Central Region (Scottish Lowlands)

Mainshill

Land Management Plan

Approval date: ****

Plan Reference No: ****

Plan Approval Date: *****

Plan Expiry Date: ******

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

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

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CSM 6 Appendix 1b

FOREST ENTERPRISE - Application for Forest Design Plan Approvals in Scotland

Forest Enterprise - Property

Forest District:	Central Region (Scottish Lowlands)
Woodland or property name:	Mainshill
Nearest town, village or locality:	Douglas
OS Grid reference:	NS 8528 3212
Local Authority district/unitary Authority:	South Lanarkshire

Areas for approval

	Conifer	Broadleaf	Total
Clear felling	n/a	n/a	
Selective felling	n/a	n/a	
Restocking	15.3	5.47	20.8
New planting (complete appendix 4)	65.6	10.23	75.83
			96.63

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* /d~~eforestation*/ roads*/ quarries*~~ as detailed in my application.

3. I confirm that the initial scoping of the plan was carried out with FC staff on

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 consultation and scoping has been carried out with all relevant stakeholders over the content of the design plan. Consideration of all issues raised by stakeholders has been included in the process of plan preparation and the outcome recorded on the attached consultation record. I confirm that we have informed all stakeholders about the extent to which we have been able to address their concerns and, where it has not been possible to fully address their concerns, we have reminded them of the opportunity to make further comment during the public consultation process.

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

Signed ……
Forest District Manager

Signed……
Conservator

District ……

Conservancy……

Date ……

Date of Approval……

Date approval ends: ……

CSM 6 Appendix 4

FOREST ENTERPRISE - Application for Approval of Woodland Creation

1. Forest Enterprise – Property

Forest District:	Central Region (Scottish Lowlands)
Woodland or property name:	Mainshill
Nearest town, village or locality:	Douglas
OS Grid reference:	NS 8528 3212
Local Authority district/unitary Authority:	South Lanarkshire

2. Proposed areas to nearest tenth of a hectare

New Planting	75.83ha
Natural Colonisation	
Open Ground	
Total	

3. Special areas and protected land

Designation	Area Name or Number	Comments

4. Proposal details of woodland creation

Area Name or number	Gross Area (Ha)	P Year	Spp	Area (Ha)	Open Ground (Ha)	Comments
1	15.33	2020/21	SS 100%			**Restock** Conifer area
2	5.47	2020/21	SOK 60% Asp 30% Haz 10%			**Restock** Broadleaved area
3	49.6	2020/21	SS 100%			Productive conifer
4	6.6	2020/21	OMS 70% ASP&CAR 30%			Productive conifer
5	9.4	2020/21	DF 100%			Productive conifer
6a	2.16	2020/21	SY 50% NOM 50%			Productive broadleaves
6b	1.69	2020/21	ROK 60% ASP 40%			Productive broadleaves
6c	0.05	2020/21	POK 60% ASP 40%			Productive broadleaves
6d	1.03	2020/21	Blackthorn, Dog rose & Hawthorn			Native broadleaves
7	2.4	2020/21	CAR 70% Willow 30%			Wet Woodland
8	2.1	2020/21	Blackthorn, Dog rose & Hawthorn			(B7078) Hedge row/shrub planting
9	0.8	2020/21	Blackthorn, Dog rose & Hawthorn			(Void/cliff face: Safety feature) Hedge row/shrub planting
Total	96.63					

I apply for authority to create a woodland as above and as shown on the attached map.

I undertake to obtain the necessary permissions from the appropriate statutory body before commencing work under any approval which is granted.

Signed …… Signed……
Forest District Manager Conservator

District …… Conservancy……

Date ……**Approval Date**……

Date approval ends ……..

EIA Determination form if required

Complete this form to find out if you need consent, from the Forestry Commission (under the EIA Regulations 1999), to carry out your proposed work.

Section 1 Proposed work							
Please put a cross in the box to indicate the type of work you are proposing to carry out. Give the area in hectares and where appropriate the percentage of conifers and broadleaves.							
Proposed work	cross	Area in hectares	% Conifer	% broadleaves	Proposed work	cross	Area in ha
Afforestation	x	75.83	65%	10%	Forest roads	x	1.74
Deforestation					Forest quarry		
Location and District			Mainshill, Scottish Lowlands Forest District				

Please attach map(s) showing the boundary of the proposed work and also give details of the operations.

Section 2 Property details	
Property Name	Mainshill
Grid Reference (e.g. AB 123/789	NS 8528 3212
Local Authority	South Lanarkshire
Nearest Town	Douglas

Section 3 Applicant's category ***(please put a cross in one box)***			
PE Personal occupier		PU Public ownership	x
BU Business occupier		OT Other	
VO Voluntary organisation		CT Crofting tenant	

Section 4 Applicant's type ***(please put a cross in one box)***			
LS Lessee		OW Owner	x
TE Tenant		TR Trust	

Section 5 your agent or woodland manager's details								
Title	Mr	Initials	R	Surname	Clamp			
Organisation	Forest Enterprise Scotland							
Address	Five Sisters House, Five Sisters Business Park, West Calder							
				Postcode	EH55 8PN			
Tel No	0300 067 6725			Mobile	07801 213304			
Fax	-			e-mail	robert.clamp@forestry.gsi.gov.uk			
Is this the address for correspondence?				yes	x	No		

Section 6 Applicant's details								
Title	Mr	Initials	J	Surname	Hand			
Organisation	Forest Enterprise Scotland							
Address	Five Sisters House, Five Sisters Business Park, West Calder							
				Postcode	EH55 8PN			
Tel No	-			Mobile	07798844636			
Fax	-			e-mail	James.hand@forestry.gsi.gov.uk			
Is this the address for correspondence?				yes	x	No		

Section 7 Sensitive Areas: Give the area of the proposal that is covered by any of the following designations	
Sensitive Area as listed in "Schedule 2" of the 1999 EIA Regulations Area (ha)	Area in hectares
a. Sites of Special Scientific Interest (SSSI) or Proposed Sites of Special Scientific Interest (PSSSI)	N/A
b. SSSI's with a Nature Conservation Order (Section 29 of the Wildlife and Countryside Act 1981)	N/A
c. National Park (NP)	N/A
d. The Broads	N/A

e. World Heritage Site	N/A
f. Scheduled Ancient Monument (SAM)	N/A
g. an area designated as National Scenic Area	N/A
h. Area of Outstanding Natural Beauty (AONB)	N/A
i. "Natura 2000" site - *(European network of special areas of conservation and special protection areas under the Wild Birds Directive)*	N/A

Contents

Summary of Proposals

This land management plan sets out a series of proposals to be undertaken or explored by the Central Region (Scottish Lowlands) in order to achieve the objectives set out within the management brief for the proposed Mainshill woodland.

This plan sets out the creation of predominantly productive coniferous woodland, with elements of broadleaved trees throughout; which are in keeping with the surrounding landscape. Retention of features such as the large headwall, showing exposed geological strata, highlights the underground geology of the area. This is of educational interest in both the history of natural landscape, as well as to record the sites industrial period for the extraction of coal. Open water habitat, with the creation of further wetland areas, aim to enhance the biodiversity potential of the site.

1.0 Introduction

1.1 Setting & Context

Mainshill is the site of a former surface mine or open cast mine. It's northern and eastern boundaries are formed by the A70 and the B7078, beyond which lies the M74. To the west, the boundary is formed by woodland, which borders the Eggerton Burn; whilst to the south the site borders open ground into undulating moorland. Beyond the western site boundary of the open cast, there is an area of coniferous woodland that was within Scottish Coal's control, now Scottish Mining Restoration Trust (SMRT); which serves as a border into the Douglas & Angus Estate.

