

Appendices

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Appendix I: Consultation Record

Consultee	Date contacted	Date response received	Consultee Comment	Forest District Response
West Lothian Biodiversity	21/09/2017		No response received	
West Lothian Planning	21/09/2017		No response received	
West Lothian Access	21/09/2017		No response received	
Landscape and Access South Lanarkshire Council	21/09/2017		No response received	
Countryside & Greenspace South Lanarkshire Council	21/09/2017		No response received	
Planning & Building Standards South Lanarkshire Council	21/09/2017	16/10/2017	<p>West Forth Immediately to the north of this woodland is allocated as a housing allocation, albeit it has stalled and there is no indication of an imminent site start however it would be worth considering how connections from any housing and the village to woodland could be achieved if developed at a future date. Supportive of the mix of species and more natural shapes for the future species of the woodland.</p> <p>Kingshill All relevant planning designations are marked on the map. Supportive of the mix of species for the future species of the woodland, and the opening up of burns and gullies and views to a</p>	<p>SLFD are aware of this area being zoned for housing however no specific development is being progressed. There is an existing footpath within the site near the border between the two sites which could easily be connected to if, when and where appropriate.</p> <p>Noted</p> <p>Noted</p>

			<p>historic/derelict farmstead.</p> <p>Woodmuir Out with SLC boundary</p> <p>Heathland All relevant planning designations are marked on the map. Supportive of the mix of species for the future species of the woodland.</p> <p>The Mosses All relevant planning designations are marked on the map, in addition there is a Gas Pipe running through between the 2 woodlands. Supportive of the planting of a broadleaf moorland.</p>	<p>Noted</p> <p>Noted</p> <p>SLFD are aware of the gas pipe and this is recorded on our utilities database and would be flagged on constraints maps for future restocking, felling in the area.</p>
Planning North Lanarkshire Council	21/09/2017		No response received	
Greenspace Development Service North Lanarkshire Council	21/09/2017		No response received	
Historic Environment Scotland	21/09/2017	19/10/2017	<p>The work that has been carried out at Wilsontown ironworks (Heathland), Couthally Castle (The Mosses) and Woodmuir Farm (Woodmuir) during the previous Forest Design Plan has greatly benefited the preservation of these scheduled monuments. In particular, ongoing work at Wilsontown and Couthally has vastly improved the setting of those monuments and access to them.</p> <p>The aspiration in the draft Plan to continue the present management</p>	Noted

			regimes at these scheduled monuments will maintain these benefits. We greatly welcome these measures and strongly support this aspect of the Plan	
RSPB	21/09/2017		We broadly support the measures being proposed. For future management at The Mosses', we would wish to see all forestry removed from Woodend Moss and it be identified as a priority for peatland restoration.	This remains the plan for Woodend Moss which has previously been approved by way on amendment to the exiting FDP.
SNH	21/09/2017		We can confirm that no designated sites are likely to be affected by these proposals and we do not intend to offer formal comment on this plan as a result.	Noted
WOSAS	21/09/2017	31/10/2017	Dear Sir or Madam, I'm emailing in relation to the above forest design plan, which was sent through to us by post on the 21st of September. The covering letter requested comments by the 19th of October; obviously, this deadline has already passed, but I thought it was worth contacting you as the various forest plan documents appear to under-represent the number and range of archaeological features recorded from within the various forestry blocks. In terms of the Heathland block, for example, section 3.5.1 of the forest plan	With regards the comment on the under representation of the number and range of archaeological features recorded from within the various forestry blocks; the district do maintain extensive records within our heritage database. Important historic environment features are surveyed, recorded, mapped and monitored by the forest district to ensure and demonstrate Forestry Commission Scotland compliance with the UK Forestry Standard. This ensures that undiscovered historic environment features are mapped and recorded prior to forestry management operations and ensures the continued comprehensive protection of the known archaeological resource. In the case of this plan area,

