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Conservator
John Dougan

Forestry Commission Scotland
Forest District Manager
Dumfries and Borders Forest District
Ae Village, Parkgate
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Date 8th December 2015

Our Ref: FDP227

Dear Sirs

Application for Forest Design Plan - Craik

Please find enclosed copies of the Design Plan, Certificate of Approval for Tree Felling and Maps for Craik now approved by Mr Iain Laidlaw.

Please retain these documents for your records.

Yours sincerely

Jenny Cairns
On behalf of Conservator

Certificate of Approval for Tree Felling

This is to certify that tree felling under

Forest Design Plan Craik (2015-2025)
FDP227

has been approved by the Forestry Commission as being in accordance with Government policy for the sound management of a renewable resource.

This certificate is valid only for the period of the felling approval.

Signed .....
Forestry Commission Officer

Date .....

Dumfries and Borders Forest District

Craik

Forest Design Plan

Plan Reference No: FDP227

Plan Approval Date: 2/12/2015

Plan Expiry Date: 1/12/2025

FOREST ENTERPRISE - Application for Forest Design Plan Approvals in Scotland

Forest Enterprise – Property

Forest District:	Dumfries & Borders Forest District
Woodland or property name:	Craik Composite Forest Plan
Nearest town, village or locality:	Hawick
OS Grid reference:	NT33080969
Local Authority district/unitary	Scottish Borders Region

Areas for approval	Conifer	Broadleaf
Felling	680ha	
Restocking	558.3	17.5

1. I apply for **Forest Design Plan** approval*/~~amendment approval~~* for the property described above and in the enclosed Forest Design Plan.
2. * I apply for an opinion under the terms of the **Environmental Impact Assessment (Forestry) (Scotland) Regulations 1999 for afforestation/road building*/ quarries*** as detailed in my application.
3. I confirm that the initial scoping of the plan was carried out with FC staff in 2014
4. I confirm that the proposals contained in this plan comply with the UK Forestry Standard.
5. I confirm that the scoping, carried out and documented in the Consultation Record attached, incorporated those stakeholders which the FC agreed must be included.
6. I confirm that agreement has been reached with all of the stakeholders over the content of the design plan and that there are no outstanding issues to be addressed. Copies of consultee endorsements of the plan are attached.
7. I undertake to obtain any permissions necessary for the implementation of the approved Plan.

Signed ..... Signed .....

Forest District Manager

pp Conservator

District Dumfries & Borders

Conservancy South Scotland

Date 3/9/15

Date of Approval 2/12/2015

Date approval ends: 1/12/2025

UKWAS summary sheet

Description	Percentage of Forest block	Location of data
Restock main conifer species	Currently 59% dropping to 52% by 2060	Forester restock layer
Restock other conifers species	21% by 2060	Forester restock layer
Open space	20%	Forester restock layer
Native broadleaves	5.4%	Forester restock layer
Managed for conservation/biodiversity NR, MI	9.0%MI	Forester management layer
Long Term Retentions	5%	Forester management layer
Natural reserve	0.7%	Forester management layer

- Contents

Support documents: Maps

1. Location map
2. Design Brief and Analysis and Concept map
3. Management map
4. Future habitats and management
5. Scheduled Ancient Monuments
6. Ancient Woodland Inventory
7. Soil map
8. Water Catchments
9. Current Climate data
10. Ancient Woodlands
11. Timber Transport Routes
12. Landscape Characer
13. Tree Species Suitability maps
14. Thinning Rulesets
15. Open Habitats Survey
16. Core Path maps
17. Neighbours Adjacent felling map
18. Evidence of public consultation

Summary of Proposals

The main aim of the proposal is to deliver the objectives identified in the FDP brief. The primary management objectives are Climate change, Timber and environment. This is delivered by continuing to build on the previous good restructuring plans.

All coupes across the entire forest have been reviewed in terms of coupe management type and felling dates. Large areas been identified as minimal intervention and these areas of Minimal Intervention are typically first rotation conifers having been felled in the 80's and 90's and having been restocked with MB to create permanent habitat networks. Some of these are candidate areas for Natural Reserve in 10-20 years time. Other areas of Long term retention are identified. Smaller areas of CCF have been identified where there are social and environmental advantages. The main management type in the forest remains as clear felling.

All the clear felling coupes have been revisited in terms of forecast felling date. The length of rotation is significantly limited by wind with high potential for windblow.

Considerable effort has been exercised in trying establish resilience to wind in the long-term by designing "hilltop" coupes and avoidance of replicating the geometric shapes of the 1970's. Some of this vision works in the current felling phases whereas others will require amalgamation over the future decades and rotations.

In terms of species, to deliver climate change management objectives and ensure a resilient forest, the plan includes a strong emphasis in changing an element of the next rotation species away from Sitka Spruce towards alternatives to SS wherever conditions are suitable e.g. Change from Sitka Spruce to Norway Spruce. In addition the previous plans included larger proportions of open space, this plan aim to keep permanent open space to no more than c.20% - this is to maximise productivity.

Public access remains important across the forest but given resource limitations some of the formal facilities are being removed over time. The whole forest remains open for public access and SOAC outlines the responsible access principles.

Biodiversity and nature conservation is being supported through the creation of permanent native woodlands in and around the riparian zones. Ponds and water features will be maintained. Some priority open habitat is being restored following the removal of the first rotation crop in Crooked Loch area.

Deer management will continue to be important as the forest develops towards full restructuring and control of Roe deer at a landscape scale will continue with professional deer officers. Fencing is not a proposal in this plan.

1.0 Introduction:

1.1 Setting and context

Upland forest with much potential for sustainable timber production.

Part of a much larger productive forest known as Eskdalemuir and Criak.

Set in an area of low tourism numbers and of lower landscape importance.

Covering a large geographical area with potential for significant positive environmental impact if planned correctly.

Potential for significant advantages to water management including quality and reduction of peak flow.

Like many of the large upland forests timber transport planning is important. Especially so in Craik where the FCS timber joins the same public roads used my many private sector growers. Another important factor here is that private sector growers have an increasing forecast to 2030 thereby increasing the amount of timber traffic.

There are some local communities who use the forest for public access.

Much potential for significant biodiversity benefits with the future permanent riparian networks of native woodlands.

All operations will be carried out to the internationally recognised forestry standards as set out in the UK Forest Standard (UKFS) and as required under UK Woodland Assurance Scheme (UKWAS) and Forest Stewardship Council (FSC).

This woodland is part of Dumfries and Borders Forest District and is certified by the Forest Stewardship Council (FSC). Certified woodlands are subject to regular audit by an independent audit body against the requirements of UK Woodland Assurance Standard (UKWAS). UKWAS is the independent certification standard for verifying sustainable woodland management in the UK.

1.2 History of the site

The upland forest known as Craik is largely coniferous having been planted at various times between the 1950's and 1990's.

Prior to the large scale conifer planting the land was predominantly used for sheep farming and beef cattle.

Felling of the first rotation crop and restructuring has progressed well and as the land has been restocked opportunities have been taken to create permanent riparian areas that will act as a future management layout (including timber coupes on the better ground between the riparian areas)

1.3 Planning Context

The management of the Forestry Commission Scotland's NFE (National Forest Estate) is guided by Scottish Forestry Strategy (SFS) 2006, which sets out seven key themes:

- **Climate change**
- **Timber**
- **Business development**
- **Community development**
- **Access & Health**
- **Environmental quality**
- **Biodiversity**

The seven issues above have been considered in detail in the FDP design brief. The design brief sets the direction of the forest for the future.

Forest Enterprise Scotland's strategy for managing Scotland's National Forest Estate is defined in our strategy document, 'The role of Scotland's National Forest Estate and strategic directions', which sets out priorities and actions for 2013-2016. http://scotland.forestry.gov.uk/images/corporate/pdf/FES-strategic-plan.pdf

2.0 Analysis of previous plan

The 5 previous plans making up the new Craik Composite plan have been followed during the past 10 years delivering multiple benefits of this large upland forest.

For the period of the plans, they were fit for purpose and perhaps most importantly delivered the aim of restructuring and diversifying a mono-age largely Sitka Spruce Woodland.

1. Was previous plan implemented properly?

   In general terms, yes. But not all the coupes were felled as per the original plan mainly due to windblow. Crooked loch in particular has suffered greatly from windblow. In 2011 we reviewed the position and came to the conclusion that where possible, more wind firm coupes should be held longer than the plan to balance the additional areas being cleared due to windblow. In many ways this plan has been successful with many of the identified coupes for retention still standing firm after the severe storms of winter 2013 and 2014.

2. Did implementation of plan meet stated objectives?

   Yes, sustainable timber production continued in the forest, improvement of riparian zone areas and creation of habitat networks and public access continued.

3. Are the Aims & Objectives of the plan still appropriate?

   Many of the aims and objectives of the current plan (due to expire in 2015) are still very relevant e.g. restructuring. But due to policy changes and better understanding of climate change there are factors that need greater consideration in this plan.

   Firstly, tree species diversity in the woodland is lacking and although we appreciate Sitka Spruce is important for timber production into the future we must plan alternative species to increase resilience of the forest given the potential impacts of climate change.

Secondly, given UKWAS targets and increasing importance of conservation on the right sites the previous plans lacked identification of areas of Natural Reserves or candidates for Natural Reserve. We term these candidates for Natural Reserve as Minimal Intervention, essentially these areas are recently established native woodlands and the best candidates will develop into Natural Reserves over the coming decades.

The current plan identifies significant proportions of open space and if this approach was to continue as the remaining first rotation crops are felled the productivity of the forest would reduce to an unfavourable extent and as such the proposed plan should limit the amount of open space and maximise timber productivity – whilst adhering to UKFS.

3.0 Background information

3.1 Physical site factors

3.1.1 Geology Soils and landform

Typical upland forest soils including large areas of Surface Water Gleys, peatly gleys on the mid slopes. In the lower valleys some upland brown earths and also iron pans with potential nutrition issues. On the upland areas there are large blanket bog areas again where nutrition will be a challenge and specific planting and consideration will need to be given to ensure productivity.

Typically the landform consists of low rolling hills leading into water courses ranging from 180m to 465m.