The village of Douglas is located 1.5km to the west, along the A70, and is within the local authority of South Lanarkshire Council (OS Grid ref: NS 8526 3208). Lying between 225m and 300m above sea level, the site covers an area of approximately 134 hectares and lies on a north facing slope looking onto the A70 & M74 towards the town of Lesmahagow.

The surrounding landscape is predominately composed of agriculture land and productive forestry, with a multiplicity of small woodland blocks and shelterbelts. Several surface mining sites surround the Mainshill site and can be easily observed on the horizon. Mainshill is currently being restored by the Scottish Mines Restoration Trust (SMRT), with the aim of restoring this site to productive woodland, as it formally was before its surface mining history.

See **Map 1 Location**

Table 1.1a-Current land useage

Land use	Area (ha)	% area
Open cast (New planting)	75.83	
Productive Forest (Restock)	20.8	
Amenity area (Open grass)	15.61	
Open water (Void & Settlement Ponds)	11.46	
Car park and Road	2.13	
Geological exposure	2.08	
Wetlands	1.74	
Footpaths	3.72	
Open ground	1.84	
Total	135.21	

1.2 History of the site

The Mainshill site was originally part of the Douglas & Angus Estate (D&A estates), of which the surrounding lands are still remain a part of. The site lies on the north-facing flank of a valley, through which the 'Douglas Water' flows and was originally comprised of a dense coniferous plantation, with improved pasture on the lower slopes.

This forest was subsequently removed for the undertaking of surface mining activities from 2009 through until 19th April 2013. Only a small proportion of the forest was retained as peripheral woodland, as well some additional planting along part of the frontage to the A70. This additional planting comprised a belt of quick growing willow species. Along with specimen deciduous trees, within the existing hedge line, which have been planted along the agricultural fields which front the A70. The purpose of this planting was to detract from the workings within the site and break up any views which looked through into the soil storage bunds; which were placed along the field boundary.

The site covers an area of approximately 136 hectares, of which only 63 hectares was planned by Scottish Coal for the extraction of coal and fireclay. The Mining operation proposed an extraction of approximately 1.7 million tonnes of coal and 160,000 tonnes of fireclay over an approximate 3½ year extraction period. The remaining area was used for the storage of soils and overburden, as well as for access and site support area, with water treatment lagoons.

Open cast mining ceased operations on 19th April 2013 as a result of financial difficulties within the Scottish Coal Co Ltd. In July 2014, The Mines Restoration Limited (MRL), a wholly owned subsidiary of The Scottish Mines Restoration Trust (SMRT) acquired the site, along with Hargreaves Services; who have been awarded a management contract for the site on behalf of MRL.

South Lanarkshire council and Forest Enterprise Scotland (FES), aim to work collaboratively with MRL/SMRT to restore the site. This restoration work will look to reform the profile of the land, along with reducing the central void, to create a sinuous natural landform which blends into the surrounding landscape. The stored soils will be re-laid to recreate suitable ground conditions, which are amenable to growth of productive trees. The aim for the site FES will be to undertake woodland creation scheme to return the site back to its former state, a productive coniferous forest. However, this site will have the added diversity of additional broadleaved species with a mixture of alternative coniferous species mixed throughout. Not to mention a variety of habitats, such as wetlands or the central open water void, which have been created as a result of the surface mining works.

2.0 Analysis of previous plan

There was no previous plan.

3.0 Background information

3.1 Physical site factors

3.1.1 Geology Soils and landform

At present the site is mainly derelict following opencast coaling and has not yet been fully restored. The site includes a large headwall with exposed geological strata, which has been identified as being of geological importance and is being considered for inclusion in the Geological Conservation Review list of important sites and may also be considered for inclusion in a geological park covering a number of sites in the region (e.g. spires-slack located at Glenbuck just outside Muirkirk). The headwall has vertical rock formations made up of many differing rock types from weak mudstones, sandstones including some shell rich, clay's and coal, as well as a number of others.

The coal measures which had been sought after during the mining operations, lye in the Passage Group, Upper Limestone Group and the Limestone Coal Group. The southern limit to the extraction area is a major fault, thought to be the Kennox Fault, which is seen at the Glentaggart site lying further to the west near Glespin. This fault results in down throwing the Carboniferous strata against volcanic rocks of Devonian age. This results in steeply dipping coal seams.

There are several separate coal group seams within the site:
- Manson and Lower Happendon;
- Gill Coal;
- Ponfeigh Gas;
- Ellenora; and
- Limestone Coal Group (Index, Gas, Wee Drum, Big Drum, Skaterig, Horn, Kirkrod, Stoney Back Robb, Fallowhill, and Coalypath).

The drift material which overlay the solid rock overburden was believed to range from 1m to 11.6 m in thickness. The soils were mainly Non Calcareous Gley's with small areas of Brown Forest Soils and iron podzol's.

The soils have been removed from most of the site as part of the opencast progression and stored ready for reinstatement. The soils will not act as natural soils when re-laid as they will have impeded drainage. Until natural drainage develops over future years (depending on quality of restoration) there is likely to be little cohesion between the soils and underlying overburden.

The drainage plan proposed for the restoration (**See Appendix IV Drainage plan),** will use a series of contour berms, to gradually take the water through the site in a series of step downs, progressively moving down through the slope gradients. Water will be channelled into two pre-existing water retention features (settlement ponds) to manage sediment run off as well as excessive water.

3.1.2 Climate

The site is mainly within the Cool Wet climatic zone, with some pockets lying within the Cool Moist zone. The accumulated temperature, (day-degrees above 5.0 C) for much of the site is 1,175, with some pockets at 1,210.

3.1.3 Exposure (DAMS)

Detailed Aspect Method Scoring (DAMS) is a measure of windiness of a site using the angle to the horizon in the eight compass points, weighted towards the prevailing wind direction. Scores range from 0-24: The higher the score the greater the exposure, with scores below 13 regarded as sheltered and above 22 as too high for commercial forestry.

Elevation & Aspect – 210 metres to 345 metres with a northerly aspect

DAMS on the site scores a 17 (16-17 = highly exposed & 18-22=severely exposed).

See **Map 3 – Climate**

3.1.3 Hydrology

The site has a one main burn (Eggerton burn) which is located on the western periphery of the site. This crosses into the site for a short distance of approximately 50 meters, located at the very tip of the southern western boundary.

Open water forms an area of 11.46ha and is mainly made up of the large open void, created from the mining works, which had been reduced from its previous extent. A further two settlement ponds are located towards the northeast and northwest corners of the site.

Ferruginous seepage has been noted as present on site; however this is entirely expected as it relates directly to the underground geology. This has been found to be entering the large water feature, which contains elevated levels of Iron and acidic pH, however as the main water body is alkaline; this is diluted and therefore mitigates the seepage.

Further to this there will be a series of seasonal wetlands, created as part of the restoration works. These will form, in most cases, a ring of reed beds surrounding the settlement ponds; as well as at strategically placed positions for the void. This will act as a filter and address any excessive flow, during periods of peak flow, and or prolonged rainfall over the winter.

The Newmains Home Farm, located at the Western Periphery, contains 11 residential properties within the overall farm complex. The estate office and various livestock and storage buildings all come under the ownership of the Douglas & Angus Estate (D&A estates), of which two are Grade B listed buildings. The Newmains home farm has historically sourced their potable water from a private spring-fed supply, which rises within the Mainshill site. However following the site development Scottish Coal were required in tandem with D&A Estates, who owned all the affected properties, to connect the seven properties, served by the Mainshill spring, to the mains water network (of which a mains water pipe runs parallel to the A70).