		<p>document identifies the presence of the Wilsontown Ironworks scheduled monument, while section 3.5.2 notes that the district have used aerial photography to identify several bell pits out with the scheduled area, and that the Thirlstane cairn feature was subject to a community excavation in 2015; however, the HER database records over 30 sites from within the forest block, covering a range of different periods. Similarly, section 3.5.1 states that the district removed trees from the Woodmuir Coke Ovens when these were scheduled, but the document does not appear to consider the large number of unscheduled sites that have also been recorded from within the forest as a whole. This is also an issue in terms of the Kingshill and West Forth plantations, where the forest plan generally appears to under-represent the full range of archaeological material present within the various forest blocks.</p> <p>This would be a problem in terms of measures to protect features of the historic environment, as set out in sections 5.5.1 and 5.5.2. With particular reference to the protection of unscheduled</p>	<p>whilst not identifying what each feature is, the Key Features Opportunities and Constraints Maps (4a (i-v)) show the various heritage feature locations within each block. The reason the plan doesn't expand much on each of these is due to the high number of features within the plan area and that most of them are unscheduled and generally already afforested. For this reason Section 3.5 of the plan only touches on those features which had been subject to any intervention during the previous plan period.</p> <p>In answer to the comment on protection, in particular the phrase 'appropriate buffers will be applied and maintained around pertinent non-scheduled archaeological features, these will be kept open and free of trees', this relates to the various buffer zones which have been applied by our Environment & Heritage Forester to different features across the sites recorded within our heritage database. This is done in accordance with the guidance provided in the 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. Features generally have buffers ranging from 5-10 metres depending on their nature but these can</p>
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		<p>archaeological features, section 5.5.2 of the forest plan states that 'appropriate buffers will be applied and maintained around pertinent non-scheduled archaeological features; these will be kept open and free of trees'. It's not clear what is meant in this context by 'pertinent' archaeological features – this implies that some degree of selectivity will be employed, and that not all of the archaeological features will be protected from damage resulting from forestry operations. This would be a concern, as it's not clear who would be making this decision and what criteria would be employed in determining the relative importance of individual features. For example, it's obviously the case that a large number of features in this area derive from relatively recent industrial activities, and it is possible that these could be considered to be of low or local importance; however, it's also the case that some elements of this former industrial landscape, the Ironworks and Coke Ovens, have been recognised to be of national importance, and this would tend to increase the significance of other industrial remains in the vicinity. I would also suggest that it would be</p>	<p>be wider or even have no buffer. Such constraints are identified and 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. For operations, 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.</p> <p>On a related note the forest species and design illustrated in the Future Species and Habitats Maps (5b (i-v)) considered the various heritage features, many currently hidden under trees such as historic tramways, and our future management intends to gradually reveal many of these more and more going forward providing enhanced context to them and also improving our ability to access and manage these features in the future.</p>
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			necessary to ensure that the applicant has taken account of the full range of archaeological sites recorded from across all of the forest blocks. These should be represented on the various forest plan maps, to ensure that they can be protected in accordance with current UK forestry guidance.	
Recreational users – Posters placed at site entrances	29/09/2017		No response received	
Neighbouring properties – Postcard drop	29/09/2017	24/10/2017	<p>Margaret Byrne - Wilsontown resident</p> <p><i>“Hello, I had a look at the management plans on line and didn't see Wilsontown Glen detailed although it is bullet pointed on the leaflet that came to our house. You've probably surmised by now that I live in Wilsontown! Whilst replacing larch with broad leaved native trees is laudable I do have some questions.</i></p> <p><i>There must be in the region of 100 larch trees in the area of Wilsontown Glen and the majority of them are boundary plantings. Is a phased felling and replanting scheme being proposed and if so over how long a time period? At the moment the larch trees form a windbreak and have a significant</i></p>	<p>Hello Margaret, Thank you for your email regarding what's proposed for Wilsontown Glen as part of the North Clydesdale Forests Land Management Plan. With regards the larch trees you have asked about; our Survey & Concept, Management Proposals and Future Species & Habitats maps for Heathland provide more detail as to the proposals for Wilsontown Glen. These can be viewed using the following links:</p> <p>Survey & Concept Maps (6th map)</p> <p>Management Maps (1st map)</p> <p>Future Species & Habitats (1st map)</p> <p>Our proposal is to harvest the trees within the next 5 years replanting with</p>

			<p><i>visual impact on the landscape of the glen. Removing them all at once would leave the glen very exposed to the wind and of course it may well take decades before the replacement trees have any visual impact or value as a windbreak. I would be concerned if I suddenly could see the main road from our village and the glen was no longer sheltered by these trees.</i></p> <p><i>regards</i></p> <p><i>Margaret Byrne"</i></p>	<p>native broadleaved with a year or two. The harvesting will likely be completed in one operation given concerns over probable wind blow and the relatively small area. It would be expected that from the time of planting some substantial thicket growth should be realised within 5 years, ameliorating any lost sheltering and screening.</p> <p>We appreciate your concern with regards the potential loss of screening and shelter however we have important reasons for replacing the larch, which are:</p> <ul style="list-style-type: none"> • The trees are around 44 years old and have not previously been thinned out, this means that they have reached an age where they are becoming increasingly susceptible to the wind with several trees within the stand already blowing down, a situation which will deteriorate as time goes by. Given that this is a popular recreation area with various properties bordering the larch we want to avoid any unfortunate incidents with regard tree safety both to persons and property. • Larch species are particularly vulnerable to the pathogen <i>Phytophthora ramorum</i> which has affected other larch in the vicinity. Upon infection they become subject to Statutory Plant Health
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				<p>Notices enforcing their prompt removal and all other larch within a significant vicinity.</p> <ul style="list-style-type: none"> • Wilsontown Glen has remnant existing ancient woodland within it however historically there used to be native woodland throughout the glen. As the larch is a relatively recent non-native commercial crop within the glen it is our policy to convert such plantations on ancient woodland sites back to more site appropriate native broadleaved species. <p>Given these reasons for us to intervene and replace the larch and given that the remaining trees to the east, particularly along the Mouse Water, are generally much older, larger, more stable and already provide a substantial screen to the B7016 from Wilsontown Rd, it is our opinion that whilst there will be an impact it will be relatively slight. The forest district will strive to improve the aesthetic and character as quickly as possible in order to continue to provide a pleasant visitor experience.</p> <p>We hope this adds a bit more context and insight as to our rational for the proposal. Thank you once again for taking time to respond to our proposal; we shall add your comments to our consultation record.</p>
Local community – posters	29/09/2017		No response received	

