

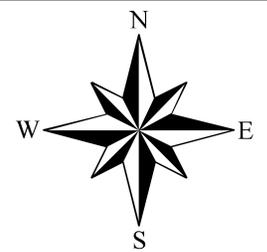
Scottish Lowlands FD

HEATHLAND
4a(i)
KEY FEATURE
OPPORTUNITIES
and
CONSTRAINTS

Scale: 6,750 @ A0



27 Jun 2017



Legend

-  Heathland
 -  Watercourse
 -  Forest Access
 -  Forest Footpath
 -  OH Power
 -  UG Power
 -  Mains water
 -  Heritage Features Point
 -  Heritage Features Line
 -  Heritage Features Polygon
 -  Public Road Corridor
- Heritage Designations**
- DESIGNATION TYPE**
-  Scheduled Monument
 -  Tormywheel Windfarm

Diversification of crops along road corridors and visible edges has begun but some areas remain as green spruce walls with others showing signs of windthrow.

There is an opportunity to enhance the work already ongoing to diversify the species and age mix along public roads and highly visible forest edges.

The rate of change is limited to sensible crop rotations and limited site suitable species range.

A variety of archaeological features are located across the sites including Wilsontown Schedule Monument

When felling and restocking there is an opportunity to redesign planting shapes to reveal features such as tramways and cairns.

Revealing features might reduce plantable area. Areas may be recolonised by natural regeneration.

Lochan feature formed as a result of former open cast mining surrounded predominantly by sitka spruce although there is pond edge vegetation.

There will be opportunity to diversify the species around the lochan with more broadleaves.

Lochan area has a history of antisocial use.

Some areas of severely checked growth predominantly on areas of peat or poorly restored former open cast coal mines

Although no areas have been identified as priority for peat habitat restoration there may be opportunities to diversify the range of species and age of the forests establishing peat edge native broadleaved woodland

Some areas of existing forest may not be economic to harvest traditionally.

Upland location provides potential for renewable development

Evolving development proposal merits consideration when designing coupe shapes and proposing felling years.

Proposals may not be carried forward

Larch areas next to road at Wilsontown Glen beginning to show signs of windthrow.

There is an opportunity to replace the larch with a variety of broadleaves and shrubs requiring minimal future intervention and reducing the shading effect and windthrow hazard around neighbouring properties.

Crops are close to residential housing and public road.

Remnant area of larch have been left unfelled along watercourses with restock occurring adjacent leading to isolated strips vulnerable to windthrow