3.2 The existing site

3.2.1 Access

The site has been closed to the public for several years whilst opencast work was carried out and will remain closed until the reinstatement works have been completed. There are opportunities to create areas for parking and walking routes throughout the site, with viewpoints looking over the site and onto the horizon.

There is currently only one active operational site entrance into Mainshill, which is located at the North West boundary along the A70. There is also a second entrance, located on the north eastern periphery, along the B7078 minor road; approximately 200m from the A70. This entrance is currently closed off due to operational safety; however this will eventually become a second access route leading to the car parking area.

A claimed Pedestrian Right of Way passes through the western point of the acquisition area and is identified by South Lanarkshire Council reference code 129.

See **Map #4 Access/Recreation & path**

3.2.2 Potential markets

Future thinning's from within the productive conifer woodland would provide the timber trade with a green/red mix of saw-logs as well as pallet wood and small round wood and firewood. There is also potential for more niche products, to supply local hardwood saw-millers. Access for timber transportation is good with

the site located next to a major road network, the M74, which runs along the eastside of the site.

3.2.3 Pathogens

In recent years there have been well documented outbreaks of Dothistroma Needle Blight (DNB), *Phytophthora ramorum* (*P. ramorum*) and *Chalara fraxinea* which predominantly affect pine, larch and ash species respectively. As such there is a presumption against planting most pine species, larches and ash.

3.3. Landscape & Land use

3.3.1 Landscape character

Mainshill is set within an Area of Great Landscape Value (AGLV), with the 'Douglas Water' forming the main corridor network through the valley. This river connects the adjoining policy grounds and higher terrain, which flank the valley. The Douglas water is designated as a local **Site of Importance for Nature Conservation (SINC)** and is fed from the east, flowing west. The Louden Pond Nature reserve is located in the east, just north of Rigside, along the Douglas water.

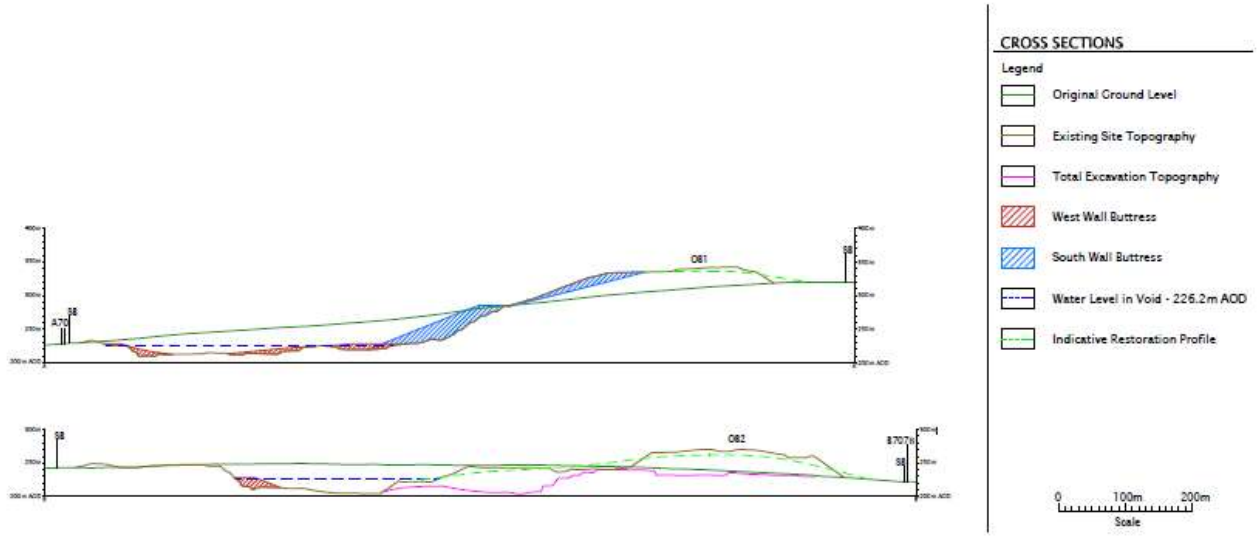
Ancient and Long Established Woodland have been found within the former site before open cast workings. The boundaries of Mainshill Wood have been a feature of the landscape since the 19th Century. There are a number of other Plantations of Ancient Woodland sites (PAWS) located along the Douglas Valley, which are located near to the site.

The remains of Douglas Castle which are located to the north of the site, close to the Douglas Water, are a Category C Listed Building. St Bride's Chapel in Douglas village is also a Scheduled Ancient Monument. A Scheduled ancient Monument (SAM) Thornil Castle, Bastle house is located to the south east, just over the M74 looking onto the rear end of Mainshill.

3.3.1 Existing Landform

N/A: Restoration works are ongoing to create a landform. Refer to indicative landform plan attached. This plan shows a comparison between the current landform (before restoration), to the substantially reduced landform which will be eventually created following a completion of the restoration works.

See **Appendix Landform map**



3.3.2 Visibility

Views into the site are mainly restricted by a screen of retained woodland, which surrounds most of the sites perimeter. However, the large soil bund at the top of the site is usually visible when viewed from a distance, which was created as part of the mining process when the ground was stripped back to the bedrock. Mining works then excavated down through the profiles into the geological horizons to reach the desired coal seams. Restoration works will aim to reduce the size of this large bund, which currently appears as a natural hill, down to a lower elevation. This will recreate the original landform and profile, which will fit into the sinuous natural landscape.

The site is visible at the medium to large scale, as it faces the North, looking onto the M74 motorway. Motorists driving south bound past junction 11 will have a view onto the site. However, with three large open cast sites in the foreground, meeting the traffic before the Mainshill site; it is easily missed. This along with the woodland screen in the foreground serves to conceal its existence quite effectively.

The site is also visible from east from the small hamlet of Uddington and Newton head; however the surrounding woodland serves again to screen out most views of the site.

Views from the west, at the local village of Douglas, are generally not possible with brown hill and Park hill obscuring most site lines in the foreground. With this the woodland at Kirkcondyke, as well as along the Eggerton burn, located along the western boundary of the site serve to obscure any sight lines into the site.

See **Map 2– Landscape considerations.**

3.3.3 Neighbouring land use

The predominant neighbouring land use is that of agricultural farmland, with a number of open cast sites, which are all in a different stages of restoration. In addition to that there are a number of mixed woodlands, with a predominantly commercial conifer forest in the surrounding landscape.

3.4 Biodiversity

3.4.1 Priority Habitat Types and Important species

The site is within the Central Southern Uplands Environmentally Sensitive Area. However, a desk based survey did not identify the site as being significant for any of the habitats within.

A further survey was undertaken by **Elliott Environmental Surveyors,** as part of the pre restoration operation, which identified the potential for breeding birds such as the Peregrine Falcon, which has been observed nesting in previous years; however was not successful in 2018. A potential otter Holt was highlighted, present in the west periphery of the site near the Eggerton burn; however it was identified as appearing to be used by another mammal currently. Otter spraint and potential prints have been recorded around the lagoons to the north west of the site. A number of bat boxes present within periphery trees along the site boundaries were found to contain two male and one female soprano pipistrelle as recorded in a recent survey.

3.4.2 Invasive Non-Native Species

Grey squirrel (*Sciurus carolinensis*)- As a woodland which is yet to be established there aren't currently any grey squirrel within the management area. However due to the significant surrounding woodland cover it is expected that grey squirrel will seek to occupy the site in the future

3.5 Heritage

Following FES Historic Environment Planning Guidance, this Land Management Plan amendment describes and considers the conservation and management of the historic environment.