<p>placed at the local sports centre and the community hub in Forth, press release advertising the LMP, FCS RSS News Feed.</p>				
<p>Neighbouring landowners – emails to agents of:</p> <ul style="list-style-type: none"> • Upper Throughburn & Tashieburn • Hill of Westerhouse and Thornmuir • Longford and Sandys Wood • Mousewater li Woodland • Muldron Forest • Pates Hill West • Whitecleugh and Backshot Woodlands 	<p>04/10/2017</p>	<p>10/10/2017</p>	<p>No comment to make on LMP</p> <p>No response received</p>	

Appendix II: General Management & Potential Projects

Aspect	Feature	Aspiration	Task	General Management / Potential Project	Owner	Occurrence	Status Monitoring (Y/N)	Monitoring occurrence
Access	Operational Access	Improve operational access for ongoing silviculture and operational site management	Extend roads in Heathland and Kingshill	General Management	Civil Engineering	Within the life of this plan	Y	At 5 & 10 years
Access	Site furniture	Maintain informative infrastructure	Install way markers at Hie Dykes West Forth	General Management	Communities & Visitor Services	Within the life of this plan	N	N/A
Access	Site furniture	Improve recreation infrastructure	Replace bench on Rab's Path West Forth	General Management	Communities & Visitor Services	Within the life of this plan	Y	Annual
Access	Site furniture	Improve recreation infrastructure	Resurface under all benches on Quality Row Wilsontown Heathland	General Management	Communities & Visitor Services	Within the life of this plan	Y	Annual
Access	Site furniture	Improve recreation infrastructure	Bench on Glen path Heathland requires additional material to level surface underneath bench.	General Management	Communities & Visitor Services	Within the life of this plan	Y	Annual
Access	Fencing	Improve site security	Repair fence at main Heathland entrance off A706	General Management	Communities & Visitor Services	Within the life of this plan	Y	Annual

Access	Path verges	Maintain for amenity and habitat value and for longevity of path.	Flail/Mow/Strim selected pathside edges for amenity of the site and to maintain path in good condition. Path edge spraying may also be undertaken if necessary	General Management	Communities & Visitor Services	As per developing maintenance plans	Y	Annual
Health & Safety	Vegetation	Reduce potential hazard posed by stumps	Remove hawthorn stumps in grass area between car park and Wilsontown Road at Heathland	General Management	Communities & Visitor Services	Within the life of this plan	N	N/A
Health & Safety	Windblow	Reduce potential hazard posed by trees	Fell and make safe windblown Larch next to B7016 on Glen path at Heathland	General Management	Communities & Visitor Services	Within the life of this plan	Y	Annual
Health & Safety	Site furniture	Maintain integrity of wall	Re-point wall at Woodmuir carpark.	General Management	Communities & Visitor Services	Within the life of this plan	Y	Annual
Promotion	Site furniture	Maintain informative infrastructure	Pressure wash stone interpretation blocks to remove algae at Wilsontown Heathland	General Management	Communities & Visitor Services	Within the life of this plan	Y	Annual
Biodiversity	Wildflower Meadow	Maintain/improve the condition of the habitat at West Forth for biodiversity	Cut and lift of sward in a mosaic of cut and uncut patches. Remove material from site where possible.	General Management	Environment & Heritage	1 Cut and Lift per annum	Y	Annual
Biodiversity	Invasive non-native species	Eradicate invasive non-native species flora	Continue the programme of clearing and treating invasives i.e. Himalayan Balsam	General Management	Environment & Heritage	Ongoing	Y	Annual