3.1.2 Water

Water is an important factor in this plan area given the extensive nature of the site, the potential flooding downstream and the public water supply at Ale Reservoir. See attached River Basement Management Plans by SEPA. See www.sepa.org.uk/water/river_basin_planning.aspx
For full information. River Basin Management Plans for each of the 5 water courses can be found in the appendix.

Water course	Current SEPA status
Northhope Burn (leading northwards through to Craik Village)	Moderate
Borthwick Water (Leading Northwards from Craik village)	Good
Ale Water (Leading from Crooked Loch Forest to Ale Reservoir)	Moderate
Rankle Burn (Leading Northwards from the centre of Craik Forest)	Good
Tima (Leading from Gair Bridge Northwards to Ettrick Village)	Good

To help improve water quality and reduce peak flow of these water courses the forest will be designed with permanent riparian buffers often exceeding that specified in the Forest and Water Guidelines E.g. Rankle burn riparian buffers.

3.1.3 Climate

The current climate in the forest ranges from cool wet and highly exposed on the upper slopes and hill tops to warm moist and sheltered on the valley bottom by the Borthwick water. See current climate map for further information.

The climate indicates that there would be a wide range of species opportunities in the better areas and a very limited range of species e.g. Sitka Spruce and Birch in the more challenging locations. This will be explored fully in section 5 – the proposal.

The future climate data for Craik has been explored and the following conclusions are made given the data we currently hold assuming a high emissions scenario for 2050.

- Accumulated Temperature (Growing Season duration) is forecast to increase and this has the effect of moving all of Craik forest from the cool category to the warm category. E.g. 1000 accumulated day degrees to >1200. This means that the length of growing season will be less limiting to many of the alternative conifers e.g. Firs. We must remember though that if planted in say 2015 the plants will not benefit from this increase in growing season during their early establishment.
- Moisture Deficit (wetness). Much of Craik is still forecast to be in the wet category and as such this will not be a limiting factor for Sitka Spruce.
- There is no data available for wind but given recent storms and general predictions of extreme weather events we forecast that wind will remain as the main limiting factor across these Southern Upland hills. Experience and evidence would suggest an average rotation age of 45 years for Sitka Spruce grown in these areas and as such 45 years is given as the rotation length in most of the forest with the exception of the better climates and slower growing species e.g. Scots Pine. Design for resilience to wind will be an important part of this plan.

3.2 Biodiversity and environmental designations

There are no formal environmental designations in Craik forest but there are a number of interesting and very important factors that need to be taken into account when planning the forest for the future.

Open Habitats

There are important bog habitats at Crooked Loch and these can be protected or restored as the first rotation crop is removed. The extent of restoration needs to be balanced with the potential timber productivity as per current FCS policy on restoration of peatlands. Generally the wetter and poor nutrition areas where there is low potential timber productivity and significant biodiversity gain together with improved carbon sequestration can be left free of trees and restored as open habitat. It should be noted that there is already much bog restoration in the area of Crooked loch following the first rotation felling and additional opportunities are limited.

Native Woodlands

Ancient woodland inventory (AWI).

The SNH SWI has been checked for records of ancient woodland and there are no records of Ancient woodland or Long Established woodlands of plantation origin. The nearest sites with this status are small areas of woodland near to Ettrick village.

Existing native woodlands are very scarce in Craik.

The greatest potential for native woodlands is in the riparian areas between the felling coupes. Over the past 20 years there has been excellent progress made towards creating these "new native woods" in what was a forest of almost 100% conifers when planted in the 60's.

With a large proportion of the riparian broadleaved woodland already created (although still <20 years old) the focus of the plan will be to link up these permanent habitat networks as the remainder of the first rotation crops are cleared from beside the water courses.

These existing young native broadleaved woodlands include oak, birch, rowan, alder ash and willow. The youngest of these areas are continually under threat from deer and vegetation and it is important to continue with intensive

management until they are established. This includes deer control, tubes, weeding, removal of SS regen, and beating up.

Potential for Natural Reserve.

As the recently planted native woodlands establish and mature they will become permanent native woodlands running the length of the water course. Currently these are titled Minimal Intervention. These will become permanent native broadleaved woodlands with high biodiversity value and will become Natural Reserves in the long term.

There is potential for plantation Natural Reserve in existing old conifer crops – typically 50 years + Norway Spruce.

Species

Red squirrel

Craik forest is not a strong hold for Red Squirrels but it is classified a priority woodland and sits very close to the stronghold of Eskdalemuir. Red are present throughout Craik Forest. Greys were present in the past, especially near the houses, but none have been seen recently. Red squirrel monitoring takes place in the woodland to check for the pox virus. Grey squirrel control takes place in the forest as required and approx 10 have been caught in the recent years. Long term retentions and planting of Norway Spruce and Scots pine will be an important part of the forest design. Connectivity of these areas will be important too. There are currently few large seeded broadleaves in the forest and we aim for this to continue this principle as their presence would build a habitat for Greys and introduce more pox. Albeit some oak will be planted in the riparian zones.

Badgers exist in the forest and forest operations will be considerate of their setts.

Schedule 1 birds include Goshawks and forest operations will be planned at locations and timings to avoid disturbing these birds.

Otters exist in the forest and prior to operations survey work is carried out to ensure this species is not disturbed.

3.3 The existing forest:

3.3.1 Age structure, species

Current Age structure

AgeClass	Area_Ha_2015
0-10	804
11-20	1019.5
21-40	293
41-60	808.1
60+	227.9
Other open and felled	1098.9
	4251.4

* Please note this data is taken from the sub compartment database and all areas without species are grouped together e.g. areas recently felled and awaiting restock and areas with open in the scdb

Current species

Species	Area_Ha _2015	%
Permanent Open	823	19.4
Felled	236	5.6
SS or SS/LP	2495	58.7
SP	68.3	1.6
DF	2.1	0.0
WH	0.8	0.0
JL	101.5	2.4
HL	63.8	1.5
NS	261.8	6.2
MC	0.8	0.0
NF	3	0.1
EL	3	0.1
MOP	1.4	0.0
OMS	0.7	0.0
GF	3.6	0.1
XCD	0	0.0
CAR	0.3	0.0
AR	1	0.0
RON	0.5	0.0
XB	3.5	0.1
WEP	0.7	0.0
SY	0.5	0.0
MB	170.2	4.0
BE	2.1	0.0
BI	7.3	0.2
	4250.9	100.0

* Extracted from the sub compartment database 31/3/15

3.3.2 Access

Timber transport is a key issue throughout this area given the ongoing high timber volumes being planned and forecast. Craik Forest benefits from recent improvements via the Strategic Timber Transport Fund including the Eskdalemuir bypass and Ettrick B709 road between Ettrick and Eskdalemuir. But difficulties for timber wagons, other road users and communities are still commonplace. The agreed exit points from the forest onto agreed routes are at Craik Village, Meadshaw, Crooked Loch (North entrance) and Gair. From these points timber is transported in all directions. Ongoing liaison with communities and stakeholders is undertaken to maintain co-operation. In 2007 timber transport was considered as part of the wider Craik Forest Area Development Study. The report suggested three different options to improve timber transport strategically including tie in with the "Eskdalemuir Bypass" and moving timber south. The report concluded;

- Significant capital investment in new internal forest road infrastructure spanning multiple ownership's and difficulty in overcoming all the inherent issues associated with this;
- Commitment required by the respective forest owners to the on-going revenue expenditure needed to maintain the roads thereafter;
- A strong reluctance amongst some forest owners to pursue in-forest routes due to potential difficulties with reaching agreements
- There was a prevailing feeling amongst the owners that the ultimate strategic and financial responsibility for providing public roads that are fit for purpose, including timber transport, lay with the Local Authority and that future timber traffic flows should be planned for accordingly.

Due to some of these difficulties there has been no further progress in implementing or agreeing strategic timber transport for FCS Craik area. However FCS are keen to continue to be involved in any initiative to improve conditions in timber transport thoughout the period of the plan and beyond.

In terms of "in wood" forest roads, the infrastructure is very good with roads existing to most coupes, only a small number of new forest roads are required for timber extraction. E.g. to access the thinnings on Craik farm. These new forest roads will be included on the proposed management map as "Planned forest roads"

3.3.3 LISS potential

There is limited potential for alternative silvicultural systems other than clearfelling due to the high risk of windblow and much of the crops have been

unthinned. However there is potential in some areas nearer to Craik village and along the Borthwick water. These areas will be explored during the design and the areas chosen for Continuous Cover Forestry will be shown on the Management Map in pink.

3.4 Landscape and landuse

3.4.1 Landscape character and value

All of NFE land at Craik lies within the Southern Uplands Forest Covered category of the Scottish Borders Landscape Character Assessment.

The key characteristics of this landscape include:

- Large Scale rolling landform
- Dominant coniferous forest cover characterised by Sitka Spruce plantations with occasional areas of pine and larch.
- Simple uniform character.

Landscape experience
...the pattern of felling coupes and replanting adds further textured variety to the generally uniform forest cover. ...in many areas straight forestry edges contrast with the curves of the hill landform...

Scale is large and diversity is generally low.

Some key landscape issues relating to forestry:

- Opportunities to increase visual and biodiversity through ongoing restructuring.
- Opportunities to improve landscape experience along roadsides.
- Positive distinctive landform
- No major roads or settlements, generally low visual sensitivity.
- Forest provides secure wildlife habitat
- Archaeology to be preserved within the forest.
- Large scale areas of unbroken uniformity create visual monotony and disorientation.
- Stark boundaries between forest and adjoining land.

3.4.2 Visibility

It is difficult to see all of the forest from one point given the landform but a number of useful viewpoints have been chosen around the forest and these are listed below:

- Gair Bridge B709 NT28241056
- Alemoor reservoir B711 NT38161464
- Craik Village NT35800833
- Centre of forest NT33021041

If viewing in the forest, these are useful places to go and get a good view of the forest.

3.4.3 Neighbouring landuse

Unusually almost all of the neighbouring landuse is forestry, usually a similar species and structure to FCS woodland and as such consideration of adjacency timing of felling and species interlock will be an important part of the planning.

On the North and East of the area there is some adjacent sheep farming.