A desk-based and a basic walkover archaeological survey were undertaken and didn't identify any significant archaeological features. The following items have been discovered;

- Mainshill Wood - Ditch (Period Unassigned) (Possible),
- Pit(S) (Period Unassigned),
- Organic Material (Bone),
- Unidentified Pottery (Neolithic), Unidentified Pottery(S) (Medieval).

No further archaeological surveys are necessary (as per the UKFS Forests and historic environment guidance (2011) - Guidance note for FD Environment Leads and Planners) as the site has been previously improved with the same land use for well over a century.

3.6 Community & Recreation

3.6.1 Community

The site is situated close to two communities, Douglas in the west and Rigside in the east, with local primary schools at both; but no secondary schools in the nearby vicinity. There are several active local community groups and community councils for the area.

The village of Doulgas, with a population of roughly 1,620 falls within 1km of the site and will be the main interest group wanting to use site. Although Rigside which is a slightly smaller village, of around 800 people, is likely to draw interest being located only 1.6km from the site.

The nearest town is called Lesmahagow, with a population of a 3,675 people. It is located to the north and roughly 7km away from the site. It is likely to be a draw for the local secondary schools; which serve all the local villages (e.g. Douglas & Rigsde).

3.6.2 Recreation

A right of way leads along the western boundary of the Mainshill site, cutting slightly into the south western tip. This route has little to no use currently, given the site history and exclusion, due to industrial workings. However this is expected to increase once the site has been restored, with improved access and facilities on site; as well as a future car park. This will allow for members of the public to visit the site, using it as a destination or a starting point to walk further afield, along the right of way to Maidengill hill, located just over the M74.

A National Cycle Network Route (SUSTRANS Route 74) runs on a north–south alignment, close to the site's eastern boundary. This route currently stops by Junction of the M74, though there is a proposition by SUSTRANS and South Lanarkshire Council to extend it northwards.

No formal open spaces, community woodlands or country parks fall within the site.

4.0 Analysis and Concept

Using survey work and research, a broad range of factors were acknowledged and considered to recognise the site's key features (see **Map 5 – Survey & Key Features**) which, informed by the objectives set out in the management plan brief (**see Appendix I**) were used to identify the opportunities and constraints which exist within the management plan area and from there develop an initial concept (see **Table 2 - Analysis and Initial Concept Development** below). This initial concept was then used to produce a concept map (see **Map 4b - Concept**) which summarised the initial main aspirations and intentions for the management plan. This management concept will form the main basis for the public consultations.

Table 2

Strategic priority	Survey	Opportunities	Constraints	Concepts
Accessible				
	The PROW	There is an opportunity to link into or realign the right of way, with the Mainshill site and beyond. This would enable an improved visitor experience through the envisaged woodland on more suitable terrain.	Potential opposition from those who might prefer to retain the exiting route. Potential opposition from the local area access officer.	A link to the existing Right of Way from the Mainshill site will allow MOP to follow a new extended route as part of the wider woodland design. The network of rides will still allow users of the ROW to travel from Douglas into the woodland but also provide the visitor with a variety of alternative circular paths within the site to enjoy.
	Walkway from Douglas to Mainshill **Options:** 1.A walkway along the A70 verge. 2.A cross country walkway through the D&A Estate, through into Mainshill.	There is an opportunity for the community to create a walkway from the village of Douglas to the Mainshill site. This would follow along the roadside. There is also an option to link a route from Rigside to the ROW as well as the National Cycle Network Route (SUSTRANS Route 74), to connect into the Mainhill site.	The Douglas route would require funding for the works, as well as permission from the local council to create this route along the road verge.	There is limited access for people to reach the Mainshill site along the A70, which is a busy road. A path way for approximately 1km would provide a safe link to the site for the community in Douglas, without having to take a car. Another option would be create a

				walkway from Douglas village through the Douglas and Angus Estate (with their agreement), to further connect into the Mainshill site.
Cared for				
	OHPL & UG powerline	The unplanted safety buffers along utilities could provide opportunities for views into, within and out-with the woodland through the creation of open space.		Appropriate buffers to protect utilities will be established and these will be designed to maintain views into, within and out with the site and also judiciously lined with low growing shrub species to soften hard crop edges.
	The surrounding landscape is a matrix of agricultural land and productive conifer/mixed woodland.	The planting design should mirror the surrounding landscape and create diverse woodland. A policy area could be created towards the western boundary in later periods with the introduction of additional species.	Transforming the site from a heavily restricted/ industrial site to diverse woodland with access opportunities for the local community. It is foreseen that this will have many positive responses for the local community. Any change in the landscape can result in some opposition; however it is presumed that returning this site back to its once former state as woodland cover, state the general consensus will be agreement.	In order to maintain an element of continuity with the surrounding landscape an area of mixed woodland will be created to the west of the site providing some symmetry to the Douglas and Angus Estate as well as the woodland across the valley.
Productive /accessible				
	There are two main access points to the site. The main entrance will be at the north west along the A70, with a minor access point to the north east just off the B7078.	A new road to the site from the B7078 to the south could provide a more suitable route to access the crop across the site for forest operations and timber haulage purposes in the future. A new road could also help		The design of the new woodland will incorporate a series of forest rides carefully chosen to, in the short-term; provide an excellent network of informal recreational access some of which may be upgraded over time but also to

		facilitate connectivity between either ends of the site.		allow for a suitable route for a forest road for operational access in future. The berm infrastructure which will form part of the sites drainage plan could be used as additional recreation routes and or access for maintenance in the future.
Productive/Healthy				
	The original soils were mainly Non Calcareous Gley's with small areas of Brown Forest Soils and iron podzol's. The soils have been removed from most of the site as part of the opencast progression and stored ready for reinstatement. The soils will therefore not act as natural soils when re-laid as they will have impeded drainage. Until natural drainage develops over future years (depending on quality of restoration) there is likely to be little cohesion between the soils and underlying overburden.	The exposed nature of the site lends itself to a select number of coniferous species. However, this allows the opportunity to design the planting areas in a way that maximize the ascetics of the site, which more attractive species of conifer being focused at the entrance and recreational routes and the more common 'bread & butter' conifer blocks to be located at the peripheries.	The site is suitable for productive commercial conifer, of which is in keeping with the surrounding landscape character. However, elements of hardwood species have been incorporated into the design to soften the site visually as well as target it in areas where they are adjacent to existing retained hardwood woodland in the lower slopes. To establish broadleaves and softer conifer species protection from browsing will be necessary either from deer fencing or protective tubes.	Site conditions are suitable to allow a significant proportion of productive conifers to be planted within the site as well as a component of hardwood species. Various species are site suited, so the most appropriate species will be used to develop and crop which will be productive, healthy and adapted to predicted climate change. The crop will likely require appropriate protection from browsing damage.
Treasured/Heritage				
	Cliff exposure: Views of Geological strata BGS & education	A potential walk way to view across the void and or along the bottom of the cliff will allow view point of the exposure as well as for educational visits and further investigation from the BGS.	The safety for members of the public using the site is critical. Therefore the recreational pathways will be designed to take people along routes limiting danger.	Appropriate buffers to protect MOP will be established and these will be designed to maintain views of the void. Low growing prickly shrub species will be used to prevent MOP gaining access to the cliff edge.

5.0 Land Management Plan Proposals

The proposals detailed below describe the rational and methodologies to be employed in order to achieve the objectives set out in Appendix I LMP Brief. Some of what is proposed for Mainshill will be dependent on various factors such as the availability of suitable funding, consultation with neighbours/community etc. Such proposals constitute possible future projects for FES to be delivered in partnership/agreement with others.