Heritage	Scheduled Monuments	Conserve features	Continue to follow the management as set out in the agreed monument management plan	General Management	Environment & Heritage	Ongoing	Y	Annual
Promotion	Waste material	Improve visitor experience	Remove large items of waste/fly-tipping.	General Management	Communities & Visitor Services	Ongoing	Y	Monthly
Silviculture	PAWS	Gradual restoration of PAWS to native broadleaf woodland	Areas designated as PAWS will be restored to native woodland status.	General Management	Environment & Heritage	Ongoing	Y	Annual
Landscape	Afforested public road corridors	Improve forest edge design along public road corridors	Produce a microsite restock planting design for future implementation	General Management	Landscape Architect / FM	Within the life of this plan	Y	At 10 year renewal

Appendix III: Tolerance Table

	Adjustment to felling period	Adjustment to felling coupe boundaries	Timing of restocking	Change to species	Windthrow response	Adjustment to road lines	Designed open ground
FC Approval not normally required (record and notify FC)	Fell date can be moved within 5 year period where separation or other constraints are met	<10% of coupe size.	Up to 5 planting seasons after felling (allowing fallow periods for hylobius).	Change within species group E.g. Scots pine to birch, Non-native conifers e.g. Sitka spruce to Douglas fir, Non-native to native species (allowing for changes to facilitate Ancient Woodland policy).	Low sensitivity area Where windthrow represents more than 60% of the crop the area, including standing trees may, be felled plus up to 5Ha beyond in order to seek a windfirm edge.	Low sensitivity area Creation of turning points/ loading bays. Deviation of <100m either side of the predicted centre line of the road/ track. High sensitivity area Deviation <75m in either direction from centre of road/track.	Location of temporary open ground e.g. deer glades if still within overall open ground design Increase by 0.5 ha or 5% of area - whichever is less
Approval by exchange of letters and map		10-15% of coupe size.	5 years +	Change of coupe objective that is likely to be consistent with current policy (e.g. from productive to open, open to native species).	Low sensitivity area As above to include 5-10 Ha of standing crop to seek a windfirm edge. Areas where windthrow represents <60%. High sensitivity area Areas where windthrow represents <60%.	Low sensitivity area Deviation of 100-150m in either direction from centre of road/track. High sensitivity area Deviation of 75-100m in either direction from centre of road/track.	Increase of 0.5 ha to 2ha or 10% - whichever is less Any reduction in open ground
Approval by formal plan amendment	Felling delayed into second or later 5 year period Advance felling into current or 2 nd 5 year period	>15% of coupe size.		Major change of objective likely to be contrary to policy, E.g. native to non-native species, open to non-native,	Low sensitivity area As above. Windblown area + an area >10 Ha to find a windfirm edge. High sensitivity area Felling of standing trees beyond the area of windblow.	Deviations exceeding the above.	More than 2 ha or 10% Any reduction in open ground in sensitive areas Colonisation of open Areas agreed as critical

Appendix IV: Management Plan Brief

North Clydesdale Forests

(Heathland/Woodmuir/Kingshill/West Forth & The Mosses Forests)

Land Management Plan Brief

Contents

1. Key Background Information
2. Strategic Priorities
3. Key Drivers & Draft Management Objectives

1. Key Background Information

- The Clydesdale Forests are a collection of 5 forest blocks totalling an area of approximately 2205 hectares located predominantly within South Lanarkshire but with also spreading into West Lothian and North Lanarkshire. Forth, Fauldhouse and Carluke are the nearest large settlements. The 5 forests are: **Heathland** (1,178 Ha), **Woodmuir** (366 Ha), **West Forth** (95 Ha), **Kingshill** (360 Ha) and **The Mosses** (206 Ha).
- This management plan will revise the previous Forest Design Plans for all of these forest blocks under one Land Management Plan. This new plan will synchronise the management approval for these forests into a single new 10 year plan, associated not only by their geographic proximity to each other but also due to their similar attributes such as their upland character and relatively poor soils.
- Elevation rises from approximately 194m above sea level (asl) at Kingshill to ~ 360m asl at Heathland. Each site has a history of coal mining and several mine entries are recorded across each site with Heathland and Woodmuir also having undergone previous surface mining as well as shallow work. The soils generally consist of typical peaty surface water gleys [FC soil code: 6]; typical surface water gleys [FC soil code: 7] and blanket bogs [FC soil codes 11b & 11d] there is also some typical podzols [FC soil code: 3] particularly in Kingshill and in the areas where surface mining occurred in Heathland and Woodmuir these areas have been restored using sewage cake. Generally the soils are wet and poor in nutrients.
- The prevailing cool, wet climate is conducive to good conifer tree growth although the soils and exposed topography limits the choice of tree species suitable for continued productive conifer crops. Climate change predictions suggest that the climate will become generally warmer, with drier summers and winters more wet.
- Currently approximately 68% of the total managed area is under forest cover with the remaining 32% consisting of disparate elements such as archaeology, roads, footpaths, utility wayleaves and areas of environmental importance amongst other features. 91% of the forests are conifer and 9% broadleaves with approximately 74% of the conifer element given over to Sitka spruce.
- Of the current forest cover across the sites the growth stages of the trees are split as follows approx. 31% establishment (0-10 years), 17% thicket (11-20 years), 23% pole stage (21-40 years), 28% mature (41-60 years) and 1% old forest (over 61 years).
- Heathland and Woodmuir both have small areas of Ancient Woodland of Semi Natural Origin, which are currently ancient semi natural woodland and PAWS respectively with the PAWS are under restoration.
- Due to the exposed nature of their locations the clear fell system of silviculture has predominantly been employed thus far and will remain the case going forward. Where thinning has been employed previously e.g. West Forth and Kingshill it will

