer consider for any form of CCF.  **70095**  This coupe is mainly of previously thinned P1988 Sitka spruce, but includes some small stands of mature larch and larch/spruce. The intention is to continue thinning and fell small areas along the lines of group selection. Rather than wait for natural regeneration of Sitka spruce, however, the gaps will be planted with Norway spruce/Douglas fir and native broadleaves in the southern part of the coupe to provide a buffer for the adjacent natural reserve.  **70100**  This coupe incorporates Hillhouse Wood, an area of long established woodland of plantation origin (LEPO -see fuller description in Appendix 1 Biodiversity section). The objective is to maintain the character and biological interest within the woodland, through LISS. The plan is to fell Norway spruce from close to the cleuchs (burns) over the next two thinnings, to promote ground flora development. Ideally larch should gradually be thinned to promote recruitment of beech regeneration and provide sufficient light for under-planted native broadleaves in between the cleuchs. However, with the very real threat of infection by *Phytophthora ramorum,* all of the larch will be felled at the next thinning. Restocking the gap left by the larch and enrichment planting elsewhere (near the cleuchs) will include suitable native species such as hazel, wych elm and goat willow.  **70101**  This small coupe is a mixture of P1998 NS, broadleaves and open ground, and has a mountain bike route going through it. The Norway spruce is distributed in several smaller groups with big gaps in between, and therefore numerous edge trees. The objective is to develop a stable and well-spaced stand that provides an attractive setting for the mountain bike route. Through a shelterwood silvicultural system, the stand will gradually be opened up to enable Norway spruce natural regeneration supplemented by underplanting with other suitable conifer and broadleaf species.  **70102**  This is a stand of well thinned P1944 Norway spruce, with limited natural regeneration, and an adjacent stand of well thinned P1944 Japanese larch with patches of advanced Japanese larch regeneration and Sitka spruce. The objective is to continue to develop attractive mature, open stands of Norway spruce and Japanese larch, enhancing the visitor experience along main forest trails and to produce high quality timber. Over time, through a uniform shelterwood silvicultural system, the existing natural regeneration will be supplemented by other suitable conifers including Norway spruce (ideally from natural regeneration) and Douglas fir. Non-Sitka conifers will be favoured in subsequent respacing and thinning. If the current larch succumbs to *Phytophthora ramorum* it is most likely that it will require immediate clearfell. |
| Long term retentions / minimum intervention / natural reserves |
| **Long term retention** **(LTR)**  **70035** is a long term Forest Research (FR) experimental site with several stands of unthinned P90 SS. Once FR have concluded their experiment this will be clearfelled and restocked with a diverse range of species.  **70049** is a very diverse coupe including a range of species of different ages, including pre-Forestry Commission P1875 Norway spruce/Scots pine, P1944 Norway spruce/Sitka spruce, P1984 Norway spruce/Douglas fir/Japanese larch and numerous younger stands of coniders and broadleaves. The older stands have been well-thinned and there are patches of advanced natural reneration. They appear stable, sitting predominantly on brown earth soils, and there is scope to develop these stands using continuous cover silvicultural systems.  **70051** is an extensive area (57 ha) of mainly mature NS (P37), with large pockets of windblow. Historically this area has been thinned, but with soft, wet ground conditions a lack of brash and a high risk of further windblow, no further thinning will be carried out. With much of the Sitka-dominated forest now felled and into a second rotation, this is a valuable mature stand of Norway, in particular for red squirrels, and will be retained for as long as it is sufficiently stable.  **70071 & 70074** are older conifer stands, with large areas of SS over 70 and 80 years old. As above, these will be retained for as long as they remain sufficiently stable. Largely unthinned, options for continuous cover management are limited.  **70066** has been expanded to offer some protection from windthrow to a core stand P53 SS/NS that includes some of the tallest and broadest trees in Newcastleton. This stand has the potential to develop old growth characteristics and will be considered for future minimum intervention and possibly natural reserve.  **70098** is a well thinned and fairly stand of P1921 Japanese larch and Sitka spruce on steep ground at the forest edge. Adjacent to natural reserve and minimum intervention coupes, there is potential for this to be managed as minimum intervention too. There is currently a risk of infection of the larch by *Phytophthora ramorum*.  **Minimum intervention** **(MI)**  This is the most appropriate type of management for the main riparian corridors where native broadleaves are well enough established, or where further natural regeneration is expected with minimal management input. It is also appropriate for established stands of SP/NS where conservation of biodiversity is the main objective and trees are established at sufficient stocking levels and well-spaced. Many of these areas are smaller parts of other, mainly clearfell, management coupes, but some MI coupes have been specifically designated. In time, the number and size of specific MI coupes will increase. MI also provides an important buffer between designated natural reserves and adjacent coupes. Management in MI areas will be restricted to tree safety work close to paths and public access, tree felling resulting from statutory plant health notices, and removal of excessive invasive non-native species.  **Natural Reserves (NR)**  **70096** is the main NR, including a section of Clintheuch Linns, a steep sided gorge, and mature conifers either side of it. It is not possible to exclude all management from this area due to the proximity of a forest road and recreation routes, and the NR also includes mature larch that may be at risk from infection by *Phytophthora ramorum* and therefore potential statutory plant health notice resulting in felling.  **70116** is a smaller NR of just over 3 ha with a mixture of P1927 SS and NS, along with more recent natural regeneration of SS and some broadleaves. There is potential for a larger NR in the future, linking up with nearby MI coupes 70114 and 70115, |
| Tree species choice |
| Species choice in much of the forest is limited by soil types and climatic conditions. Guided by the principles of Ecological Site Classification (ESC), and in line with management objectives, conifer and broadleaf species diversification will be developed as far as possible.  Timber production is an important LMP objective, and Sitka spruce remains the most suitable species to achieve this across most of the forest, with the current 59% decreasing to 57% by Year 10 of this plan and to 54% by Year 20. Lodgepole pine will be planted in intimate mixture with Sitka spruce over large parts of the forest to help compensate for nutrient-poor peaty soils. On one site, coupe 70059, alder will be tried as an alternative nurse species.  Given the limited opportunities to diversify conifer species, where soils and other site conditions allow, notably on relatively sheltered brown earths, surface water gleys (where drainage is not an issue) and patches of ironpan soils, suitable alternative species will be planted including Douglas fir, Norway spruce, Scots pine and Noble fir.  In the previous plan larch was an important species for achieving a degree of conifer species diversification, and providing landscape benefits. With the continuing threat of *Phytophthora ramorum*, larch will not be an option for the foreseeable future, so additional areas of Norway spruce and Scots pine in particular are planned to compensate. Birch will be included in mixture with Scots pine where additional landscape benefit is sought, as well as providing additional biodiversity benefit.  The approach to native broadleaves is covered in the section on native woodland below. There are no proposals to restock with non-native broadleaves. |
| Natural regeneration |
| Clearfell coupes will be assessed for signs of natural regeneration ahead of felling and where there is encouraging evidence, this will be factored into restock proposals. Where management through continuous cover forestry is planned, and the current species is desired in the next crop, natural regeneration will be encouraged.  In riparian areas, where native broadleaves are established through planting or previous natural regeneration, it is expected that this will provide the seed source for further expansion of native woodland. Excessive natural regeneration of non-native conifers can pose a threat to this habitat and this will be monitored. |
| New planting |
| n/a |
| Protection |
| In common with most forests in the region, there is a high level of browsing pressure from roe deer in Newcastleton. A variety of factors currently present challenges to achieving deer cull targets.   * The main road network runs south-west to north-east with few links, making access for stalking difficult; * Across the national border in Kershope Forest, Forestry England have lower impact targets and do not carry out night shooting, so deer cross the border in significant number. * Areas with recreation facilities and higher visitor numbers make stalking more difficult.   There is little scope to significantly increase the forest road infrastructure, but the opportunity will be taken to improve access for deer management at the time of restocking.  In the forest design, where possible, areas of ‘soft’ conifers and broadleaves will be established on easily defendable and consolidated sites. Where economies of scale permit, deer fencing will be considered. |