The proposals for this site have been produced based on sound silvicultural and environmental principles and follow the requirements, guidelines and recommendations set out within the UK Forestry Standard, the UK Woodland Assurance Scheme, FC Bulletin 124 Ecological Site Classification for Forestry and FC Bulletin 62 Silviculture of Broadleaved Woodland, FC Bulletin 115 Alternative Silvicultural Systems and the current FC edition of Forest and Water Guidelines.

5.1 Woodland creation

The proposed woodland will function to produce productive conifer and hardwood timber and provide general amenity and biodiversity value. It is the intention to manage the woodland sensitively to all these aspects.

5.1.1 Planting prescriptions

The proposed woodland will be made up of distinct woodland categories:

- Productive Conifer
- Productive Mixed conifer and broadleaves
- Productive Mixed broadleaves and low growing woody shrubs
- Native wet woodland

The indicative species, areas, densities and spacing for each category are listed in the following sub-sections (see **Map 7 – Planting Design & Species**).

5.1.1.1 Productive Conifer

Map reference	Species	Density (Stems/ha)	Spacing (m)	Area (Ha)
1.Restock (Option to use Norway spruce in place of Sitka spruce for higher elevations).	Sitka spruce (SS) & Lodgepole pine as a nurse (ALP) or Common alder (CAR)	2,500 2:1 Mix	2.0 x 2.0	15.3
3.New planting (Option to use Norway spruce in	Sitka spruce (SS) & Lodgepole pine	2,500 2:1 Nurse	2.0 x 2.0	49.6

place of Sitka spruce for higher elevations).	as a nurse (ALP) or Common alder (CAR)	Mix		
5. New planting	Douglas fir & Common alder (CAR) as a nurse mix, with Western Red Cedar (WRC) in the lower slopes (5-10%)	2,500 2:1 Nurse Mix	2.0 x 2.0	9.4
			Total	74.3

This plan will create 74.3Ha of conifer woodland which will enhance important visual diversity within the crop and complement the surrounding woodland character. Although Sitka spruce is noted as the dominant species, there is an option to use Norway spruce in the higher elevations which may be better suited to the exposure as can be found in the mainland continent (dependant on the provenance sourced).

5.1.1.2 Productive Mixed conifer & Broadleaves

Map reference	Species	Density (Stems/ha)	Spacing (m)	Area (Ha)
4.New planting	Serbian spruce (OMS) (70%) & Common alder (CAR)/Aspen (ASP) (30%)	2500	2.0 x 2.0	6.6
			Total	6.6

This plan will create 6.6Ha of mixed conifer & broadleaved woodland. The Serbian spruce will create a structural and aesthetic pleasing shape, which will allow for transition from the broadleaved component below, just above the void, into the predominance of productive coniferous woodland above. Serbian spruce forms a compact crown like the true firs and therefore allows some scope to introduce further species. There is an option to introduce Western red cedar, noble fir once the initial planting has been established, as this will provide shelter for shade tolerant species; which generally suffer from exposure in early

establishment as they naturally regenerate under the canopy cover in their native environment.

5.1.1.3 Productive Mixed broadleaves & shrubs

Map reference	Species	Density (Stems /ha)	Spacing (m)	Area (Ha)
2b. Restock	Oak (60%) in groups of 25-36 trees, with a matrix of Aspen (30%). Hazel (HAZ) (10%)	3300	1.7 x 1.7	5.47
6a. New Planting	Norway maple (100%)	3300	1.7 x 1.7	2.16
6b. New Planting	Red oak (60%) groups of 25-36 trees, with a matrix of Aspen (40%)	3300	1.7 x 1.7	1.69
6c. New Planting	Oak (60%) in groups of 25-36 trees, with a matrix of Aspen (40%)	3300	1.7 x 1.7	1.03
6d. New Planting	Hawthorn & Black thorn (50%/50%)	500	5 x 5	0.05
8. New planting (B7078)	Dog rose & Blackthorn (50%/50%)	1100	3.0 x 3.0	2.1
9. New planting (Void)	Dog rose & Blackthorn (50%/50%)	1100	3.0 x 3.0	0.8
			Total	13.3

Productive broadleaves will be planted at higher density stocking, with oak being clumped into a group planting of 25-34 trees, with a matrix of aspen. The sycamore and Norway maple will form pure crops. A small quantity of wild cherry will be planted at a low density, near the car park area, to allow for future management through pruning, as well as to improve the aesthetics. The hill front located near the site entrance and car park area will have a planting of red oak in groups with a matrix of aspen, which will create a visually appealing entrance and will link to the plantings to the north of the boundary wall.

Hedge B7078: Planting areas should allow suitable gaps between groups in order to facilitate any future management that may be required. Once established, the woody shrub species will be observed annually during the growing season and should any particular shrubs become overgrown or too tall an appropriate management regime will be created and implemented.

Hedge Void: The creation of a hedgerow that flanks the void cliff face, located on the west flank, will function primarily as a natural safety feature consisting of prickly species. This will deter members of the public, much better than a fence, from wanting to walk through a barrier toward the cliff edge. This hedge will have a defined trimming regime every 2 or 3 years, helping to shape the path edge and ensure the path routes create the best conditions for the hedge, to provide a wider important feature of habitat creation for wildlife (birds & insects). Cutting should be between January – February before the bird breeding season and allowing wildlife to take advantage of the autumnal berries.

5.1.1.4 Native Wet woodland

Map reference	Species	Density (Stems/ha)	Spacing (m)	Area (Ha)
7	Common Alder (CAR) (70%) & Goat willow (30%)	1100	3.0 x 3.0	2.4
			Total	2.4

Areas of native wet woodland once established will have minimal management intervention other than for any tree safety issues that may arise. Natural processes should be allowed to shape these stands enhancing biodiversity.

Planting of the wetter hollows which are prone to waterlogging will improve the biodiversity and the forest habitat connectivity of the site into the larger water bodies or seasonal wetlands with reed beds.

5.1.2 Ground preparation

The open cast restoration works will involve a cultivation of the hard rock overburden, prior to replacing the soil cover from the storage bund. Hard rock opencast overburden consists of a random mixture of crushed and broken rock fragments, of assorted stone lithology.

Placement of the soil cover will involve a method of loose tipping, using soil-forming material (sand and gravel) which has been excavated from storage mounds on site, placed over the cultivated overburden. The lower layer of soil-forming material will be approximately 500 mm in thickness.