be reviewed and may continue for the remainder of the current rotation at West Forth but is unlikely to feature again at Kingshill.

- Operational access across the sites is good with forest road access to every block from the public road network.
- Several watercourses either run through or alongside the sites. Draining into the River Clyde catchment from Heathland is Mouse Water (which also drains from West Forth), draining to Dippool Water, Wormlaw and Mosshat Burns and draining to the River Forth, Punce Linn. At Kingshill the Auchter Water also drains to the Clyde. Draining into the River Almond catchment from Woodmuir is Woodmuir Burn, Longford Burn & Paddy's River. There is significant potential to create/improve Forest Habitat Networks along these riparian corridors.
- Recreational use of these sites is not particularly high and access, aside from forest road network, is restricted to the footpaths within West Forth and around Wilsontown Ironworks scheduled monument in Heathland (both WIAT areas). SNH and Local Authority data shows there are several claimed public rights of way and core paths through Kingshill and Heathland which have no formal footpath or forest road provision and where commercial forest provides a barrier for access. There is potential to improve this situation to reinstate these routes or provide alternatives.
- Landscape design is most significant at the small scale e.g. along transport corridors as the forests being on the central plateau are not particularly visible at the medium to large scale from the surrounding areas and generally therefore felling coupes shapes and sizes don't have an great effect on the wider landscape.
- Two Scheduled Monuments are located within the forests. The former Wilsontown Ironworks is situated in the south-west of Heathland and Woodmuir Farm Coke Ovens and Reservoir is situated in the north-east of Woodmuir. Couthalley Castle Scheduled monument whilst out-with Carnwath Moss borders the site to the west.
- A very small portion of the Mosses overlay the Carstairs Kames SSSI and also lie adjacent to the Carnwath Moss SSSI. The other sites have no environmental designations associated with them however there are important habitats such as intermediate and lowland raised bogs in Heathland as well as a planted wildflower meadow at West Forth. There are also some important priority species which may use the sites such as Goshawk, cuckoo, long-eared owl, otter, water-vole, badgers, small pearl-bordered fritillary and common blue butterfly.
- Deer impact levels on the commercial crops within these blocks is on the whole below the national target of 10% leader browsing damage. Roe are the only species of deer present within these woodland blocks but there is a healthy and viable population in and around the woodland meaning that sustained deer management is required to keep the background population at an acceptable level.

2. Strategic Priorities

The work of FES is guided by the Scottish Forestry Strategy 2006, which set out seven Key Themes:

- *Climate Change*
- *Timber*
- *Business Development*
- *Community Development*
- *Access & Health*
- *Environmental Quality*
- *Biodiversity*

Since 2006 the purpose of the estate has evolved slightly and has been re-characterised in: [The Role of Scotland's National Forest Estate and Strategic Directions 2013 – 2016](#), which sets out six aspirations that the National Forest Estate is:

- **Healthy** - achieving good environmental and silvicultural condition in a changing climate
- **Productive** - providing sustainable economic benefits from the land
- **Treasured** - as a multi-purpose resource that sustains livelihoods, improves quality of life, and offers involvement and enjoyment
- **Accessible** - local woodlands and national treasures that are well promoted, welcoming and open for all
- **Cared for** - working with nature and respecting landscapes, natural and cultural heritage
- **Good value** - exemplary, effective and efficient delivery of public benefits

In light of the new national strategic directions, Scottish Lowlands Forest District revised the District Strategic Plan, producing the [Scottish Lowlands Forest District Strategic Plan \(2014-2017\)](#), which draws on the six aspirations and sets out the key national commitments and what district specific actions are to be taken to achieve them.

In preparing the Brief and Objectives for this Land Management Plan (LMP), issues were considered against these revised 'Key Commitments' and assessed for their importance. Those most relevant to the Clydesdale Forests are set out below.