3.5 Social factors

3.5.1 Recreation

Craik Forest is a large, rural, and wide open space that is open to informal public access. The management of the public access is guided through the Scottish Outdoor Access Code and users are welcome on foot, on bicycle and on horseback.

From time to time motor rallies use the forest and for this short time duration (hours) there will be some restrictions.

There are recreational facilities in the forest including walking and car parking. These facilities have very low usage compared to other facilities across National Forest Estate. Given the shortage of funding, the low usage and relatively high expenditure on maintenance per visitor head these facilities will reduce over time unless there is an alternative funding stream. Currently there a short waymarked walk leading from Craik Village into the woods. Core Path 196 – The Roman and Rievers Route and other rights of way are recognised and will continue to be planned as open.

3.5.2 Community

Hawick, Roberton and Craik village are the main communities who have an interest in the forest. The following issues are important to these communities.

- Timber transport management. Conflict with other road users and damage to the public roads
- Public access opportunities. The local community is disappointed that the formal recreation facilities will be removed over time.
- The community has an interest in the "stewardship" of the woodland and are keen to see things done efficiently and effectively including thinning and other forest operations.
- Some local community members are keen to get work locally and have found this difficult recently with the introduction of the legislation of framework contracts. FCS encourages people to become contractors and bid for work but unfortunately the regulations do not allow special treatment of "local" people.

3.5.3 Heritage

Four Scheduled ancient monuments are located within Craik and include agreed management plans with Historic Scotland. See Archaeology map for further information. Grid references are given in the table below.

Heritage Designations

NAME	DESIGNATION_HYPERLINK	OS_GRID_REFERENCE
Meadowshaw,earthwork	http://data.historic-scotland.gov.uk/pls/htmldb/f?p=2300:35:::::P35_SELECTED_MONUMENT:02115	NT377097
Black Rig, linear earthwork N of Kingside Loch	http://data.historic-scotland.gov.uk/pls/htmldb/f?p=2300:35:::::P35_SELECTED_MONUMENT:02534	NT342140
Wolfcleughhead, enclosures, Craik Forest	http://data.historic-scotland.gov.uk/pls/htmldb/f?p=2300:35:::::P35_SELECTED_MONUMENT:02529	NT337076
Craik Cross Hill-Borthwick Water, Roman road	http://data.historic-scotland.gov.uk/pls/htmldb/f?p=2300:35:::::P35_SELECTED_MONUMENT:01709	NT318060

Also throughout the forest there are a number of unscheduled sites ranging from locally important sheepfolds to field systems, Roman roads, Linear earthworks, etc. and these can be seen on the archaeology map in the appendix and also listed on the table below.

NAME	FEATURE_1	FEATURE_3	OS_GRID_REF
BELLENDEAN BURN	FIELD SYSTEM	A field, shown as pecked lines is depicted on the 1st edition of the OS 6-inch map [Selkirkshire 1862-3, sheet xvii].	NT359145
BELLENDEAN BURN	ENCLOSURE, STRUCTURE	An enclosure with a small structure attached to the inside of the E wall of the enclosure.	NT372151
BLACK RIG	LINEAR EARTHWORK	Linear Earthwork, Black Rig: The N end of this work rests on the left bank of the Black Burn where the parish boundary fence comes down to it from Goose Knowe; from there it pursues a somewhat sinuous course S.W. and then S. along the flank of Black Rig.	NT347149
TORWOOD - RAEBURNFOOT - NEWSTEAD	ROMAN ROAD (ROMAN)	Known line and discovery line of the Roman road.	NT307050
COUTLAIR KNOWE	ROAD	Line of a road or track. Isolated fragment can be traced for 800m from E shoulder of Black Knowe Head to E flank of Coutlair Knowe.	NT333112
QUARRY RIG	LINEAR EARTHWORK	A linear earthwork extends for some 400 yards comprising a ditch and bank to E. It may have been destroyed by ploughing for forestry. Suggested that it is part of the Catrail, but may be a linear boundary between two natural landmarks.	NT353123
GIRNWOOD HILL, NORTH	LINEAR EARTHWORK	A linear earthwork comprises a bank 0.4m wide and 0.2m high and a ditch is 0.3m wide and 0.3m deep. It appears to have been destroyed by forestry ploughing. One suggestion is that it was part of the Catrail, but others say not.	NT357129
MAIN DROVE ROAD	ROAD	A line of a drove road.	NT346133
TORWOOD - RAEBURNFOOT - NEWSTEAD	ROMAN ROAD (ROMAN)	Roman road is thought to pass near here, but no evidence has been recorded other than a possible bridge mound can be seen at NT 336 104, and the possible road runs through a field at NT 338 106.	NT350100
OTTERHOLE SIKE	EARTHWORK, ENCLOSURE	An earthwork measures 210ft from N to S by 140ft within a bank and external ditch. Bank measures 8ft 3ins above the interior and the ditch, 8ft in width and 8ft deep, with an upcast mound on the W arc of the ditch. Possible entrance in the S.	NT355100
FLAKE HILL	ENCLOSURE	The remains of a rectangular enclosure, measuring 42.0m N-S by 34.0m E-W. Only the outer scarp of a turf bank is c.0.3m wide is visible. The enclosure has 2 rounded and 2 right angled corners. Probably a stock enclosure. Similar turf bank s found to NW	NT358101
DEANBURNHAUGH - NORTHHOPEHAUGH	ROAD	A line of a road or track, which runs from NT 355 036 runs up right bank of Dethope Burn to NT 342 103.	NT355036
HARE SIKE	ENCLOSURE	A circular enclosure or sheepfold.	NT347093
MEADOWSHAW	SETTLEMENT	A scheduled settlement measuring internally 140ft from E to W by 155ft. A ditch with counterscarp up to 1.2m high and a bank. Interior split into a N part entered from the E arc across a causeway. The S part entered from the S. Sheepfold lies 28m to NE.	NT377097
DEANBURNHAUGH - NORTHHOPEHAUGH	ROAD	A road or track, descends from NT 346 092. At NT 345 084 heavily marked tracks seen running to Northope Haugh before afforestation.	NT343084
VOLFCLEUCHHEAD, 'LOUPIN' STONE'	MOUNTING BLOCK	A mounting stone is 0.9m long by 0.35m wide at top, narrowing to a point at bottom, and is only 0.05m thick. On one side two heads and lettering are inscribed; on the other the name 'Volfcleuchead'.	NT313083
VOLFCLEUCHHEAD	ENCLOSURE	A scheduled enclosure measures c.10.5m NW-SE by c.6.0m and is formed by a bank 1.5m wide by 0.6m high, with a possible entrance in its NW side. A bank extends NW from the NE side for c.10.0m, where it runs into the NE side of a small mutilated mound.	NT324080
NORTHOPE HAUGH	ENCLOSURE(S)	A scheduled group of 3 enclosures. Large enclosure damaged in SE arc, contains one or two small turf banked enclosures. SO to SW are two circular enclosures, each 5.3 m in diameter and formed by similar turf banks.	NT337076
BORTHWICK WATER	CULVERT (ROMAN); CULVERT	A culvert of the former Roman road. The eroded remains were recorded as a length of 14ft, was of rectangular section and measured 1ft 5ins in height by about 1ft in breadth. Thought to have been washed away in 1962.	NT341077
HAZELY SIKE	ENCLOSURE(S)	Two or three conjoined enclosures. Recorded as a farmstead by the SMR. The location by a Roman road does offer the possibility of a Roman roadside cemetery.	NT311054
UPPER BORTHWICK WATER & SUBSITE OF TORWOOD - RAEBURNFOOT - NEWSTEAD	ROAD	Tracks begin to diverge from Roman road at NT 325057 to seek more level ground up the ridge, wide belt of hollow tracks.	NT326057
HAZELY SIKE	ENCLOSURE(S)	An enclosure beside the Roman road. May have rig and furrow associated with it.	NT312054
CRAIK CROSS	BARROW (POSSIBLE); WATCH TOWER (ROMAN)(POSSIBLE)	A Roman watch tower beside the Roman road. It measures 11m in diameter and 1m in height, and surrounded by a shallow ditch 1.5m broad. No finds when excavated and it may be a burial cairn.	NT303047

All of these Archaeology sites are included in our FC GIS systems and they are highlighted when new contracts are created for works. The sites are protected to the standard detailed in the UK forest standard: Forests and Historic Environment.

3.6 Deer

Roe deer are a significant threat to tree establishment in Craik forest, as they are in many of these large upland forests. Populations in craik are approx 10 deer per hundred hectares as can be seen on the graph in the page opposite.

Professional wildlife officers and managers monitor and manage populations and this has been ongoing successfully for decades. Generally current deer numbers allow successful establishment of conifer species, including the some alternatives and more palatable species e.g. Norway Spruce. However, protecting broadleaves in the riparian zones and Douglas Fir is more of a challenge and recent establishment success has been mixed, with some successes and some failures.

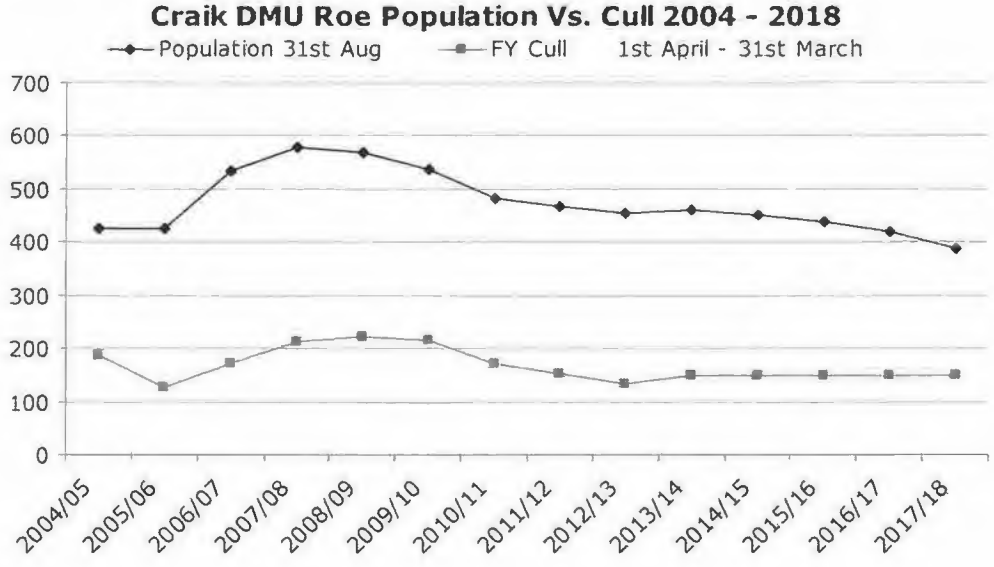
These areas of riparian broadleaves acting as permanent habitat networks are a key element of the plan and their establishment is essential. They will

benefit greatly from the reduced deer numbers achieved through culling but there are also a number of other factors to consider including:

1. Selection of the right species and the right sites for riparian broadleaves
2. Suitability of individual tree shelters (tubes)
3. shape, size and location of the initial broadleaved areas in the riparian zone e.g. 25% NBL or 100% NBL.