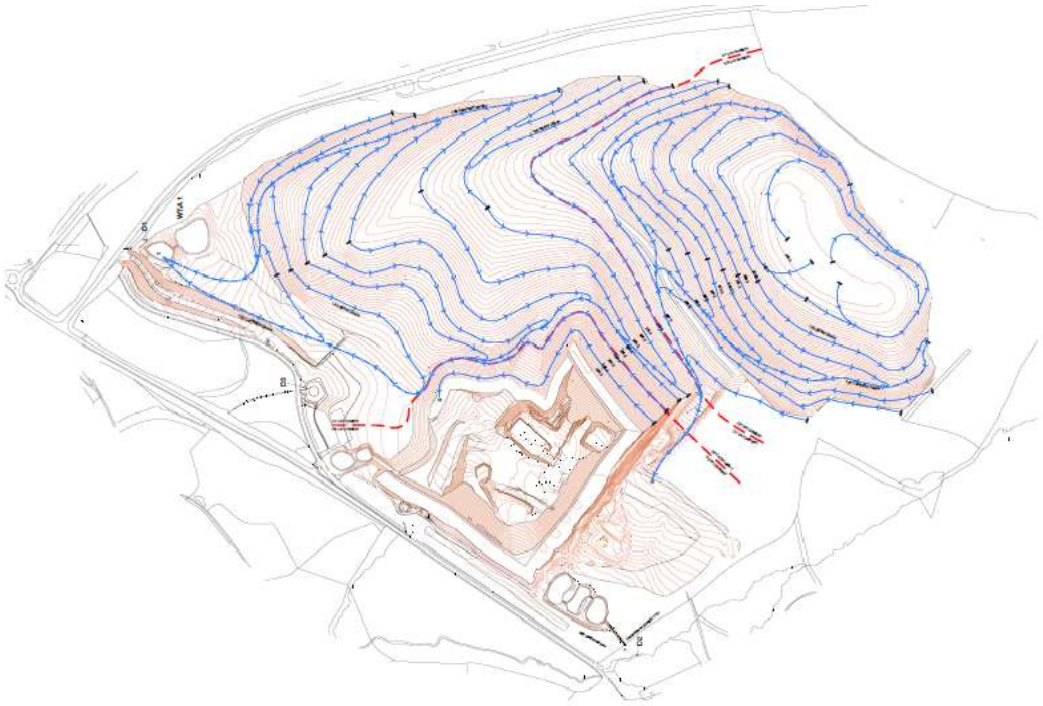
To create a suitable soil structure for tree growth an excavator mounted fork will incorporate opencast overburden into soil-forming material, to produce a composite with an approximate ratio of one part overburden to two parts soil-forming material. The opencast overburden will be incorporated into the soil-forming material using a long carriage tracked excavator fitted with a stone fork attachment. This will be carried out by excavation to 750 mm below the top of the soil-forming material into the cultivated overburden and overturning of the two layers. The thickness of the composite later on completion will be approximately be 750 mm.

A final loose tipping of topsoil, over the composite overburden / soil-forming material, will create a thickness covering of approximately 250 mm.

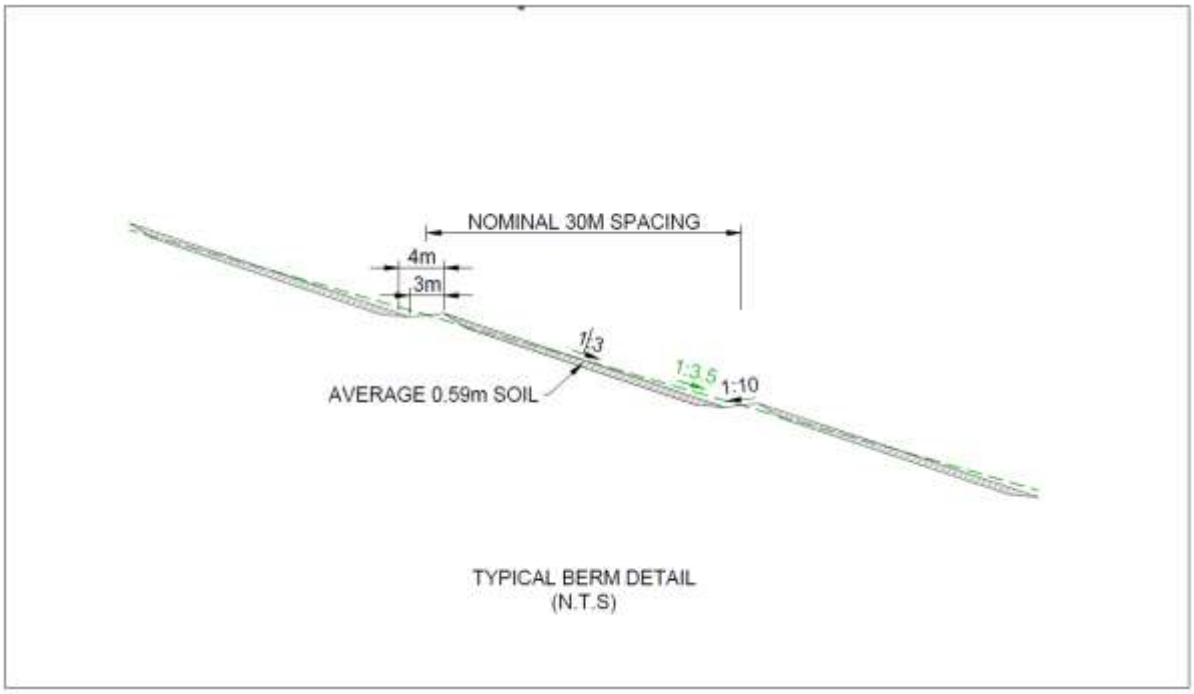
5.1.2.1 Drainage:

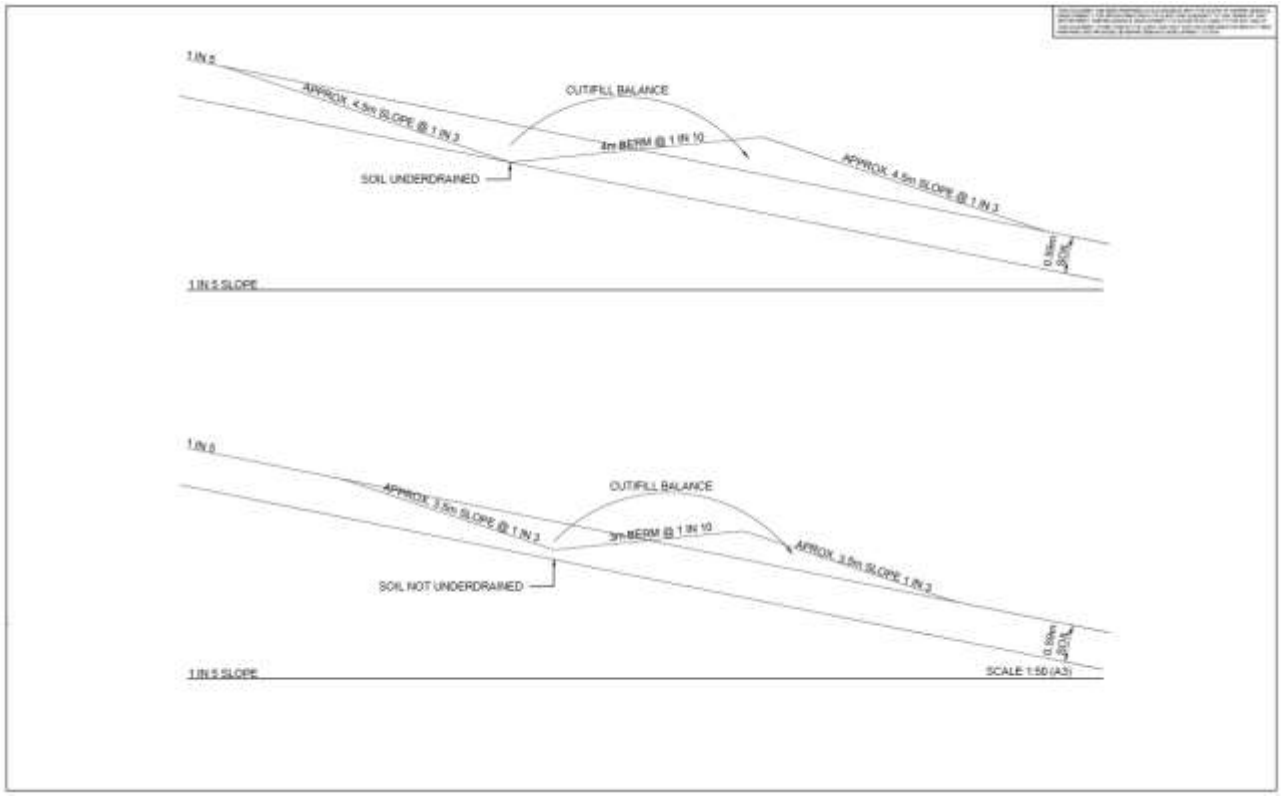
The objective of the drainage system is to convey surface water runoff from the hill slopes to the discharge points as economically as possible. Whilst minimising the potential for erosion and the need for further mitigation. A grass sward will be established following the restoration works, which will help to mitigate against an initial increase in erosion and help stabilise the soil until further forest planting takes place.