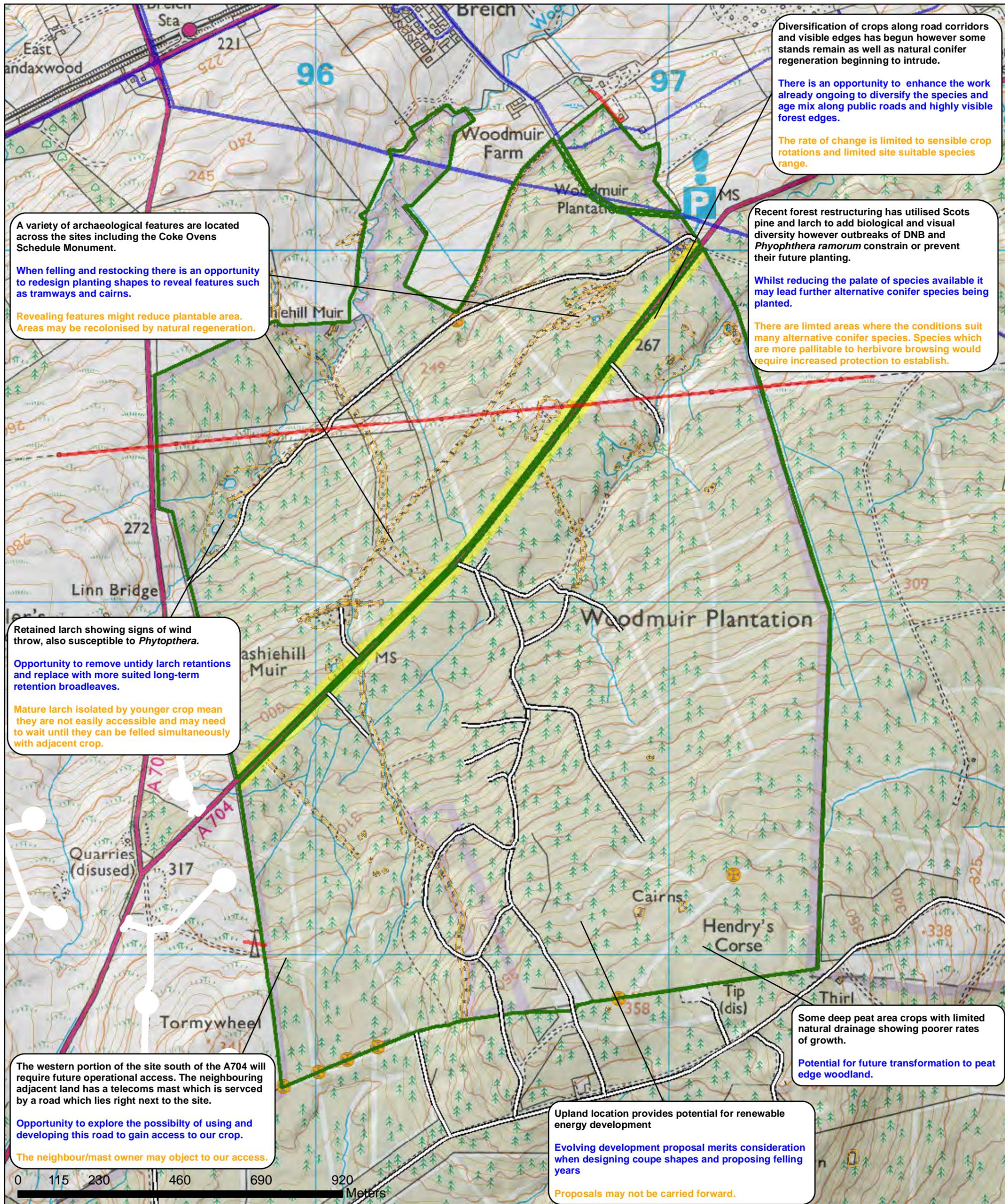
There is an opportunity to reshape future conifer felling coupes to include riparian conifers along watercourses allowing for diversification to more appropriate mixed broadleaved species.

Remnant strips where adjacent coupes already felled and restocked will most likely have to wait until the end of the next wider coupe rotation to be felled.

Recent forest restructuring has utilised scots pine and larch to add species and visual diversity however outbreaks of DNB and Phytophthora ramorum constrain or prevent their future planting.

Whilst reducing the palate of species available it may lead further alternative conifer species being planted.

There are limited areas where the conditions suit many alternative conifer species. Species which are more palatable to herbivore browsing would require increased protection to establish.



Diversification of crops along road corridors and visible edges has begun however some stands remain as well as natural conifer regeneration beginning to intrude.

There is an opportunity to enhance the work already ongoing to diversify the species and age mix along public roads and highly visible forest edges.

The rate of change is limited to sensible crop rotations and limited site suitable species range.

Recent forest restructuring has utilised Scots pine and larch to add biological and visual diversity however outbreaks of DNB and *Phytophthora ramorum* constrain or prevent their future planting.

Whilst reducing the palate of species available it may lead further alternative conifer species being planted.

There are limited areas where the conditions suit many alternative conifer species. Species which are more palatable to herbivore browsing would require increased protection to establish.

A variety of archaeological features are located across the sites including the Coke Ovens Schedule Monument.

When felling and restocking there is an opportunity to redesign planting shapes to reveal features such as tramways and cairns.

Revealing features might reduce plantable area. Areas may be recolonised by natural regeneration.

Retained larch showing signs of wind throw, also susceptible to *Phytophthora*.

Opportunity to remove untidy larch retentions and replace with more suited long-term retention broadleaves.

Mature larch isolated by younger crop mean they are not easily accessible and may need to wait until they can be felled simultaneously with adjacent crop.

The western portion of the site south of the A704 will require future operational access. The neighbouring adjacent land has a telecoms mast which is serviced by a road which lies right next to the site.

Opportunity to explore the possibility of using and developing this road to gain access to our crop.

The neighbour/mast owner may object to our access.