| Road operations |
| Newcastleton has a substantial road network with minimal need for new roads, but during the plan period several roads will require major upgrading. **Table 10** and **Map TBC** refer. |
| Biodiversity |
| Designated sites |
| There are no designated sites for nature conservation. |
| Native woodland |
| Native woodland (mainly native mixed broadleaves in the sub compartment database) currently occupies around 6% of the forest, and by the end of the plan period (Year 10) is expected to reach 7%. The focus of native woodland expansion will continue to be along the main riparian corridors of Kershope Burn and Tweeden Burn, as well as Priesthill Burn, Harden Burn and burns feeding into Boghall Burn in the north of the forest.  Although sites vary locally, the main riparian corridors are dominated by typical surface water gleys. Choice of tree species in these areas will be guided (but not bound) by the following NVC woodland types:  W7 (alder-ash woodland with yellow pimpernel) – alder, downy birch, goat willow, oak (pedunculated and sessile), rowan, holly, bird cherry, grey sallow, hazel, hawthorn.  W9 (Upland mixed broadleaved woodland with dog’s mercury) – downy birch, rowan, oak (pedunculate and sessile), wych elm, alder, holly, aspen, bird cherry, hazel.  Ash is notably missing from both due to on-going issues with Chalara ash dieback.  On peatier sites including peaty surface water gley, options are more limited in line with:  W4 (birch woodland with purple moor grass) – downy birch, goat willow, alder, grey sallow, eared willow, bay willow. |
| PAWS |
| There are no PAWS sites in Newcastleton Forest. |
| Protected and priority habitats and species |
| There are various small areas of wetland (bog and mire) habitat distributed throughout the forest, on rides, coupes edges and unplanted riparian areas. These will be left unplanted, but no other specific management is proposed. Opportunities to improve the condition of the small areas of raised bog at Stell Knowe, Swarf Moss will be considered, but no adjacent felling is planned in this plan period so opportunities will be limited. These are small scale and not priority sites.  Prior to forest operations, sites will be checked for the presence of protected and important species to ensure that these species are adequately protected, licences are in place where necessary, and appropriate mitigation measures are taken. Several species are highlighted in Appendix 1 (Description of Woodlands), including badgers, red squirrels and various raptors.  Conservation efforts will focus on improving the riparian habitat network, through the on-going process of forest restructuring (mainly clearfell and restocking). An increasing area of connected native woodland and open ground will provide habitat opportunities for a variety of flora and fauna. Increasingly these areas will be managed as minimum intervention. Within the forested area, natural reserves and long term retentions will provide more mature woodland, with some stands developing ‘old growth’ characteristics. Well thinned areas will provide opportunities for raptors to nest, and improve ground vegetation conditions for other wildlife. More areas of Scots pine and/or Norway spruce will be planted to provide future habitat for red squirrels in particular, and where possible these will be thinned to develop stand stability, healthy coning crowns and more open woodland. |
| Open ground |
| Open ground and felled areas currently account for 22% of the forest, with no significant change over the plan period. |
| Dead wood |
| Opportunities for retaining and creating deadwood will be identified during the work planning phase of all felling and thinning operations, favouring areas with the highest deadwood ecological potential.  In Newcastleton these areas are within natural reserves, long established woodland of plantation origin (LEPO), minimum intervention areas and main riparian areas with native woodland. |
| Invasive species |
| Trapping of grey squirrels will continue to be supported on the edge of the forest which lies within Teviot and Rule Priority Area for Red Squirrel Conservation (PARC). |
| Historic Environment |
| Designated sites |
| The only designated site is Langknowe SAM. The unplanted buffer zone left after adjacent felling and restocking will be kept clear Sitka spruce regeneration poses the main threat: this will be monitored annually and pulled out as and when necessary. |
| Other features |
| There are numerous unscheduled features throughout the forest, in particular stock enclosures. These will be protected during forest operations and an appropriate buffer maintained around the features when restocking. |
| Landscape |
| Newcastleton Forest fits in well in the surrounding landscape, and most of the forest has a low profile as seen from the village and immediate area. The on-going restructuring, primarily through clearfell and restock, will continue to diversify the forest structure. Thinning and management with low impact silvicultural systems will help develop an attractive forest environment close to the core recreational area. |