3. Key Drivers & Draft Management Objectives

On the basis of the background information, and given the considerations outlined above, a series of drivers have been identified in order to produce the management objectives proposed for The Clydesdale Forests.

Key Aspiration – Healthy

The potential impacts of climate change and the potential threat from current and/or future pests and disease such as Great spruce bark beetle, *Phytophthora ramorum* and Dothistroma Needle Blight means uncertainty to the future make-up of the forest. Changes in storm frequency and intensity may increase the risk of windblow, while drier and warmer summers might increase the risk of drought. Increasing trade importation from across the world, facilitating pest and disease movement, is likely to lead to more risk of new threats arriving on our shores. The current narrow range of tree species is generally site suited which should reduce tree stress and the chances of infection or infestation however some alterations in future restock species choice to more site suited species would improve this situation further.

The forests have been managed under a clearfell system as the exposure and soils are not conducive for successful alternatives to clearfell methods such as CCF or LISS.

Management Objectives:

- *Manage the conifer plantations using the clearfell system.*
- *When restocking, diversify where appropriate the planted species to enhance the resilience of the woodlands to the impacts of predicted climate change and the threat from pests and diseases.*
- *Use appropriate methods of herbivore protection to minimise leader browsing on establishing or regenerating trees.*
- *Where restocking will not lock up enough carbon to outweigh that lost from the soil, consider bog restoration or conversion to peat edge woodland deferring to the guidance set out in the FC Practice Guide for 'Deciding future management options for afforested deep peatland'.*
- *As finances allow we will restore Woodend Moss lowland raised bog.*

Key Aspiration – Productive

Climate and soils generally across the forests limit the range of species choice for both conifers and broadleaves with only a few conifer species suited for productive growth. Generally poor nutrient levels suggest nursing mixtures will be necessary to promote good growth in various areas.

In some areas the yield classes being achieved in the current crops suggest that restocking again with commercial conifer is not a viable option and alternative land uses should be considered.

As much of these sites are geographically suited for wind based renewable energy capture, there is interest from this sector and much of Kingshill already sites several wind turbines. This plan will account for existing renewable developments and bear in mind any potential impact from proposed future developments.

Management Objectives:

- *Maintain sustainable volumes of timber for local and national markets determined by appropriate coupe management within the forests as well as volume production forecasts across the district.*
- *Design management coupes to account for existing wind turbine developments and in mind of proposed future developments.*

Key Aspirations – Treasured and Accessible

In recent years improvements have been made across the sites to access, signage and interpretation; these improvements along with greater onsite staff presence has led to a decline in antisocial use of the forest and increased recreational usage.

Management Objectives:

- *Engage with local communities and partners to encourage increased visitor numbers to the woodlands and create an improved visitor experience.*
- *Where appropriate upgrade and enhance the path network to improve the visitor experience in the woodlands.*

Key Aspiration – Cared for

There has been some increase in age diversity within the forest, and the process broadening the diversity of age ranges continues.

There has been little development of semi-natural Forest Habitat Networks across the sites - currently the majority of watercourses have conifers planted close to their edges where their regeneration can inhibit the transition to broadleaved species.

In addition to the two Scheduled Monuments, which are covered by existing Historic Environment Scotland-approved management plans, there are a number of other sites

of archaeological interest which will be managed in accordance with guidelines on Forestry and the Historic Environment.

Management Objectives:

- *Create an improved Forest Habitat Network along riparian corridors to benefit biodiversity.*
- *Preserve and enhance the diversity of open space and native woodland to benefit important habitats on and around land we manage in accordance with the UK Forestry Standard (UKFS)*
- *Where appropriate enhance views within and without the sites by judicious use of thinnings, enhanced spatial transition along footpaths/junctions using felling, new planting, high pruning, mowing and monitoring.*
- *Protect known historic features, including archaeological remnants in accordance with UKFS guidelines on Forests and historic environment.*
- *Where appropriate enhance roadside corridors for improved road user experience and improved safety and visibility of entrances.*