Contour berms will be employed in accordance the current edition of the Forests and Water Guidelines, no drainage methods are anticipated in areas of native wet woodland as species will be matched to site type.



See **Appendix-Drainage plan for full size map.**





Example cross-sectional views of the contour berms, which will form the water management systems, as well as potential options for future access to assist in deer management, maintenance and public access.

5.1.3 Protection from browsing

It is expected that once the restoration works have concluded on site there will be a vacuum effect created, which will draw the roe deer population in from the surrounding land. In order, therefore, to protect the establishing trees it is expected that the crop will need to be fenced to exclude deer and/or protected with tree guards (for the broadleaved species only). In addition, with a disturbance of the soil surface and retention of seed bed it is likely that there will be heavy weed competition; given there will be no control on the vegetation from grazing livestock. This will provide cover for voles, of which the population will be expected to increase and therefore vole guards may be required to further protect the seedlings.

5.1.4 Landscape

The planting design and proposed species have been suggested in **Map #6- Planting Design & Species**.

The design has been thoughtful to:

- Emphasize, subtly, the local topography features. The landform design will re-instate the original slope to compliment the surround landownerships and blend into landscape.
- Conserve the perceived scale of the dramatic cliff feature, located within the void.
- Promote visual diversity with a variety of coniferous species as well as broadleaves interspersed within the site as well as mixed conifers, which will reflect the local topography and surrounding character.
- Retain suitable areas of open space for added visual diversity and to maximise the opportunities for views from access routes.

5.2 Woodland Management

The management of the 4 distinct woodland categories will have their own distinct management prescriptions.

5.2.1 Productive Conifer

The conifer element of the wood will be managed to produce quality timber and will be thinned at appropriate intervals, to be determined in future plans, to improve the crop stability and facilitate future natural regeneration in these areas.

Conifers will be planted at an initial density of 2,700 stems/ha, with the intention of achieving a final density of 2,500 stems/ha at year five (where the objective is sawlogs) or a reduced year five target where the objective is small Roundwood or chip/pulp (2,250 stems/ha)

There is potential to create a small element of niche products, which have a high economic return. These could be obtained from the alternative conifers such as the Douglas-fir, Western red cedar and Serbian spruce. Although a small component of the woodland this diversity will help encourage biodiversity as well as mitigate against future risks in terms of climate and pest/diseases.

5.2.2 Productive Mixed conifer & broadleaves

The conifer element of the wood will be managed to produce quality timber and will be thinned at appropriate intervals, to be determined in future plans, to improve the crop and facilitate future natural regeneration in these areas. Hardwood species may be gradually removed for firewood during thinning regimes.

5.2.3 Productive Mixed broadleaves & shrubs

Table# -Suggested targets for specific species

Species	Objective
Oak (Sessile, Pedunculate, Red)	Produce quality timber with 6-8m clean bole and 60-70cm dbh
Sycamore & Norway maple	Produce quality timber with 8m clean bole and 80cm dbh
Aspen	Produce quality timber with 6m clean bole and 40cm dbh
Wild cherry	Produce quality timber with 8m clean bole and

These objectives above are only suggestions at this stage as more precise goals cannot be determined until the crop has developed. As the various species approach their first thinnings a determination should be made on whether to delay thinnings to achieve greater clean bole length and what the target final girth (diameter at breast height, DBH) should be.

To achieve these aims various interventions will be necessary during the rotation of each species such as leader forming, pruning, re-spacing and thinning. The establishment prescriptions such as densities and spacing have been suggested in order to encourage good vigour, form and self-pruning where applicable to facilitate the trees achieving their intended objectives.

It is suggested that these stands will be suitable for Alternative to Clearfell (ATC) systems of management such as Continuous Cover Forestry (CCF) and/or Low Impact Silvicultural Systems (LISS). A decision on future silvicultural systems will be made in future management plans however it is recommended that for the more light demanding species such as oak, alder, birch, aspen and wild

cherry a seed tree or group system may be appropriate with a group system also appropriate for the sycamore.

Areas of mixed broadleaved trees once established could potentially have an element of minimal management intervention, allowing natural processes to shape and enhancing biodiversity. There is also the option and potential to manage some areas productively for the creation of hardwood timber as well as firewood.

The woody shrubs along the cliff face will have a dual function. Firstly and foremost as a natural safety barrier, to prevent members of the public from unintentionally walking toward or over the cliff edge. Planting of a hedge of prickly species (Blackthorn, dog rose and Hawthorn) will act as a natural barrier, which are less likely to be vandalised, or remove from site. Whilst, as a secondary motive, the hedge will create a natural habitat for biodiversity; improving the retention of bird and insect species throughout the year.

5.2.4 Wet woodland

Areas of native wet woodland once established will have minimal management intervention other than for any tree safety issues that may arise. Natural processes should be allowed to shape these stands enhancing biodiversity.

5.2.5 Open land

This will consist of designed gaps between planting to retain important views and facilitate recreational access through the site. The walking routes through the site will also form part of the open ground. The recreation routes and suitable desire lines/rides should be mown to encourage and promote recreational use.

The small areas of seasonal wetland, to be created, will be planted with mainly reeds spp. but will be left as open ground. However, these areas will not be formally managed, but will be left to develop and overtime.

5.2.6 Hydrology

Operations and planting on the site will adhere to the guidance in the latest version of the Forest and Water Guidelines. The ground preparation described in section 5.1.2 should ameliorate the potential effects of run off and, the sown grass sward will also reduce run off. Until eventually the establishing tree canopies and rooting systems increase interception of rainfall, increase soil stability, improve soil permeability and ultimately reduce the effects of flash flooding using natural flood alleviation.

The areas SEPA's flood map identifies the site as of low flood risk from surface water, with flood risk areas only associated within the river 'Doulgas water', located lower in

the valley. The native wet woodland which will be planted, in and around the site, as well as the surrounding afforestation should cumulatively help to reduce any effects of surface run off on site and increase water uptake from the soil. In addition to the natural flood alleviation benefits of the planted areas, 5 metre buffers will be applied to the burns within the site within which no planting will take place; this will allow the potential for future meandering of burns reducing flow rate at peak times. Similarly there may also be future potential to create leaky woody debris dams at appropriate points to reduce flows.

5.3 Biodiversity

5.3.1 Important Species

Breeding birds

A Peregrine Falcon has been observed in the area and the retained headwall of the cliff exposure is expected to be of interest to it in the near future. Therefore working methods and buffer zones will be adopted prior to the next nesting season, to ensure that actions taken on site do not disturb nesting peregrine, or damage a nesting place.

Agreement with SNH will be required. Therefore it is recommended that monitoring of peregrines should take place from mid-February until September each year.

Otter

There is a potential otter Holt, present in the west periphery of the site near the Eggerton burn, however it appears to be used by another mammal currently. Otter spraint and potential prints have been recorded around the lagoons to the north west of the site. It is recommended that further survey works and monitoring should

continue on this watercourse and in the lagoons area as well as any other waterbodies across and around site.