These issues will be further explored and specific prescriptions given in section 5 of this plan.

Full detail on the historical and planned Roe deer cull can be found in the Dumfries and Border Deer Management Strategy. Summary details can be seen in the graph below.



4.0 Analysis and Concept

4.1 Analysis

The initial Analysis and Concept map shows the factors that have significantly influenced the development of design and long term vision of this forest.
Main factors were identified as:

- Climate change
- Timber production opportunities

4.2 Concepts of the plan

The initial design concept has been presented in the analysis and design concept maps. This was used at the initial consultation.

Below is the slightly amended concept following consultation of the design brief (including feedback from stakeholders and the community) and further analysis work around the time of initial consultation. The concept below is used to drive the design of the forest.

Key issues

Factor	Opportunity	Constraint (limitation or restriction)	Concept Development
Potential for timber production	Very large area capable of large volume supply. Opportunity to diversify some of the species to other productive conifers other than Sitka Spruce.	The rate of growth is limited in some areas with soils and climate. Rotation is limited by wind. By planning riparian areas for native woodland this will reduce the area available for softwood timber production.	In the key timber production areas focus on the growth of key species suitable for processing for construction timber e.g. C16 strength Sitka Spruce, Norway Spruce and C24 Douglas Fir

Climate Change	Sequester carbon in trees and timber products. Use forests to slow water flow and reduce flooding. Opportunity to design this high windthrow risk forest for the threats of climate change and more extreme events. "Designing for resilience" or "spatial resilience"	Extreme weather events may reduce rotation length. Resilience of the forest is and issue and diversity will reduce risk. Creating wide open coupe boundaries can be used to make coupes independent of one another in the future forest but this takes up valuable productive ground.	Large areas of woodland cover (conifers and broadleaves) will sequester carbon and assist in mitigation of climate change. Maximise species diversity will make forests robust and also help regulate water. Design resilience into the forest by carefully locating permanent open space between the crop areas to make edges resilient to wind over time – these edges will be buffered by wind and will have greater stability.
Restructuring	Build on the previous plan and continue to restructure. Start to consider some early felling of the second rotation crop to increase age class diversity.	In some areas e.g. Crooked Loch the wind has limited the ability to restructure and this will take to the end of the second rotation to complete.	As used in the previous plan use Hill Features to form the basis for a future management structure: these are naturally subdivided by lower lying areas and valleys. Many of the existing coupe shapes can be used in this revision.
Landscape	Use restructuring to help improve the landscape. Natural shapes following landform.	No larch is planned in the next 10 years due to phytopthora and autumn colour will be lost. The wind reduces ability to keep old trees.	Where improvements can be made to shape / size amend restocking and coupe design. Amend Restocking plans to improve the landscape e.g. push native woodland up the gullies, open space left on the spurs.

Conifer species choice	By diversifying the species this will improve woodland resilience in climate change. Also improve biodiversity potential and improve landscape.	Diversification of species will reduce softwood timber production and will cost more to establish.	Sitka Spruce will remain as the predominant species. Use alternatives including DF, NS etc where their productivity is high/very high. Consider a large scale trial of Red Cedar or Noble Fir in locations where productivity is classed as very suitable in ESC.
Broadleaved woodlands	As 1st rotation plantation is cleared change the species in the riparian areas to permanent broadleaved woodland.	There are few old native woodlands and therefore this limits the speed at which we can deliver full native woodland benefits. Climate and soils limits the potential for productive broadleaves.	Assign at least 5% of the area to Mixed native woodlands. Identify key areas as Minimum intervention. Plan as permanent native woodlands. Explore option of small areas of productive native woodlands where impact on softwood production is negligible.
Public access opportunities	Large area of land for open access for foot, cycle and horse.	Funding for maintenance of recreation facilities is limited.	Plan woodland to allow freedom to roam and informal access. Withdraw recreation facilities over time.

Create and maintain habitats for conservation	Expansion of native woodlands in riparian zones as 1st rotation crops are cleared. Potential to restore open habitats as 1st rotation crops are cleared. Potential to improve habitat for red squirrel.	Given the previous mono culture and lack of old native woodland the short and medium term nature conservation opportunities are limited.	Assign appropriate management types of LTR, Natural Reserve (move towards 1%), Minimum Intervention. Identify current and future permanent broadleaved riparian buffer areas and design forest around these areas. In the area of crooked loch identify and protect priority peatland habitats and open habitats Plant NS and SP for red squirrel habitat. Retain older trees as Long Term Retention for habitat.
Timber Transport	Work with private sector owners and share costs and roads to create agreed strategic timber transport solutions.	Difficult to agree maintenance costs	Timber transport solutions will continue to be considered and FCS will work with Timber Transport Forum and other forest owners..
Community	FCS can help the community through taking on board issues from the community. The community can help FCS better understand the issues and provide local input/knowledge e.g. heritage sites. FCS welcome community involvement in forests.	Funding is limited for recreation facilities.	Consult and liaise with neighbours and the communities to check understanding and aspirations for the woodland. Build issues into plans where they are compatible with the wider management objectives for the forest

Archaeology	Protect heritage sites across the woodland.		Identify and protect archaeology including scheduled sites

5.0 Forest Design Plan Proposals

5.1 Management types

Continuous Cover Forestry (CCF) systems generally need good site conditions including soils and favourable climates and these conditions are limited in Craik. However there are a number of sites across the lower areas where there is potential, the areas are usually where public access is more frequent and also where there are environmental benefits e.g. water management. Shown as pink on the management map, these areas are planned in detail in a LISS management plan.

Clearfelling is, and will continue to be the predominant management type in Craik and this has been the case for the past 2 or 3 decades. These clearfelling areas are individual working units with a planned fell date. Currently the coupe boundaries include water courses, landform changes (hills), roads and existing forest rides.

Given the high wind throw risk, the long-term aim is to reshape the coupes by moving away from the 70's commercial geometric planting of monocultures towards a coupe management layout more suitable for the future extreme weather events (rain and wind) and also respecting the shape of the land form and increasing options for future forest management. Specifically we need to get away from the geometric shapes that cut across the ridges and tops of hill summits and should increase the robustness of coupe boundaries by moving towards independent organic shapes with well designed and stable coupe edges. We need to avoid leaving elevated edges very exposed to windblow - windblow is a specific problem in this forest. In this review some coupes have been reshaped or amalgamated to reduce the number of coupe boundaries that cut across the hill tops and ridges and to limit the exposure of coupe boundaries to windthrow.

But there are challenges to this approach; where young and older trees currently occupy one hill summit coupe it is not always desirable to early fell the young trees or delay fell the older trees due to potential reductions in revenue. So, it will take some time to fully implement all of the "ideal" coupe shapes – the important thing is to move towards them.

We are calling this approach "spatial resilience"

During the review a number of problem areas have been identified where the existing forest ride system goes straight over the top of a hill and if one of these adjacent coupes are felled the other can become unstable and blow down. We want to avoid this scenario in the future by building in windthrow "resilient" edges. Some design principles for this approach in these windier and wetter climates are listed below:

- More effort should be put into the design of the restocking pattern so that these exposed boundaries and poorly designed shapes do not continue into the next rotation.
- Perhaps accept poorer felling shapes but replant them in a different pattern including open space strip through the restock where there is a vision of a future windthrow resilient boundary.
- Future coupes should be independent of each other – if one is felled it should not affect the other.
- Good design in Craik should focus on resilience to wind, but as this also means removing the coupe boundaries from hill tops and creating larger coupes on summits and higher ridges, good visual design is a spin off benefit.
- Avoid coupe boundaries crossing top of hills and recreating original forest ride shapes where these open up exposed edges or are visually intrusive from key public viewpoints
- Create fewer but wider and more robust rides that will form coupe boundaries, where stable edges can develop over time.
- These stable edges are particularly important in non thin sites where we want to grow crops to terminal height.
- Coupes should encompass whole hill summits – this may result in some larger coupe sizes c. 70ha. As long as the coupes can be taken to wind firm boundaries, and can be accessed by a good length of road larger coupes are appropriate in this large scale landscape.
- Use riparian zones as resilient edges and create buffers with Native broadleaves and open space.
- Aim for the coupe edge to have trees with green foliage coverage all the way from the tree top to the ground level – this type of tree growth leads to more stable edges. We must avoid brown edges where possible.
- These independent coupes should be clearly visible in the Future Species and Habitats map and perhaps this map is the starting point for the coupe shapes.
- There are a number of options for creating a windfirm edge but the main principle is sustained exposure throughout the rotation. Some other interesting solutions may include special treatment on the strip around the edge including mixed broadleaves, Scots pine or Noble fir or indeed graded density Sitka Spruce.

In terms of restructuring the review aims to separate coupes by 7 years or 2m in top height difference and much of this restructuring work is already progressing well and the review has focussed on refining this. Crooked loch in particular has been difficult to achieve good age class diversity given the wind limitations and general young age of the crops. Where it is not possible to retain trees until the adjacent coupe reaches 2m, separation is dealt with via delayed restocking.