Upland location provides potential for renewable energy development

Evolving development proposal merits consideration when designing coupe shapes and proposing felling years

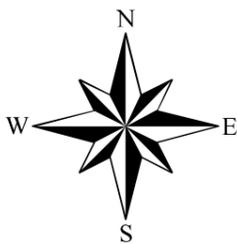
Proposals may not be carried forward.

Some deep peat area crops with limited natural drainage showing poorer rates of growth.

Potential for future transformation to peat edge woodland.

- Legend**
- Woodmuir
 - powerline_oh
 - Forest Access
 - Mains water
 - Heritage Features Point
 - Heritage Features Line
 - Heritage Features Polygon
 - Public road corridor
 - Infrastructure_buffer

© Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number [100021242]



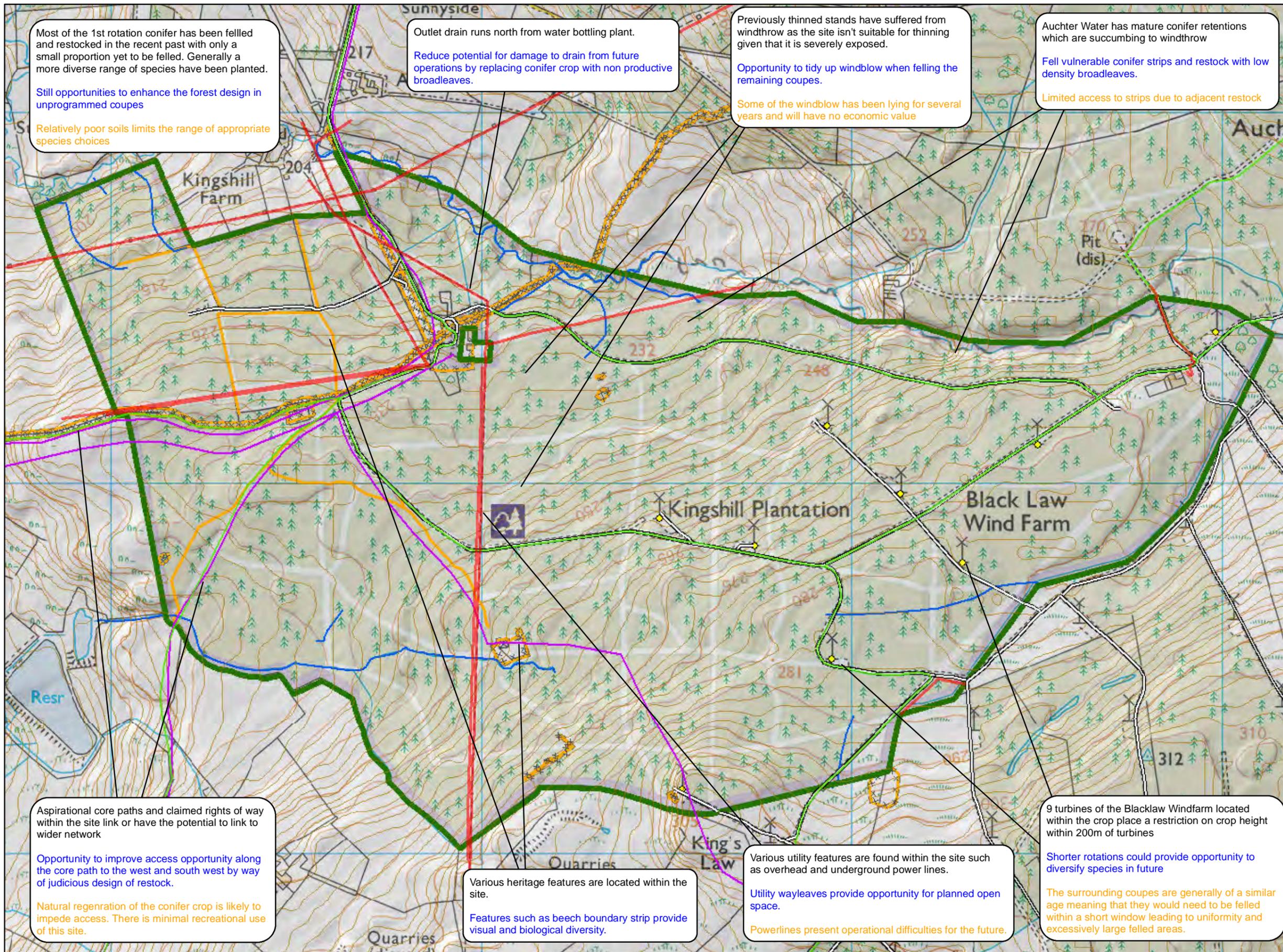
Scale: 10,000 @ A3

27 Jun 2017

Forestry Commission Scotland
Coimisean na Coilltearachd Alba

Scottish Lowlands FD

WOODMUIR
4a(ii)
KEY FEATURES
OPPORTUNITIES
and
CONSTRAINTS



Most of the 1st rotation conifer has been felled and restocked in the recent past with only a small proportion yet to be felled. Generally a more diverse range of species have been planted.

Still opportunities to enhance the forest design in unprogrammed coupes

Relatively poor soils limits the range of appropriate species choices

Outlet drain runs north from water bottling plant.

Reduce potential for damage to drain from future operations by replacing conifer crop with non productive broadleaves.

Previously thinned stands have suffered from windthrow as the site isn't suitable for thinning given that it is severely exposed.

Opportunity to tidy up windblow when felling the remaining coupes.

Some of the windblow has been lying for several years and will have no economic value

Auchter Water has mature conifer retentions which are succumbing to windthrow

Fell vulnerable conifer strips and restock with low density broadleaves.

Limited access to strips due to adjacent restock

Aspirational core paths and claimed rights of way within the site link or have the potential to link to wider network

Opportunity to improve access opportunity along the core path to the west and south west by way of judicious design of restock.

Natural regeneration of the conifer crop is likely to impede access. There is minimal recreational use of this site.

Various heritage features are located within the site.

Features such as beech boundary strip provide visual and biological diversity.

Various utility features are found within the site such as overhead and underground power lines.

Utility wayleaves provide opportunity for planned open space.

Powerlines present operational difficulties for the future.

9 turbines of the Blacklaw Windfarm located within the crop place a restriction on crop height within 200m of turbines

Shorter rotations could provide opportunity to diversify species in future

The surrounding coupes are generally of a similar age meaning that they would need to be felled within a short window leading to uniformity and excessively large felled areas.

Scottish Lowlands FD

KINGSHILL
4a(iii)