Appendix V: Objective Appraisal, Monitoring & Evaluation

Key Aspiration	Objective	Assessable Criteria	Appraisal Method	Monitoring Method	Monitor Where	Monitor When	Monitor Who	Record Monitoring Where	Evaluation. <i>How does the Appraisal and Monitoring method inform current & future proposals? If you cannot answer this question then the methods may not be appropriate.</i>
Healthy	Manage the conifer plantations using the clearfell system.	Silvicultural system	Production Forecast	Design Plan Query	Forester Design Plan Module	After operations and at appropriate intervals e.g. mid-term and 10 year reviews	Planning Forester	Against the LMP	Monitoring the volumes and quality of timber produced and levels of income received will allow the Planning Forester to gauge the quality of conditions and whether future crops might fetch improved revenues if managed differently.
Healthy	When restocking, diversify where appropriate the planted species to enhance the resilience of the woodlands to the impacts of predicted climate change and the threat from pests and diseases.	Species mix	Species types, proportions & distributions	Site survey SCDB Query	Onsite SCDB	After operations and at appropriate intervals e.g. mid-term and 10 year reviews	Planning Forester	Against the LMP	Monitoring species proportions and distributions will inform the planning forester as to whether the plan is working and whether adjustments are required allowing the district to adjust expectations and business plan for alternative management methods.
Healthy	Use appropriate methods of herbivore protection to minimise leader browsing on establishing or regenerating trees.	Establishment Deer Population	Leader Browsing	Site survey SCDB Query Deer Pop Survey Thermal Imaging Survey	Onsite SCDB Impact monitoring form	After operations and at appropriate intervals e.g. mid-term and 10 year reviews	FM Forester Wildlife Manager	SLFD Deer Overview Map Thermal Imaging Po Spread-sheet NNR Survey by SCL Impact monitoring form	Monitoring leader browsing by deer allows the FM Forester and Wildlife Manager to establish whether establishment is likely to be successful or whether further methods of protection are required and therefore factored in to business planning.

Healthy	Where restocking will not lock up enough carbon to outweigh that lost from the soil, consider bog restoration or conversion to peat edge woodland deferring to the guidance set out in the FC Practice Guide for 'Deciding future management options for afforested deep peatland'.	Species, Open Space & Habitat	Changes in land use over time	Site survey SCDB Query Forester Conservation Module Query	Onsite Aerial photos	At mid-term and 10 year review	Environment & Heritage Manager	Forester Conservation Module	By monitoring any changes in land use it can be determined whether there have been any unforeseen impacts from implementation of the plan.
Healthy	As finances allow we will restore Woodend Moss lowland raised bog.	Species, Open Space & Habitat	Changes in land use over time	Site survey SCDB Query Forester Conservation Module Query	Onsite Aerial photos	At mid-term and 10 year review	Environment & Heritage Manager	Forester Conservation Module	By monitoring any changes in land use it can be determined whether there have been any unforeseen impacts from implementation of the plan.
Productive	Maintain sustainable volumes of timber for local and national markets determined by appropriate coupe management within the forests as well as volume production forecasts across the district.	Timber volumes	Production Forecast	Design Plan Query	Forester Design Plan Module	After operations and at appropriate intervals e.g. mid-term and 10 year reviews	Programme Manager Harvesting Forester	Against the LMP	Monitoring the volumes and quality of timber produced and levels of income received will allow the Programme Manager & Harvesting Manager to gauge what returns might be expected from future interventions and which customers would most likely be interested. This monitoring also allows the Planning Forester to gauge the quality of conditions and whether future crops might fetch improved revenues if managed differently.
Productive	Design management coupes to account for existing wind turbine developments and in mind of proposed future developments.	Coupe design	Evaluate future renewable footprint against management coupes	Design plan layer	Forester Design Plan Module	After operations and at appropriate intervals e.g. mid-term and 10 year reviews	Planning Forester	Against the LMP	Evaluating the impact of any future renewable development will allow the planning forester to determine how much flexibility has been gained by the proposed design by how little or much disruption it may cause.

Treasured & Accessible	Engage with local communities and partners to encourage increased visitor numbers to the woodlands and create an improved visitor experience.	Local community involvement	Contact lists numbers. Event & Project activity	Contact list check, number of events/projects progressing	Within the local community	On-going engagement with local stakeholders	Recreation Manager	Against the LMP & Site contact list	By monitoring when and who we have contacted as well as what events and projects are being progressed the CRT Manager can evaluate how active we have been in engaging with local community as well as being better able to plan budgets for upcoming events/projects.
Treasured & Accessible	Where appropriate upgrade and enhance the path network to improve the visitor experience in the woodlands.	Visitors & Public Opinion	Survey users	Visitor survey(s)	Onsite Online In community	On-going engagement with communities and at appropriate intervals for gate counts and mid-term and 10 year review	Recreation Manager	Evaluation Feedback Forms folders in CRT2 folder within Management unit folders	Visitor feedback will allow for opportunity to learn where further improvements can be made and if necessary factored in to future business plans.
Cared for	Create an improved Forest Habitat Network along riparian corridors to benefit biodiversity.	Tree species	Changes in species types, ages, proportions & distributions	Site survey SCDB Query	Onsite SCDB	After operations and at appropriate intervals e.g. mid-term and 10 year reviews	Planning Forester Against	Against the LMP	Monitoring the diversity of species and structure of the canopy will allow for comparisons to be made overtime which will inform the planning forester as to whether the plan is working and whether adjustments are required allowing the district to adjust expectations and business plan for alternative management methods.
Cared for	Preserve and enhance the diversity of open space and native woodland to benefit important habitats on and around land we manage in accordance with the UK Forestry Standard (UKFS)	Tree species & Landuse	Changes in species types, ages, proportions & distributions	Site survey SCDB Query	Onsite SCDB	After operations and at appropriate intervals e.g. mid-term and 10 year reviews	Planning Forester	Against the LMP	Monitoring the diversity of species, structure of the canopy and land use will allow for comparisons to be made overtime which will inform the planning forester as to whether the plan is working and whether adjustments are required allowing the district to adjust expectations and business plan for alternative management methods.