To maximise revenue the aim for clearfell rotation length (timing of felling) is the point in time just before stands suffer serious windblow, typically this is 20-25m in top height and ranging from 40-50 years of age, assuming YC of c.16-18. It is difficult to set exact felling ages or top heights across the forest as there are so many variables including soils, climate, and adjacent shelter. Felling age/rotation length is forecast on a coupe by coupe basis following site visit to each coupe. Slower growing trees at higher altitude are shorter in height than those at lower levels which grow faster and are taller but experience and evidence would suggest that 45 years is the best starting point. From that starting point, coupes are "brought forward" and "set back" to achieve age class diversity but rarely is rotation length less than 40 years or does it exceed 50 years.

Typically clearfell areas are left fallow for 3 years after felling to allow time for the Hylobius beetle to reduce in population and be less of a threat to the newly planted restock trees.

During this 10 year review each coupe has been visited and assessed for shape, management type and felling date.

Deadwood management in these large conifer productive forests is important and particularly so in the conservation areas of Long Term Retention, Natural Reserves and Minimal Intervention (See below). The Dumfries and Borders Local Policy Guidance note is attached, this explains that there are key areas where deadwood will be retained e.g. Natural Reserves and also more generally across the forest Deadwood will be retained on Clearfelled and Restocked sites. This approach will deliver the UKFS targets and UKWAS target of 20m3 per ha across the management unit.

Some areas of older plantation have been identified as areas of **Long Term Retention (LTR).** These are clearfell coupes that can be retained for a little longer than the typical rotation length. Long Term Retention is a very useful tool to increase structural diversity where there are fewer older trees. An example of LTR is near Redford Green entrance (North end of Crooked Loch).

Nature conservation and biodiversity is the priority for **Natural Reserve (NR)** areas and these areas have been identified as natural reserves in perpetuity. Regarding the two different categories;

1. Semi natural - There is a small piece of land that could fit this category on the Borthwick water and this is included in the Natural Reserve Management category. Some of the riparian planting of the last 20 years is becoming natural but it is probably too young to fit the semi natural category.
2. <1% of Craik forest is assigned as plantation Natural reserves. Typically these are areas of first rotation conifer trees on steeper areas more difficult to access and where there is little public access. These reserves have been selected where they will add value and strengthen the native broadleaved riparian habitat networks planted over the past 20 years or so ago. The most significant area of plantation Natural Reserve is perhaps on the Borthwick water where there is a variety of conifer species planted mainly on the flood plain. Consideration has been given to deadwood or trees falling into the water and it is considered that the biodiversity value obtained from the approach outweighs any potential negative impacts of dead trees in the water.

Areas of **Minimal Intervention (MI)** are lower priority conservation sites than Natural Reserve. Typically they are riparian zones and have some native woodland but some form of intervention will be required over the next few decades to make these areas permanent robust habitat networks. E.g. Enrichment planting or removal of exotic conifers. Within these MI areas Sitka Spruce will be removed where they cover more than 10% of the site area. Other conifers (Firs, Pines, Larches) will be retained where they occupy less than 20% of the area. There are a few areas of windblow that we intend to keep as deadwood for the medium term – these are identified as MI.

Open space is an important component of the forest with key areas of open space being a component of the riparian broadleaves, beside heritage features, along roadsides and in rides and deer glades. Importantly, additional open space will also be used to create windfirm coupe boudaries – *designing for resilience.* Other uses of open space include a wide range of wildlife including butterflies; the space accommodates public and operational access and also adds value to the landscape. There is some natural regeneration of SS into these areas and this can be removed if it exceeds 10 % of the open area.

5.2 Future Habitats and Species

This section/map describes the habitat and species of the next rotation where the trees are currently >10 years old. For younger areas the map shows the current species.

As described in the design brief the direction for tree species will be less Sitka Spruce and more alternative conifers where conditions suit. The best site suitable species is chosen either via professional forester judgement and/or through using Ecological Site Classification – a computer based decision support system. This process takes climate and soils into account to determine the most suitable species. ESC itself, does not take management objectives into account, this is dealt with when making the species choice.

The table below gives a description of tree species selection rationale.

Tree species	Climate	Soils
Norway Spruce – ideally on the lower slopes. Avoid making horizontal transition between NS and SS – linear line in landscape.	All climates but do not plant on the more exposed sites greater than 15DAMS	1,4,6,7
Noble Fir – Chosen in areas with very suitable ESC projection and in locations where other conifers including DF NS and WRC are not so suitable	Usually in the windier conditions	Usually in the 7's and the 1's
Douglas Fir – the preferred species where the soil and climate is suitable.	Douglas is limited by many climate factors, wind, and warmth and moisture deficit. Warmth – accumulated temperature of >1200 day degrees is important. Sheltered sites are important and DAMS should not exceed 13.	Best suitability in brown earth soil 1's. But high suitability in some 7l (Loamy surface water gley)
SS/Pine Mix (LP and SP). Pine is used as a nurse species where there is deap peat and / or heather threats.	Few limitations of climate for these species.	8 9 10 11 Deep Peats
Japanese Larch – Avoided in first 10 years due to Phytopthora. May plant later for landscape reasons	Few limitations in Craik	Few limitiations in Craik.
Scots Pine – lower productivity but useful species in rockier area. Useful tree for internal landscape design.	Few limitations in Craik.	Prefers drier soils.
Western Red Cedar – Highly productive and durable as a timber.	Can tolerate slightly windier conditions and exposure compared to other alterative conifers	Suitable in the wetter soils. Surface water gleys are the most suitable soils for Western red cedar
Sitka Spruce – A key component of the upland	Suitable in all climate types in Craik.	Suitable in most soil types but should be included with

forest		a nurse species where nutrition is low.
Productive broadleaves – Very limited in Craik due to the upland climate and soil conditions.		Non have been included in the plan as there are better sites across the forest district for growing productive broadleaves in terms of soils and climate. We intend focusing effort in the better areas.

To deliver the wide range of management objectives a diverse range of species is included. The principle of selection is to always consider alternatives to Sitka Spruce where ever species are predicted in ESC as suitable to very suitable: usually everything above 60% suitability. By maximising alternatives to SS this enhances the species diversity of the forest for social, environmental and biodiversity as well as building resilience into the forest as climate changes and forests are under threat.

As can be seen from the proposed species maps Sitka Spruce remains a dominant species because of the extent of limiting soil and climate conditions combined with the desire to produce high volumes of construction timber. This is particularly true further up the slopes where the climate and soils deteriorate and suitability for the softer alternative species reduces

Although current climate data has been used to select species for this plan, future climate data has also been explored and this tells us that Sitka Spruce will remain appropriate in this part of South Scotland by 2050. Alternative conifer species planned will benefit from more warmth and an extended growing season expanding their general zone of suitability, but for this plan selection has been made using current climate predictions/species limitations. Predicted severe weather and wind events will damage trees and crops, careful coupe boundaries have been chosen, as well as the use of LISS.

It's perhaps worth noting that spatial ESC does not take landscaping into account and often the best silvicultural answer creates a band in the landscape rather than following the landform. In this plan the ESC answer was the starting point and the boundaries have been adjusted to take account of landscaping (following landform)

Due to the concerns and business risk of Larch associated with Phytopthora the decision has been taken to avoid planning to plant Larch in the next 10 years approval period of the plan. Given the unique place of Larch in the landscape, in

particular for its autumn colours, larch has been kept in the plan for years 11-50. This will be kept under review as our knowledge of the disease grows.

Dothistroma needle blight is a disease in Pine that has been increasing concern in Scotland over the past few years and depending on how things spread or develop this may have an effect on Scots Pine and Lodgepole pine planting.

Like conifers, **native broadleaved species** will be selected for different sites depending on the soil, climate and management objectives.

Site conditions	Management Objectives	Tree Species
Peaty, ironpan and gleyed soils above 300m	Riparian Woodland Red Squirrel Habitat Avoid large seeded broadleaves in this area to try and disadvantage grey squirrels	Downy Birch Goat Willow Rowan Eared Willow and Grey Willow as shrub species Hawthorn Juniper
Better mineral soils below 300m	Riparian Woodland Red Squirrel Corridors Avoid significant planting of large seeded broadleaves in this area to try and disadvantage grey squirrels	Silver Birch Rowan Holly Aspen Ash (Natural Regen) Hazel (Minimal planting due to Red Squirrel Priority area) Willow Alder Hawthorn Oak (Minimal planting due to Red Squirrel Priority area)

Broadleaves are chosen mainly to deliver biodiversity and environmental objectives. Typically the non-productive broadleaves are new native woodland areas designed and established as part of restructuring and following clearance of first rotation conifer crops. Typically the areas shown on the map as Native Broadleaves and Open space represent 30% NBL and 70% open space. A few areas are 50% NBL and 50% open space.

Native broadleaves can be seen on the Restocking and Management Maps with the following categories:

1. Retention of mature broadleaves in perpetuity through using Natural Reserve and Minimal intervention management types.
2. Established riparian broadleaves (approx. 10-20 years old) following first rotation felling.

3. When establishing new native woodlands on felled conifer sites experience has shown that it is better to concentrate the initial planting of broadleaves in places where they can be protected from deer. The carefully selected locations should also deliver greatest environmental and biodiversity benefits faster (e.g. where burns join or on a flood plain area).

Natural regeneration will enrich all these native broadleaved areas and the "future forest" will consist of robust permanent native woodland corridors at all elevations across the forest.

Analysis of the species change in the "Future Forest"

The table and graphs below show how the species changes over the period of the plan.