| People |
| Neighbours and local community |
| There is a strong sense of community in and around Newcastleton village, with several representative organisations including Newcastleton & District Community Council and Newcastleton & District Community Trust.  Tourism is a vital element to the local economy, and the forest is seen as an important asset for drawing walkers, mountain bikers, horse riders, etc. to the area, many of whom are likely to stay, eat and shop locally. The 7 Stanes mountain bike route, starting and finishing in the village, is of particular importance. These facilities will be maintained to a high standard, and through on-going forest management the forest setting for these facilities (the ‘welcome’ and ‘interactive’ visitor zones) will be enhanced.  Newcastleton is vulnerable to flooding from the Liddel Water, so the local community has a close interest in any activities upstream that may influence the flooding risk, including forest management. It is important that forest operations are carried out as sensitively as possible in line with Forests and Water Guidelines, to minimise the risk of any negative downstream impact. |
| Public access |
| Refer to Neighbour and local community section above. |
| Soils |
| Ground preparation |
| Appropriate ground preparation will be essential to successfully establish restock crops. The choice of ground cultivation will consider short term benefits form establishment, as well as longer term effects on tree stability, future forest operations and the environment. |
| Deep peats |
| Sites with deep peats will be reviewed on a site by site basis. In line with FCS (now Scottish Forestry) Practice Guide on Deciding Future Management Options for Afforested Deep Peatland and associated FLS Policy, options to restock with conifers (most likely Sitka spruce/Lodgepole pine), peatland edge woodland (native broadleaves – most likely willow and birch) or bog restoration will be considered. |
| Water |
| Drinking water |
| Known water supply points and pipelines will be highlighted during the work planning process and protected during forest operations. Additional buffering of water supplies with open ground and/or native broadleaves will be considered as and when coupes come up for felling and restocking next to supplies. |
| Watercourse condition |
| According to the most recent SEPA survey of water quality in 2014, the main water courses in Newcastleton, Kershope Burn and Tweeden Burn, are both in overall good condition (as is Liddel Water).  Riparian woodland that acts as a buffer for water courses will be enhanced through further planting and natural regeneration of site suitable native broadleaves (see section on native woodland above). This will help protect water quality as well as aiding sediment removal and erosion control, moderation of shade and water temperature, maintenance of habitat structural diversity and ecological integrity, and enhancement of landscape quality.  To help maintain this status, all management operations will be carried out in accordance with Forests and Water requirements of the UK Forest Standard. |
| Flooding |
| Newcastleton Village has been identified as an Objective Target Area (OTA) in SEPA’s Solway Flood Risk Management Strategy. OTAs are key flood locations across Scotland where assets are vulnerable to flooding. The village and immediate surrounding area have also been identified as a Potentially Vulnerable Area (PVA 14/03), as detailed in Dumfries & Galloway Council’s Solway Local Flood Risk Management Plan.  Natural flood management (NFM) is not included in the Solway Local Flood Risk Management Plan 2016-2022, but the Natural Flood Risk Management and River Basin Management Plan report (2018), identified potential NFM measures within the wider catchment. These are very broad and focus on the Liddel water and its main tributaries in the lower lying areas, i.e. below the established plantation forests. There are limited opportunities in Newcastleton Forest for NFM measures that would have a significant effect downstream.  35% of the Liddel drainage area is forested and Newcastleton Forest occupies less than 5% of this. In any given year during the LMP period only 200 Ha or 7% of the forest (1% of the total catchment area) will either be felled awaiting restocking, or young crop less than 10 years old. Felling is phased and this will ensure that the, in relation to flooding, will remain throughout the plan period. *(Alan Gale’s suggested text to replace the next para)*  Through careful phasing of felling coupes and following best practise in line with Forests and Water Guidelines, the forest will continue to provide the evapotranspiration benefits of tree canopy, and potentially negative impacts will be avoided. Enhancement of riparian areas through native broadleaf planting will contribute positively to water management in the forest. |