Cared for	Where appropriate enhance views within and without the sites by judicious use of thinnings, enhanced spatial transition along footpaths/junctions using felling, new planting, high pruning, mowing and monitoring.	Landscape	Survey users	Visitor survey	Onsite Online In community	At mid-term and 10 year review	Recreation Manager	Evaluation Feedback Forms folders in CRT2 folder within Management unit folders	By seeking visitor feedback on the woods the recreation manager can evaluate what affect over time the development of the crop has on visitor appreciation of the sites and also learn where further improvements can be made and if necessary factored in to future business plans.
Cared for	Protect known historic features, including archaeological remnants in accordance with UKFS guidelines on Forests and historic environment.	Historic features	Changes in condition	Site survey	Onsite Aerial photos	At mid-term and 10 year review	Environment & Heritage Manager	Forester Heritage Module	Monitoring the condition of heritage features allows the Environment & Heritage Manager and Recreation Manager to evaluate whether implementation of the plan has adversely affected any features e.g. has increased visitor numbers increased pressure on features or have operations damaged features? Any issues can be captured and mitigated against in future.
Cared for	Where appropriate enhance roadside corridors for improved road user experience and improved safety and visibility of entrances.	Landscape	Visual reference	Site evaluation	Onsite	At mid-term and 10 year review	Landscape Architect	Against the LMP	By evaluating changes in roadside corridors the landscape architect can evaluate what affect over time the development of the crop has on the motorist experience and also learn where further improvements can be made and if necessary factored in to future business plans.

Appendix VI: Maps

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

- 1 – Location
- 2 - Context
- 3a – Soils
- 3b – Climate
- 3c – Existing Forest Stock
- 4a – Key Feature Opportunities & Constraints
- 4b – Initial Concepts
- 5a – Management
- 5b – Future Species

Appendix VII: Relevant Reference Documents

In addition to those already referenced within the main text the following key policy or guidance documents which have influenced this plan are listed here:

- UK Forestry Standard (3rd Edition)
- UK Woodland Assurance Standard 3.1
- Scottish Forestry Strategy 2006
- Scottish Lowlands Forest District Strategic Plan 2014 – 2017
- Central Scotland Forest Strategy
- Glasgow and Clyde Valley Forestry and Woodland Strategy
- SNH Landscape Character Assessments for 'Glasgow and Clyde Valley'.
- SNH Landscape Character Assessments for 'The Lothians'.
- South Lanarkshire Local Development Plan 2015 (adopted)
- South Lanarkshire Local Biodiversity Plan
- West Lothian Local Plan 2009 (adopted)
- West Lothian Local Development Plan 2015 (proposed)
- Historic Environment Scotland - Strategy for Scotland
- Scottish Lowlands Forest District – Monument Management Plan 2015
- Scotland River Basin Management Plan
- SEPA Flood Risk Management Maps
- Forestry Commission Bulletin 62 – Silviculture of Broadleaved Woodland
- Forestry Commission Bulletin 110 – Reclaiming Disturbed Land for Forestry
- Forestry Commission Bulletin 119 – Cultivation of Soils for Forestry
- Forestry Commission Practice Guide – Deciding Future Management Options for Afforested Deep Peatland.
- Forestry Commission Practice Guide – Managing Open Habitats in Upland Forests
- Forestry Commission Scotland - Strategy for Lowland Raised Bog and Intermediate Bog on the National Forest Estate in Scotland 2012-2022
- Forestry Commission Practice Guide 3 – The management of semi-natural upland mixed ashwoods.
- Forestry Commission Practice Guide 8 – The management of semi-natural wet woodlands
- Forestry Commission Practice Guide 14 – Restoration of Native Woodland on Ancient Woodland Sites
- Forestry Commission Practice Guide 21 – Choosing stand management methods for restoring planted ancient woodland sites
- Natural Reserves - Guidance for their selection and management on the NFE in Scotland
- Minimum Intervention Areas - Guidance for their selection and management on the NFE in Scotland

- Long-Term Retentions - Guidance for their selection and management on the NFE in Scotland