If a Holt is identified on site in the future, then the appropriate mitigation through buffer zones will be implementing for periods when it is active. A license will be requested from SNH further if required during works.

Bats

There are a number of bat boxes present within periphery trees along the site boundaries. Two male and one female soprano pipistrelle where recorded in a recent survey. If trees within the existing woodland are required for removal, relating to tree safety and or to facilitate future works, such as with restoration of the wall and or car park creation or drainage. Then a license for disturbance may be required, which will be requested from SNH.

5.3.2 Invasive Non-Native Species

Below is the methodology to be employed for the Invasive Non-Native Species (INNS), which is likely to move into our management area in accordance with the District Invasive Non-Native Species Plan 2014-2019.

Grey squirrel (*Sciurus carolinensis*) – Red squirrel (*Sciurus vulgaris*) are found within this area. However, there is not a driver for controlling them given that red squirrels have not been noted as present and or indicated as having a presence in the future through migration.

In addition; as the woodland has a small element of managing for productive broadleaves, damage to the future crop is a possibility. Susceptible species such as oak and aspen will be monitored for squirrel damage and should damage be observed appropriate, control may be required.

5.3.3 Wetlands

Wetland habitat will be created as part of the restoration process. This will be centred on the void area, as a well as the existing sediment ponds and any further water retention features. Native species of reed will be planted to enhance this new habitat, as well as to reduce erosion & peak water flows into the larger water bodies. It is anticipated that this will develop further in time naturally.

5.3.3 Wildlife Management

As there is no woodland to protect as of yet (due to restoration works), there has been no need to manage the site for deer. As suggested previously, to protect

the establishing crop, fencing and/or tree guarding are most likely to be the methodologies employed. Once the crop has established and fencing/tree guards are removed future plans will detail the deer management prescription for the site.

Further details on our deer management can be found within the Central region Deer Management Strategy.

5.4 Heritage

In general, all significant archaeological sites will be protected and managed following Forests and historic environment guidelines (2011), the FCS policy document: Scotland's Woodlands and the Historic Environment (2008) and the supporting FES Historic Environment Planning Guidelines (available from the FCS Archaeologist). Access roads and fence lines will be surveyed by Forest District staff prior to any work being undertaken in order to ensure that upstanding historic environment features can be marked and avoided. At planting, work prescriptions protect relevant historic environment features apportioning appropriate buffers clear from ground disturbing operations and planting. Opportunities to enhance the setting of important sites are considered on a case-by-case basis (such as the views to and from a significant designated site).

5.4.1 Geology (BGS)

The British Geological Society has shown keen interest in the headwall of the void, which exposes geological strata, identified as being of geological importance. It is being considered for inclusion in the Geological Conservation Review list of important sites and the site may be considered for inclusion in a geological park covering a number of sites in the region; of which Spireslack at Glenbuck forms the main attraction.

The headwall has vertical rock formations made up of many differing rock types from weak mudstones, sandstones including some shell rich, clay's and coal as well as a number of others. The coal measures which had been sought after during the mining operations, lye in the Passage Group, Upper Limestone Group and the Limestone Coal Group. The southern limit to the extraction area is a major fault, thought to be the Kennox Fault, which is seen at the Glentaggart site lying further to the west near Glespin. This fault results in down throwing the Carboniferous strata against volcanic rocks of Devonian age. This results in steeply dipping coal seams.

The restoration works may create a walkway along the bottom of the cliff headwall, to allow for research and educational access during geological trips or school visits. It is likely that a gate with safety signage in combination with a hedge may need undertaking to limit or restrict access for safety purposes. This would be primarily to

ensure that members of the public are aware of the dangers of loose rock fall from the cliff exposure.

5.5 Community & Recreation

FES district staff will liaise with the local community to promote and encourage use of the wood and Community Rangers will continue to seek opportunities to develop new and forge existing links with schools, community and user groups to increase awareness and enjoyment of the site.

5.5.1 Community & Recreation

Our visitor teams will work to establish new, and forge existing, relations with various user groups e.g. wildlife, rambling, mountain biking, school and nursery groups etc. to encourage use of the site. We are also open to ideas from the community or particular user groups with suggestions to improve the site as it develops. We will also explore with South Lanarkshire Council the potential to provide a community growing area within the site. In addition to the aesthetic enhancement of the site, planting the site will provide opportunity for educational and health benefit. It is hoped that nursery and school groups might use the site as outdoor learning space and to learn about nature. The planting of species which produce edible berries or seeds which can be picked by the visitors it is hoped will provide further community benefit. Coppicing of species e.g. willow, hazel may also provide educational benefit to demonstrate weaving or fencing.

5.5.2 Recreation

As well as the existing right of way the planting design will incorporate rides (spaces between planted areas) which will provide opportunity for visitors to take alternative routes through the site allowing for extended walks and circular routes. Initially suitable rides will be subject to a mowing regime of several cuts each growing season providing improved walking conditions. It is also envisaged that in future, various mown paths may warrant being surfaced potentially with woodland furniture e.g. benches, picnic tables. This will be dependent on use of the site, funding and liaison with the community. It is intended that the indicative ride network provides links to the wider PROW facilitating enhanced connectivity between Douglas and also to provide future opportunity to link more widely to the east e.g. along the PROW to Maidengill hill, located just over the M74.

FES district staff will liaise with the local community to promote and encourage use of the wood and Community Rangers will continue to seek opportunities to develop new and forge existing links with schools, community and user groups to increase awareness and enjoyment of the site.

5.6 Access

5.6.1 Visitor

Visitor access to the site has been excluded since the start of the open cast mining. Therefore it is anticipated that there will be great interest from the local community at nearby Douglas, Rigside & Lesmahagow; as well as from people further afield.

The main site access in the North West, just off the A70, will form the primary access for people visiting the site initially. The east access, just off the B7078 will be developed further to connect to the car park.

It is in envisaged that further future entrances to the wood will be created to facilitate both improved ease of access and enhance the initial experience the visitor has to the site. There are plans to provide visitor parking for the site, as it is not easily accessible along the A70. As mentioned previously access will be provided initially via existing tracks or mown woodland rides but it is hoped that in future these may be upgraded to more formal paths. The public right of way will remain in its current route with additional links to the site to suggest alternative routes; which may develop over time (see **Map 4 – Access & recreation**).

A potential future pathway could be developed to connect the Mainshill site to the village of Douglas, for local walkers. This would need to follow along either the A 70 roadway or cross country through the Douglas and Angus estate, which would be a safer route.

5.6.2 Management

At present the main site access from the A70 will be suitable for the initial period of establishment. During this time there will be limited traffic accessing the site for the purposes of preparing the ground, securing the site (e.g. fencing) and planting trees. Following a successful completion of the restoration it would be expected that machinery no larger than a tractor along with occasional with HGV, to delivery materials will be used. For future management the site will ideally use the east access from the B7078 public road. Appropriate infrastructure such as a car parking area, along with a locked barrier gates, will be required for installation on site to ensure that the site is protected against the potential for anti-social access e.g. quad and dirt bikes. Further to this there will be regular visits by operations and communities' staff should reduce the potential attraction for such pursuits.

Appendix I: LMP Brief

Appendix II: Tolerance table

Appendix III: Maps

The table below lists the maps which support and form part of this Land Management Plan.

1 – Location
2 – Context & Landscape features
3 – Climate Zone map
4 – Access & recreation
5 –Survey & Key features
6 –Concept map
7 –Planting design

Appendix IV: Drainage plan

Appendix V: Landscape cross-sections

Appendix VI: Land management Plan Consultation Record