Species	Area_Ha _2015	%	Area_Ha _2030	%	Area_Ha _2045	%	Area_Ha _2060	%	Comments
Permanent Open	823	19.4	888	20.9	922	21.7	814	19.1	Open includes the open component between the NBL in the riparian zones. Also successional and also "felled"
Felled	236	5.6	257.8	6.1	169.5	4.0	99	2.3	
SS or SS/LP	2495	58.7	2263	53.2	2220	52.2	2209	52.0	Mainly pure SS but some areas of SSLP with LP as a nurse.
SP	68.3	1.6	69.6	1.6	65.1	1.5	45.5	1.1	Low productivity, used sparingly
DF	2.1	0.0	25	0.6	32.9	0.8	42.6	1.0	Limited use due to climate and soils
WH	0.8	0.0	0.8	0.0	0.8	0.0	0	0.0	
JL	101.5	2.4	68.9	1.6	64.2	1.5	52.8	1.2	Lower use due to Phytopthora risk
HL	63.8	1.5	56	1.3	42.4	1.0	13.2	0.3	
NS	261.8	6.2	331	7.8	428	10.1	484	11.4	Primary alternative conifer on this site, increasing over time
MC	0.8	0.0	20	0.5	38	0.9	191	4.5	Increasing diversity in the forest
NF	3	0.1	12.9	0.3	12.9	0.3	36.6	0.9	Limited by timber quality.
EL	3	0.1	2.8	0.1	2.8	0.1	4.6	0.1	
MOP	1.4	0.0	0	0.0	0	0.0	0	0.0	
OMS	0.7	0.0	0	0.0	0	0.0	0	0.0	
GF	3.6	0.1	9.6	0.2	9.5	0.2	6.5	0.2	
XCD	0	0.0	17.4	0.4	17.4	0.4	22	0.5	Increase diversity in species
CAR	0.3	0.0	0.1	0.0	0.1	0.0	0	0.0	
AR	1	0.0	0.3	0.0	0.3	0.0	0.3	0.0	
RON	0.5	0.0	0	0.0	0	0.0	0	0.0	
XB	3.5	0.1	1	0.0	1	0.0	0.4	0.0	
WEP	0.7	0.0	0	0.0	0	0.0	0	0.0	
SY	0.5	0.0	0.3	0.0	0.1	0.0	0.1	0.0	
MB	170.2	4.0	222	5.2	221.6	5.2	229.5	5.4	Increasing from 4% to 5% over time
BE	2.1	0.0	1.7	0.0	1.5	0.0	0	0.0	
BI	7.3	0.2	3.1	0.1	0.5	0.0	0.4	0.0	
	4250.9	100.0	4251.3	100.0	4250.6	100.0	4251.5	100.0	

Please see next page for areas seeking approval over the next 10 years. Please note that areas currently felled and awaiting restocking from the current forest plan are excluded from this table and they will be replanted as per commitment of the current plan. The resumption for these areas are managed in the Forest Disctrict Planning programme, and all areas are planned for restocking.

Sub coupe	PLANT YR	SPIS1	AREA1 %	SPIS2	AREA2 %	AREA OPEN	Shape Area	Area Species 1	Area Species 2
65041c	2024	DF	100		0	0	6.9	6.9	0.0
67052b	2022	DF	100		0	0	9.7	9.7	0.0
		DF Total						16.6	0.0
63005b	2020	MB	30		0	70	1.4	0.4	0.0
63011b	2021	MB	30		0	70	5.9	1.8	0.0
63016c	2026	MB	30		0	70	7.3	2.2	0.0
63019b	2020	MB	30		0	70	2.9	0.9	0.0
63019e	2020	MB	30		0	70	3.9	1.2	0.0
63020c	2025	MB	30		0	70	2.7	0.8	0.0
63020g	2025	MB	30		0	70	1.0	0.3	0.0
64016f	2022	MB	30		0	70	5.3	1.6	0.0
64028a	2024	MB	30		0	70	13.1	3.9	0.0
65044f	2025	MB	30		0	70	1.8	0.5	0.0
65058d	2026	MB	30		0	70	3.7	1.1	0.0
65063f	2019	MB	30		0	70	1.8	0.5	0.0
67027g	2022	MB	30		0	70	1.5	0.4	0.0
67052a	2022	MB	30		0	70	1.1	0.3	0.0
68025a	2025	MB	30		0	70	0.7	0.2	0.0
68039a	2019	MB	30		0	70	0.4	0.1	0.0
68041b	2024	MB	30		0	70	3.9	1.2	0.0
		MB Total						17.5	0.0
65063b	2019	NF	100		0	0	4.9	4.9	0.0
		NF Total						4.9	0.0
63005c	2020	NS	100		0	0	9.3	9.3	0.0
63011i	2021	NS	100		0	0	2.1	2.1	0.0
64016b	2022	NS	100		0	0	3.4	3.4	0.0
64016d	2022	NS	100		0	0	2.3	2.3	0.0
65017c	2018	NS	100		0	0	2.5	2.5	0.0
65017d	2018	NS	100		0	0	0.3	0.3	0.0
65029a	2024	NS	100		0	0	16.0	16.0	0.0
65041b	2024	NS	100		0	0	11.1	11.1	0.0
65044c	2025	NS	100		0	0	4.0	4.0	0.0
65044d	2025	NS	100		0	0	8.1	8.1	0.0
65063c	2019	NS	100		0	0	3.4	3.4	0.0
65077a	2026	NS	100		0	0	4.3	4.3	0.0
67027c	2022	NS	100		0	0	9.4	9.4	0.0
68041a	2024	NS	100		0	0	8.0	8.0	0.0
		NS Total						84.2	0.0
63005a	2020	SS	100		0	0	44.1	44.1	0.0
63011c	2021	SS	100		0	0	18.1	18.1	0.0
63011e	2020	SS	100		0	0	7.8	7.8	0.0
63011f	2021	SS	100		0	0	1.5	1.5	0.0
63011h	2021	SS	100		0	0	4.4	4.4	0.0
63016a	2026	SS	70	LP	30	0	52.1	36.5	15.6
63019a	2020	SS	70	LP	30	0	14.3	10.0	4.3
63019c	2020	SS	100		0	0	23.1	23.1	0.0
63019d	2020	SS	70	LP	30	0	6.6	4.6	2.0
63020a	2025	SS	70	LP	30	0	19.2	13.4	5.8
64016c	2022	SS	100		0	0	28.0	28.0	0.0
64016e	2022	SS	70	LP	30	0	29.3	20.5	8.8
64027e	2020	SS	70	LP	30	0	32.9	23.1	9.9
64028b	2024	SS	70	LP	30	0	18.9	13.2	5.7
64028c	2024	SS	100		0	0	3.9	3.9	0.0
64028d	2024	SS	100		0	0	2.1	2.1	0.0
65017b	2018	SS	100		0	0	3.9	3.9	0.0
65044b	2025	SS	100		0	0	12.4	12.4	0.0
65044e	2025	SS	100		0	0	12.9	12.9	0.0
65058b	2026	SS	100		0	0	9.8	9.8	0.0
65058c	2026	SS	100		0	0	25.5	25.5	0.0
65058e	2026	SS	100		0	0	6.8	6.8	0.0
65063d	2019	SS	100		0	0	26.4	26.4	0.0
65065a	2020	SS	100		0	0	10.4	10.4	0.0
65077b	2026	SS	100		0	0	2.1	2.1	0.0
67027a	2022	SS	100		0	0	1.8	1.8	0.0
67386a	2020	SS	100		0	0	23.7	23.7	0.0
68018c	2023	SS	70	LP	30	0	13.5	9.4	4.0
68025b	2025	SS	100		0	0	34.7	34.7	0.0
68039c	2019	SS	100		0	0	9.0	9.0	0.0
68058a	2020	SS	0		0	100	3.8	0.0	0.0
68058c	2022	SS	100		0	0	9.4	9.4	0.0
		SS Total						452.6	56.1

In addition to theis 103.75 of open space will be created around these coupes and in particular in the riparian zones. Total felling and Restocking areas match - 680ha.

5.3 Restructuring

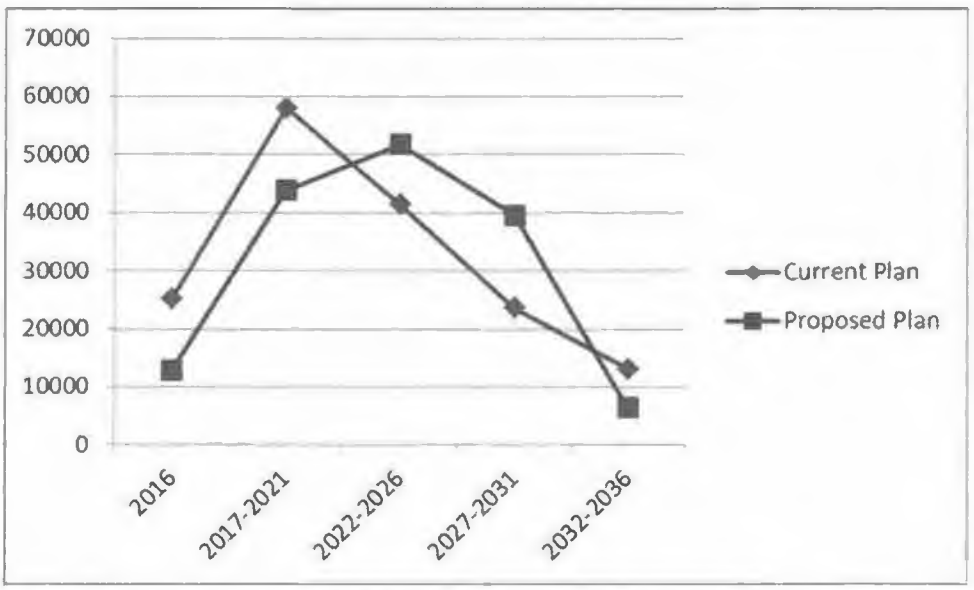
Restructuring is a way of diversifying age class structure of monoculture plantations and making the transition from geometric landscape shapes towards a landscape that follows the underlying landform. Also identifying permanent habitat networks of native broadleaved species. Successful restructuring will make a forest that will deliver added value in terms of landscape, environment and biodiversity.

Restructuring in Craik is already well advanced with much felling already commenced over the past 20 years or so. Some of the first rotation crops still remain and these areas are the focus of the next felling periods. Some will remain as Natural reserves.

Craik is well on its way to becoming a "normalised forest", one which produces a sustainable felling volume over time.

Production Forecasts. Below is a comparison of the previous plan production forecast and this plan production forecast.

PF Period	Current Plan	Proposed Plan
2016	25122	12825
2017-2021	58130	43841
2022-2026	41440	51840
2027-2031	23670	39529
2032-2036	13137	6443



This graph shows that the revision for the forest plan is producing a similar volume production in terms of clearfelling but the peak in the felling period 17-21 has been smoothed out and volume pushed back to 27-31.

The table and graph below shows how the age class structure changes over time.