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Appendix I: Description of Woodlands

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| Topography and Landscape | Most of Newcastleton Forest falls within Landscape Character Type (LCT) 96: Southern Uplands with Forest – Borders. This is characterised by large scale rolling landform with higher dome or cone-shaped summits, dominated by coniferous forest cover.  Priest Hill and the threshold at Florida fall within LCT 113: Upland Valley with Pastoral Floor. This is characterised by flat valley bottom pastures, strongly enclosed by steep valley sides merging with heather and forest covered uplands  Despite its size, the forest fits in well with the wider landscape , and little of it is visible from the village of Newcastleton. |
| Geology and Soils | Map 8 - Soils  The underlying geology is predominantly of sedimentary bedrock, largely sandstone and argillaceous rocks (Border Group).  Peaty surface water gleys are the dominant soils in the forest, with surface water gleys more evident in the riparian areas along the main watercourses, and sizeable patches of unflushed blanket bog areas on higher ground. There are smaller areas of ironpans and brown earths in the north western part of the forest, in particular on Priest Hill, where there are also some uncharacteristic sandy soils. |
| Climate | Climate conditions are variable, covering a broad spectrum from warm, moist and sheltered to cool, wet and severely exposed. There is an clear gradient progressively becoming cooler, wetter and more exposed as altitude is gained heading from south west to north east.  Average accumulated temperature (day degrees above 5°C): 969 – 1493  Average moisture deficit (evaporation – precipitation): 56 – 136mm  Climate change predictions… |
| Hydrology | Newcastleton sits within the Solway Catchment, part of the Solway-Tweed River Basin District.  There many burns and minor water courses in the forest that flow into the Liddel Water, either side of Newcastleton Village, and ultimately drain into the Solway via the River Esk.  The main burns within the forest are the Kershope Burn which marks the boundary with Kershope Forest, and the Tweeden Burn which runs through the centre of the forest (NE – SW) and has the most extensive catchment within the forest.  Newcastleton Village has been designated a Potentially Vulnerable Area (PVA 14/03) in SEPA’s Solway Flood Risk Management Strategy and Dumfries & Galloway Council’s Solway Local Flood Risk Management Plan. |
| Windthrow | Map 9 – DAMS  Average DAMS ranges from 11 in more sheltered lower slopes and gullies to 19 on exposed higher ridges |
| Adjacent land use | The forest is completely flanked on its south eastern side by Kershope Forest, part of the much larger, and predominantly coniferous, Kielder Forest. On its northern flank is a large area of privately owned coniferous plantation. The remaining neighbouring land is primarily agricultural (rough grazing). |
| Public access | Newcastleton is one of the 7 Stanes mountain bike (MTB) centres, with the main route starting and finishing in the village centre. The MTB routes run through some of the more diverse and attractive parts of the forest in the west. Formal walking trails are located mainly at Priest Hill,  And there is a longer distance route, the Cross Border Trail, that links with Kielder Forest.  Rock UK’s Whithaugh Park residential centre is located close to Priest Hill and runs various outdoor activities in the forest including mountain biking and orienteering.  There is one Public Right of Way across Priest Hill and no core paths |
| Historic environment | Langknowe SAM (NY 5272 8620) is a long cairn measuring about 175 ft long with a maximum width of 45 ft and greatest height, 5 ft. One excavated burial cist lies 60ft from the N end measuring 1ft 7ins wide by 3ft long. More cists or a chamber are reported. The buffer area around the SAM has been left unplanted.  There are numerous other unscheduled sites throughout the forest, mainly small stock enclosures and old roads. |
| Biodiversity | The forest and surrounding area is home to a variety of species including red squirrel, various raptors, waders, badgers, otters and butterflies. Efforts to conserve biodiversity have focused on enhancing the riparian habitat network.  Whilst Newcastleton is no longer considered a ‘core red squirrel area’, or a ‘red squirrel stronghold’, it is in the Teviot and Rule Priority Area for Red Squirrel Conservation (PARC). Grey squirrel control is carried out within the forest from March to August and is coordinated by Saving Scotland’s Red Squirrels.  There are no ancient woodland sites in Newcastleton, although there are some sites close to the forest boundary, notably Tweeden Plantation east of Hillhouse Wood on the western edge of the forest , and an area of woodland around Whitehaugh Park, east of Priest Hill.  Hillhouse Wood, while missing from the Scottish Ancient Woodland Inventory, should be considered as Long-Established of Plantation Origin (LEPO). Survey by Richard Thompson, FLS Native Woodland Ecologist, highlighted a rich and diverse ground flora, including bluebells, opposite-leaved golden saxifrage, greater stitchwort, dog’s mercury, enchanter’s nightshade, herb-robert, figwort and primrose.  Two natural reserves were confirmed in a national review of natural reserves in 2016.  The first is The Linns, a steep sided gulley with a rich flora including rare lichens and bryophytes.  The second is a small mature stand with some of the oldest SS and NS (P28/P27) in Newcastleton, close to the Kershope Burn. |
| Invasive species | There are no reports of invasive non-native plants in Newcastleton Forest.  Grey squirrel is the main animal species of concern (see Biodiversity section above). |
| Woodland composition | Newcastleton Forest comprises 2376 Ha of predominantly upland conifer forest located in the very South of the Scottish Borders, immediately east of Newcastleton village and adjacent to Kershope and Lewisburn Forests in Northumberland.  The earliest planting dates back to the 1920s. Further planting was carried out in most decades, the forest gradually expanding north and east. Priest Hill, just to the north east of Newcastleton village, was the most recent addition, planted in 1990. Forest restructuring has been underway for the last 20 years, largely through a clearfell system, and is progressing well.  Hillhouse Wood, a notable area of LEPO (see above) evident on OS First Edition maps, is composed of a stand of 1930’s Japanese larch and Norway spruce as well as c. 1900 beech, with an understorey of beech seedlings and a few Norway spruce seedlings. There is evidence of ASNW cores running down the watercourses.  Current species composition and age distribution is shown on Map 7. |
| Plant health | *Phytophthora ramorum* was confirmed on the side branch of a single mature Japanese larch, and all the surrounding larch within a 250m buffer zone subsequently felled. The remaining larch remains vulnerable to infection.  *Dendroctonus micans* (great spruce bark beetle) has been confirmed on several mature spruce trees in recent years, and *Rhizophagus grandis*, a host-specific predatory beetle, has been released to control the spread of this pest. |