AgeClass	Area_Ha_2015	Area_Ha_2030	Area_Ha_2045	Area_Ha_2060
0-10	804	860.7	242.4	1184.2
11-20	1019.5	615.9	636.6	587.2
21-40	293	1517.4	1604.7	1102.8
41-60	808.1	20.7	611	425.1
60+	227.9	90.5	73.5	31.5
Other open and felled	1098.9	1146.2	1083.1	920.4
	4251.4	4251.4	4251.3	4251.2

The proposed felling areas over the next 10 years are shown below

Name of Forecast: Craik Phase 1 Felling
Production Volume by Management Coupe (m3 overbark standing) - Clearfell

Total Area:	Processed:	Area Removed:			
270.11	270.11				
	Management Coupe		Operation Type	Area (ha)	Year	Volume
		63005	fell	54.3	2018	23,893.53
		63011	fell	33.75	2019	21,240.43
		63019	fell	50.21	2018	21,853.61
		64027	fell	35.38	2018	14,484.19
		65017	fell	7.47	2016	4,012.88
		65063	fell	35.76	2017	17,173.57
		65065	fell	10.49	2018	5,777.05
		67386	fell	23.03	2018	14,403.00
		68039	fell	9.81	2017	5,117.58

Name of Forecast: Craik Phase 2 felling
Production Volume by Management Coupe (m3 overbark standing) – Clearfell

Total Area:	Processed:	Area Removed: 0.25			
409.45	409.20				
	Management Coupe		Operation Type	Area (ha)	Year	Volume
		63016	fell	53.99	2024	23,096.52
		63020	fell	23.27	2022	7,340.80
		64016	fell	63.67	2020	44,142.23
		64028	fell	34.5	2022	16,747.01
		65029	fell	15.07	2022	11,485.33
		65041	fell	20.11	2020	15,221.51
		65044	fell	40.9	2022	27,683.56
		65058	fell	44.75	2024	21,603.64
		65077	fell	7.27	2022	4,184.03
		67052	fell	23.18	2020	10,128.36
		68018	fell	10.12	2021	4,655.69
		68025	fell	34.37	2023	25,581.31
		68041	fell	12	2023	8,084.17
		68058	fell	13.09	2020	9,696.49

5.1.4 Operational Access

The forest road network in Craik is already well established and has a maintenance schedule planned to keep it up to standard.

Timber haulage from FCS land is via Gair Bridge, Meadshaw, Redfordgreen or Craik Village depending on where the timber destination point is. Timber Haulage from private sector land at Gair is allowed exit via the Gair Bridge entrance and no other entrance.

There is good operational forest road access for other establishment and maintenance forest operations including quad access tracks usually established at time of restocking.

Over time there has been a practice of public vehicle use of the forest from Craik Village through to Gair. This offers a shortcut for members of the public but this is not allowed and is monitored and discouraged.

As not all first rotation crops have been felled yet there are some coupes which will require new forest road access over the period of the plan. These "planned forest roads" are identified on the management map and some will require tree felling in order to allow access for civil engineering equipment.

The main quarries for forest road stone production are "Henwoodie quarry" NT33241027 and "Meadshaw quarry" NT34931016. This plan proposes to extend the quarries by upto 25% during the 10 year period of this plan. Henwoodie is 0.9ha at 2015. Meadshaw is 0.2ha at 2015.

5.4 Thinning plans

Thinning of tree crops is severely limited by the wind and wet soils in Craik Forest. Over the years various trails and operations have been undertaken with a variety of results. If thinning is undertaken in Craik it is critical that the thinnings are undertaken at the correct time, late or delayed thinning is usually unsuccessful due to tree instability. Also critical is the machinery selection and thinning control as large machines need larger gaps to travel and this directly affects the remaining trees stability. Control of thinning intensity is also critical; if too many trees are taken again this can adversely affect the stability of the remaining trees.

The map in the appendix is "Thinning in this rotation". This map highlights less windy and drier soils and these are the areas where thinning can be undertaken in this current rotation.

The map shows the word ruleset. This is a term used by our GIS systems to identify rules associated with thinnings. This information is held digitally in the "sub compartment database" and so is readily available and viewable by forest

managers over the period of the plan. These rulesets also accumulate and deliver the national and published thinning production forecast figures.

There is a 5 year thinning plan in the Forest District and this detailed plan explains which area is being thinned in which year, the areas chosen for thinnings come from the thinning rulesets which are a starting point. The rulesets are reviewed on the ground during 5 year and 10 year Forest Design Plan reviews.

5.5 Deer Management

Roe deer continue to be a threat to tree establishment and as such an ongoing commitment to deer management is planned over the next 10 years and beyond. This commitment is especially important given the change in the future forest tree species to more *alternatives* to Sitka Spruce. The annual cull is set at 160 deer per year and this will continue to be monitored and amended as required (see deer data in section 3)

Norway spruce is a key future species and although it is less palatable than some soft conifers it is still a challenge given its initial slow growth. Firs will be more of a challenge and these will need significant effort and deer management infrastructure and planning to ensure protection. Broadleaves are in this category too.

Selecting the right location for alternative conifers and broadleaves is important so the rangers can protect them from deer. Where possible these species should have access from stalking paths and or forest roads that are used for night shooting.

Broadleaves will be protected with tubes throughout the forest. 0.6m tubes will be used where there is good access for deer shooting and in more remote and difficult to access areas the broadleaves will be protected by 1.2m tubes. The broadleaves will be placed in groups rather than scattered.

Permanent access tracks for rangers is important and they allow access along very long sections of forest and as such restocking should be kept 5m from either side to ensure future branch growth does not restrict access.

Clearance of roadside willow and SS regeneration from riparian broadleaved areas is important for sight lines between the rangers and the deer. There are other advantages to doing this work including improved road conditions and also moving the riparian zones to broadleaves rather than conifers. This will be part of the annual maintenance programme and will mainly be delivered by FM.

Red Squirrels

Continue to monitor red squirrels and trap grey squirrels. The plan includes design of habitats for red squirrels and includes linkage with Scots Pine and Norway Spruce and use Long Term retentions to create connectivity. To discourage Grey Squirrels and pox across the majority of the forest exclude large proportions of large seeded broadleaved trees in the future forest e.g. Hazel and oak.

5.6 Management of open land

Given the landform in Craik there are few open tops to the hills and typically trees cover the large open rolling landscape. The concept design includes hill top coupes to mitigate against windblow in the future.

Open land is included in the following categories;

1. Open water including natural lochs and man-made ponds.
2. Along the riparian zones (including streams, burns, lochs and ponds) open land is a key component of the Minimum Intervention permanent biodiversity habitat. Typically groups of native broadleaves are established in the open space by the water. In these areas we encourage native broadleaved natural regeneration and discourage natural regeneration of exotic conifers. Scots pine is allowed upto 20%. Where exotic conifers exceed >10% of the open land these will be removed via cutting at a young age by clearingsaw or chainsaw.
3. Specific open land is planned by Windylaw Loch, Goose Loch and Crooked loch block where there is significant priority open habitat interest. Typically this open land is planned where there is deep peat. The proposal includes expanding the area of UKBAP priority habitat (Blanket bog) in these more important peatland macrotopes, and this will not only expand the area but it would also benefit the conditions of adjacent areas of existing peatland, which contain nationally significant Upland Flush, Fen and Swamp Priority habitat. Natural regeneration of exotic conifers should be removed from these areas and consideration of removal of broadleaves if they extend to more than 20% of the area. The recently felled areas being restored to peatland should have the old forest drains blocked to enhance the peatland habitat.
4. Specifically in this plan there is open space located between the hill top coupes to allow exposure over time on the windward edge of the conifer coupe. To ensure the coupe edges get natural stability built up over time through sustained exposure these open areas between the hill top coupes

should be cleared from natural regeneration where this exceeds 20% of the area. This may include clearance of some native broadleaved species if they grow so dense that they reduce the ability of the conifer hilltop coupes to have resilient independent edges to mitigate the wind.

5.7 Public Access and Core Paths

There is low demand for public access in Craik compared to our other forests. Over the past few decades there have been some way marked routes for walkers and cyclists and toilets and car parking. Over time some of these facilities have been and will be withdrawn due to lack of usage compared to our other sites. The recreation facilities in Craik Forest consist of two car parks from where way marked walking trails start and end. Although this reduction in provision may be disappointing for a small number of users, there are funding restrictions and limitations and facility maintenance costs are significant.

The whole forest is open for public access and the Scottish Outdoor Access Code (SOAC) promotes responsible public access. Typically the area is used for short distance walking and picnicking and long distance horse trekking.

The Roman and Reivers Route was developed with The British Horse Society and originally South of Scotland Countryside Trails. It was designated as one of Scotlands Great Trails by Scottish Natural Heritage in 2014 –Through Craik Forest a section of this long distance route is Core Path 196 and runs SW – NE across Craik following the old roman road and passing through Craik Village. Continuing on forest paths to Meadshaw. This follows forest roads and forest paths. Where the route is off the forest road, the plan shows permanent open space to accommodate the trail.

The Core path 196 route and other rights of way are acknowledged. Forestry Commission Scotland accepts the responsibility as land manager to help ensure that these routes are kept open and free of obstruction. In addition where possible the management of the land adjacent to these routes will involve leaving an appropriate unplanted corridor of open land, as shown in the future habitats and species plan. Forestry Commission Scotland may do some maintenance work on the routes but if FCS are unable to fund the works on the path they will accommodate management of the path which may include work done by or for the local access authority (Scottish Borders Council). Timber harvesting and other work relating to the tree crop adjacent to the route will be organised in ways to reduce the time of or if possible avoid closure of the route.

However from time to time these routes may require temporary closing or diversion for operations and this will be organised in association with the SB Council Access Officers who are responsible for core paths.

From time to time parts of the forest are closed and used exclusively by for car rallying although this is typically for one day only. Prior notification of these events is via the Council who follow the section 11 closure requirements in SOAC and signage.

5.8 Heritage Features

The Archaeology interest is described fully in section 3.

The sites will be protected in line with the Forest Standard: Forest and Historic Environment.

The future forest design aims to keep these sites clear of trees and include a buffer zone of open land around the features. Typically this will be 10-20m in the case of unscheduled sites and at least 20m in scheduled sites.

Once the first rotation tree crops are removed these unscheduled sites, the site and buffers will be kept free of natural regeneration of trees. Typically when there is >20% cover of trees these will be removed by clearing saw or chainsaw or simply pulling by hand.

Scheduled ancient monuments will be managed as per the SAM plan.

Where new sites are found in the forest these will be recorded in our heritage database and communicated with the regional Council Archaeologist. From time to time where more information is required we will involve the FCS Archaeologist and he may commission a consultant archaeologist.

During forest operations features will be identified and mitigation measures put in place before operations start.

5.9 PAWS restoration

SNH's Ancient Woodland inventory map can be seen in the appendix and unfortunately there are no records of Ancient Woodland in Craik. Perhaps this

motivates us to focus on creation maintenance of new native woodlands when the first rotation crops are felled. You will see on the management map and the Future habitats and species map that there is aspiration to develop permanent native woodlands. Following initial establishment these are being managed as Minimal Intervention and once fully developed they may take on Natural reserve status. Currently the NBL composition is 4% of the woodland area and we see this rising to c6% at the end of this current rotation.

5.10 Critical success factors

Main critical success factors for plan development are:

- ***Ongoing business model to secure income from timber and invest in restocking.***
- ***With windblow being a significant threat in Craik and certainly being the main limiting factor on rotation length the success of this plan will depend on all operations aiming to achieve independent hill top coupes in the long term – to give resilience to extreme wind events.***
- ***Limiting thinning to only suitable areas to avoid windblow.***
- ***Ongoing deer management to allow successful restocking.***
- ***Climate change is a risk but Forest Research models suggest Craik will remain a suitable location for Sitka Spruce.***

Appendix 1 Design Plan Brief

Appendix I Appendix II Forest Design Plan Consultation Record

Consultee	Date contacted	Date response received	Issue raised	Forest District Response
FCS arranged a public consultation drop in at Roberton village hall to seek community views and give the public the opportunity to see the approach to the 10 year Forest Design Plan review. On display was the FDP design brief and Ariel photo map.	7th May 2014 3pm to 7pm	On the day	The drop in session was advertised on the FC website. Twitter, temporary signage to advertise the event at the forest gate thresholds at 10 or so locations across the forest and contacting the community council. Several attendees commented that the event was not well advertised and suggested contacting Bothwick Community Development Trust, putting adverts in the local news bulletin and putting up signs in Harwick mountain bike shop. 30-35 people attended the meeting at various times. There were few comments about the design of the forest and the majority of feedback related to communities and recreation. Virtually everyone spoke against the closing of facilities particularly the walking and mountain biking routes and also raised concerns about the current maintenance of	Noted. Alan Gale will consider all comments in the development of the plan. Next time the Development Trust will be notified and a notice put in the local news bulletin. FC Scotland and local communities should explore any opportunities here.

			the same. It was felt by many that the lack of maintenance of these facilities had directly caused the drop in visitor numbers. A number of people were interested in community groups funding or taking over maintenance of recreational facilities, particularly mountain bike tracks. Other issues raised were the possible sale or lease of a small area of land to the community as well as quality of thinning within the forest and cultural heritage sites.	Options for the small piece of land clarified by FCS. Additional control is being put on thinning operations. All heritage features are being explored, identified and protected during the design plan.
http://scotland.forestry.gov.uk/supporting/communication-consultation/forest-design-plan-consultations/craik	This web page has been published and available since March 2014.	Ongoing	The web page has the forest design brief The final design proposal will be posted on the web page.	N/a
Jim Knight, Scottish Borders Council Principal Officer (Landscape)	9th April 2014	28th April 2014	General support for the design brief Suggests possibility of pine martin release programme within the forest to aid red squirrel recovery. Refers to Vincent Wildlife Trust and refers to recent research	Noted. Very interesting, Alan Gale will investigate during development of the FDP. Update April 2015 – there are no greys recorded recently and so Pine Martin would be a threat to reds if released?

			relating to pine martin predation of grey squirrels and red squirrel recovery. In favour of timber haulage routes located within forests rather than rural roads. Considers that the FDP should contribute to natural flood management. Suggests adding flood attenuation to FC key drivers under theme of 'Climate Change' in section 2. Under theme 'Business Development', suggests there may be opportunities to enhance path networks including connections to forest roads.	Noted and always open to strategic transport solutions. Noted and will add to FDP. Funds restrict creating new path networks and maintaining existing, but forest will be open under the Scottish Outdoor Access Code.
Dr Christopher Bowles, Scottish Borders Council Archaeology Officer	9th April 2014	1st May 2014	Supportive of the design approach and looked forward to seeing the final proposal	Noted.
Anton Watson, Scottish Natural Heritage Wildlife Management Officer	9th April 2014	10th April 2014	Assumes FC are using current deer management protocol and has further comments.	Noted.
Deirdre Cameron, Historic Scotland Senior Heritage Management Officer	9th April 2014	7th May 2014	Wolfcleuchheade enclosure scheduled monument has been partially planted and HS would welcome any opportunities to	Noted and p2003 broadleaves will be removed..

			assess the site.	
			Would like to see the preservation of all other monuments within the FDP area to be continued and for the settings to be enhanced by felling where possible.	Noted. Will be considered, identified and aim to protect within the development of the plan.
			Refers to Black Rig linear earthwork, north of Kingside Loch which shares a boundary with the northwest of the Forest. Needs to be considered within the plan also.	Noted. Will be considered within the development of the plan and appropriate good practice guidance followed. Update April 2015 – open space planned around this feature.
		April 2015	Wanted clarification regarding management type at Wolfcleuch head.	Clarified that this site was withing area of minimal intervention and planned open space.
Upper Teviot and Bothwick Water Community Council	9th April 2014	28th March 2014, 11th April 2014, 2nd May 2014,	Requests FC consider natural flood prevention techniques.	FCS will participate where possible in any schemes on their land and will cooperate with any lead partners
			Queries methods of community consultation. Comments that local people were not adequately informed of plans.	Noted. A variety of engagement techniques were used however will endeavour to explore additional measures in future consultation.
Contacted all neighbouring forest owners and managers seeking feedback on the draft felling plans	3/10/14		Some feedback been given and meetings been held to established best plans for felling and restocking on the boundaries.	Ongoing.
Contacted Scottish Water in relation to	22/10/14	20/11/14	SW requested a site meeting to clarify the protection	Site meeting held on 7th of January with Alan Gale and John Everitte of FCS and Malcolm Walker, Mick Jones,

Alemoor Reservoir Catchment			measures relating to water	Graeme McIlroy of SW. 1) We considered and looked at buffers between the productive forestry areas and the natural water courses and these were considered to be above and beyond the United Kingdom Forestry Standard (UKFS) requirements. 2) We discussed peatland restoration. A few areas in Crooked loch design plan are deep peat. Some (but not all) of these areas have NOT been replanted with commercial species following removal of the first rotation crops. Instead they are being maintained as non productive broadleaves / open space helping to provide buffering between the productive conifer area and the natural water course. SW commented that there is opportunity to block some of the drains from the first rotation and FCS agreed and would action this where practicable. 3) The site layout of Minimal Intervention (leading to Natural reserves) near to permanent riparian zones was considered appropriate. 4) Quality of stone for road building was raised as a general issue in some forests and FCS are currently monitoring the quality of the stone in Craik and commit to inform SW if considered as a problem 5) There was much discussion about the management of water in roadside drains and all recognised that the standard had moved on in recent times. Practical measures were observed where buffering areas were planned between the roadside drain and the natural watercourses. Buffering of this potential dirty water in roadside drains will be an ongoing development in the forest over the period of the plan. We agreed that the areas of highest risk are near to active sites and these would be dealt with as the sites

				are worked. 6) A restocking site was visited along with an active harvesting site where double bunded tanks were in place and extraction was taking place into a quarry to avoid water pollution in a roadside drain. 7) FCS committed to inserting a comment in the Forest Plan and into the work plans that this area is a Drinking Water Protected Area (DWPA) and on-going protection is essential. Local contact details for SW will be included in pre commencement information along with the Scottish Water Customer Helpline Number 0800 0 778 778 (manned 24/7), so the alarm can be raised if there is any pollution events.
Sent notification to all stakeholders allowing them to view the final drafts on line	9/4/15			
Ettrick Community Council	9/4/15	Mid April	Was disappointed that this was the first time they had heard of the proposals. But on looking back they were informed in April 14 by e-mail. Anyway, they wanted an update and FES will deliver a session at Ettrick Village hall on 14th May 2015.	Meeting held and approx. 20 local people and neighbours attended. Most were very interested in the plans and a few were keen to explore how they could use the forest for public access. Other issues discussed include red squirrels, long term retentions and design to avoid windblow. And Archaeology. All issues resolved and mitigation built into the plan
Upper Teviot and Bothwick Water Community Council	9/4/15	4th May 2015	The CC noted that there was no desire for new planting in the valley. Timber haulage is devastating the roads.	Noted but new planting is not part of this proposal Noted and ongoing work to reduce the impact of timber lorries on communities.

			General complaints about forest management, some of which were raised and dealt with in April 2014 e.g. Archaeology.	During this consultation period FCS will continue to explore these issues and manage the forest to help the community where possible.

Appendix IV Tolerance table

	Adjustment to felling period*	Adjustment to felling coupe boundaries	Timing of Restocking	Change to Species	Change to road lines	Windthrow response
FC Approval not normally required	Fell date can be moved within a 5 year period. Where separation or other constraints are met	1.0ha or 10% of coupe area – whichever is less	2 planting seasons after felling. Restocking within 2 years +/- of year 2 . For Shelterwood area stocking assessment by year 4 and beat up in 5th growing season	Change within species groups e.g. evergreen conifers or broadleaves. Underplanting of CCF areas with species indicated on the FDP.		Up to 0.5ha
Approval by exchange of letters and maps		1.0ha to 5ha or 10% of coupe area- whichever is less			Additional felling of trees not agreed in plan. Departures of >60m in either direction from centre line of road	
Approval by formal plan amendment may be required	Advance felling into current or 2nd 5 year period	>5ha or 10% of coupe area	If timing of restocking is out with the period detailed above	Change from specified native species. Change between species groups	As above depending on sensitivity	>5ha