Appendix II: EIA screening opinion request form

Overleaf if required

Appendix III: Consultation record

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| Consultee | Date contacted | Date of response | Issues raised | FES (now FLS) response |
| FDP Consultation Event - 1st March 2017  Drop-in session held at the Buccleuch Centre, Newcastleton, 3pm – 8pm | | | | |
| Joan Robson, Newcastleton & District Council |  |  | 1. Requested that FES protect the original red sandstone sheep dip trough at Priest Hill (opposite side of forest road from the village water supply). It was identified by Dr Michael Robson, a local historian. | 1. Noted and to followed up by the Delivery Team |
| Barbara Elborne, Newcastleton & District Council |  |  | 2. With regard to the proposed windfarm development in Newcastleton Forest, requested that stone extraction happens from Swarf Quarry via Dykecrofts, through Newcastleton Village and back into Florida, to minimise impact on MTB trails (as promised during the windfarm scoping exercise). Trail closures would have a massively negative impact on the village economy/well-being.  3. Also requested improved signage for the Cross-Border trails, as people are getting lost. | 2. The proposed windfarm development is at an early stage (pre-planning), and if it is eventually approved works are unlikely to start for several years. The request is noted and FES will ensure that any future Agreement with the windfarm developer will aim to minimise disruption to the trails in the forest.  3. Noted and to be followed up by the Recreation (now Visitor Services) Team. |
| Newcastleton Community Council monthly meeting in Newcastleton Village Hall - 14th March 2017  Presentation given by FES staff on FES, Dumfries & Borders FD and Newcastleton LMP, highlighting the main issues (opportunities and constraints) as seen by FD staff, followed by questions/comments from attendees. | | | | |
|  |  |  | Several general issues/concerns were raised:  4. Timber transport issues – there is still a perception that timber lorries frequently drive through the village too fast, and lack courtesy on the local roads (sometimes travelling in convoy). Timber lorries are also seen as causing significant damage to minor roads.  5. Flooding in the village – while acknowledging that forestry is one of many factors potentially influencing flooding, concerns were expressed that poor practice was having a negative impact. A specific example outside the National Forest Estate was given.  6. Importance of the forest and its trails for the local economy – concerns regarding long periods when trails are closed or significantly diverted during forest operations, including roads works, and the subsequent impact on visitor experiences (and therefore impact on local accommodation providers, cafes, etc. if visitors are put off) | 4. Acknowledging the community concerns, it was explained that once timber lorries are on the public road FLS has no direct responsibility for them. The responsibility for safe and considerate driving on public roads lies with the drivers and haulage companies. Nearly all timber is sold as ‘standing’ or ‘at roadside’ in the forest, and its onward movement is the responsibility of the timber buyer. The requirement for good practice in timber haulage is included in sales contracts between FLS and timber buyers.  The Industry best practice is contained in the following documents, which can be found at the Forest Industry Safety Accord (FISA) website  <https://www.ukfisa.com/safety-information/safety-library/haulage.html>   * The Forest Haulage Safety Manual (2018) * Road Haulage of Round Timber Code of Practice (2012)   Timber transport as a whole, including agreements regarding public roads, is covered by local timber transport forums. Amongst their objectives is provision of a forum for discussion of local community concerns about timber haulage.  <https://timbertransportforum.org.uk/groups/borders>  5. Local flooding issues were acknowledged, but it was explained that providing good forestry practice is followed, in accordance with Forests and Water Guidelines, well managed forests should on balance contribute positively to water management within the catchment. This is covered in the Flooding Section of the LMP (4.0 Management Proposals – guidance and context).  6. Every effort will be taken to minimise disruption during forest operations but it was emphasised that Newcastleton is a working forest producing valuable timber. Work carried out aims to improve the forest environment around recreation trails (the ‘welcome’ and ‘interactive’ visitor zones), and the on-going felling and restocking is helping develop a more diverse forest in terms of age structure and species diversity. |
| Forestry Panel Meeting / Newcastleton LMP Scoping Meeting – 21st June 2017  Indoor presentation focusing on the draft LMP Analysis and Concept, and discussion on major themes, followed by a visit to several sites in the forest. The following organisations were represented at the meeting:  FCS, South Scotland Conservancy  Ettrick & Yarrow CC  Newcastleton & District CC  Newcastleton Community Trust  Upper Liddesdale & Hermitage CC  Upper Teviotdale & Borthwick Water CC  Confor  Scottish Borders Council  Historic Environment Scotland  SEPA  SNH  RSPB | | | | |
|  |  |  | The main issues discussed in the meeting were those already picked up at the community council meeting on 14th March, especially timber transport.  7. During the site visits there was considerable interest in continuing to expand native broadleaf woodland within the riparian habitat network, and some concerns were expressed that past attempts in some riparian areas had been unsuccessful.  8. There was also discussion regarding conifer species choice, with a keenness to see more diversification where possible. It was acknowledged that the soils and site conditions in Newcastleton are generally unfavourable for most species. | 7. The focus for expanding native broadleaf woodland will continue to be along the main riparian corridors including Kershope Burn, Tweeden Burn and tributaries. It was acknowledged that in some parts of the forest previous attempts at establishing broadleaf woodland had been disappointing. Moving forward FLS will target planting more carefully in more consolidated groups where it is more accessible so easier to protect, monitor and maintain during establishment.  8. It is challenging to establish anything productive other than Sitka spruce in Newcastleton, but Ecological Site Classification (ESC) and local knowledge will be applied to identify potential sites for alternative conifers that meet LMP objectives where at all possible. This is likely to be mainly Norway spruce and Scots pine, but there are small areas where Douglas fir and other minor species will be suitable. Larch is not an option for the foreseeable future due to the threat of *Phytophthora ramorum*. |
| Lee Musson, Rock UK, Whitehaugh Farm | 26th July 2017 |  | A general discussion about the forest and proposals for Priest Hill. The main interest is access from Whitehaugh Farm, and the trails in the forest. Rock UK are keen to improve the informal trail (different from the existing MTB trails) that link Whitehaugh Farm with Priest Hill. | Some of Priest Hill will continue to be thinned and windblown trees removed, but it is no longer considered suitable for conversion to continuous cover forestry (as proposed in the previous plan). It will be divided into several smaller clearfell coupes, but no felling is proposed for the next 10 years.  Discussions on the link trail and wider recreation network were referred to the Visitor Services Team. |

Appendix IV: Tolerance table

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

**NOTES:**

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

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

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

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

**Table of Working Tolerances Specific to Larch**

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