KEY FEATURES OPPORTUNITIES and CONSTRAINTS

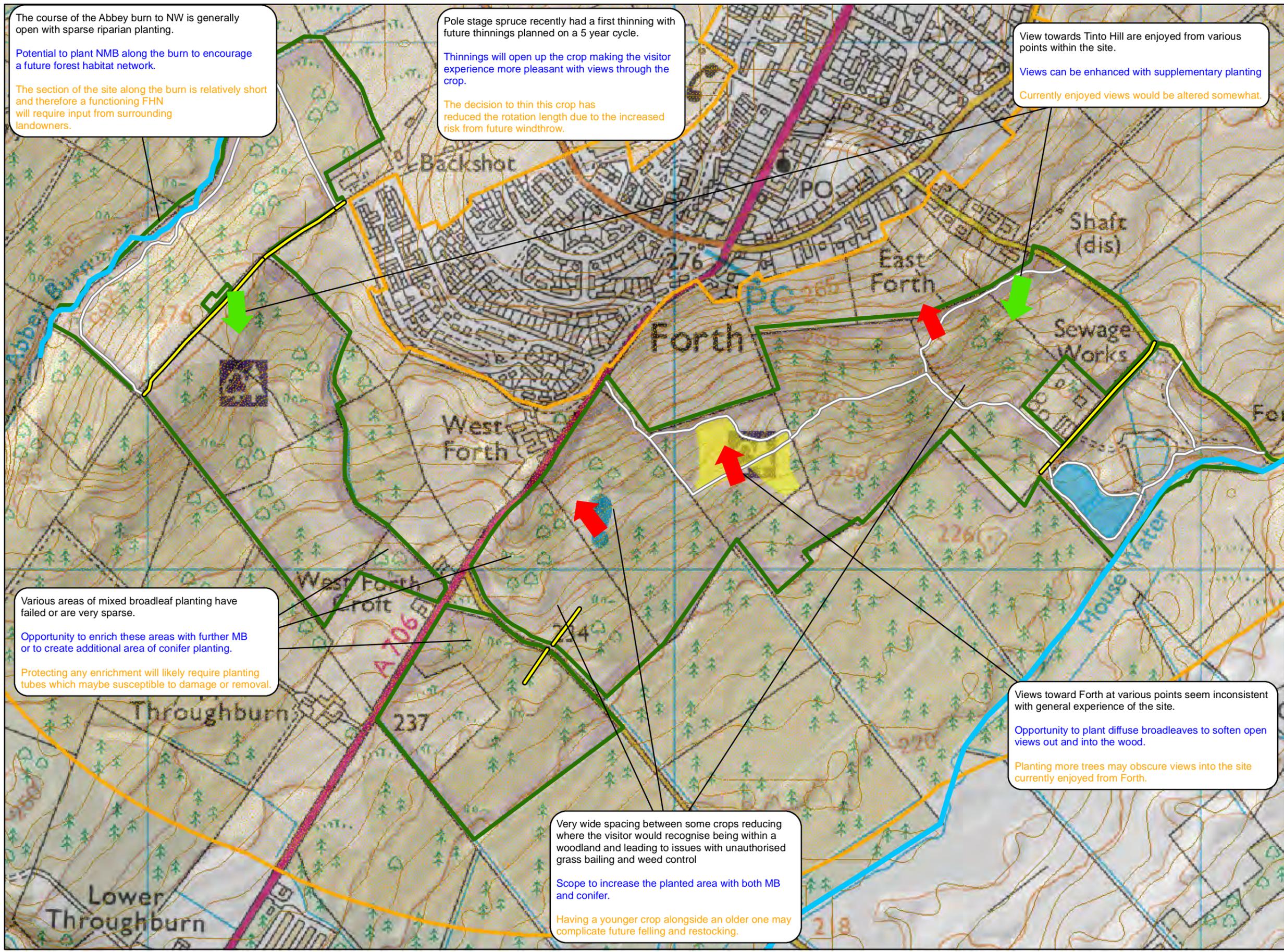
Scale: 10,000 @ A3



27 Jun 2017



- Legend**
-  Kingshill
 -  Overhead power
 -  Wind turbine
 -  Forest road
 -  Core path
 -  Claimed right of way
 -  Heritage Features Point
 -  Heritage Features Line
 -  Heritage Features Polygon



The course of the Abbey burn to NW is generally open with sparse riparian planting.

Potential to plant NMB along the burn to encourage a future forest habitat network.

The section of the site along the burn is relatively short and therefore a functioning FHN will require input from surrounding landowners.

Pole stage spruce recently had a first thinning with future thinnings planned on a 5 year cycle.

Thinnings will open up the crop making the visitor experience more pleasant with views through the crop.

The decision to thin this crop has reduced the rotation length due to the increased risk from future windthrow.

View towards Tinto Hill are enjoyed from various points within the site.

Views can be enhanced with supplementary planting

Currently enjoyed views would be altered somewhat.

Various areas of mixed broadleaf planting have failed or are very sparse.

Opportunity to enrich these areas with further MB or to create additional area of conifer planting.

Protecting any enrichment will likely require planting tubes which maybe susceptible to damage or removal.

Very wide spacing between some crops reducing where the visitor would recognise being within a woodland and leading to issues with unauthorised grass bailing and weed control

Scope to increase the planted area with both MB and conifer.

Having a younger crop alongside an older one may complicate future felling and restocking.

Views toward Forth at various points seem inconsistent with general experience of the site.

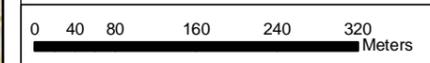
Opportunity to plant diffuse broadleaves to soften open views out and into the wood.

Planting more trees may obscure views into the site currently enjoyed from Forth.

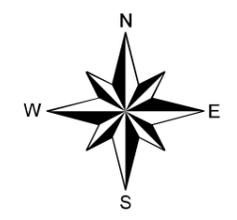
Scottish Lowlands FD

WEST FORTH
4a (iv)
KEY FEATURES ANALYSIS
and
CONCEPT

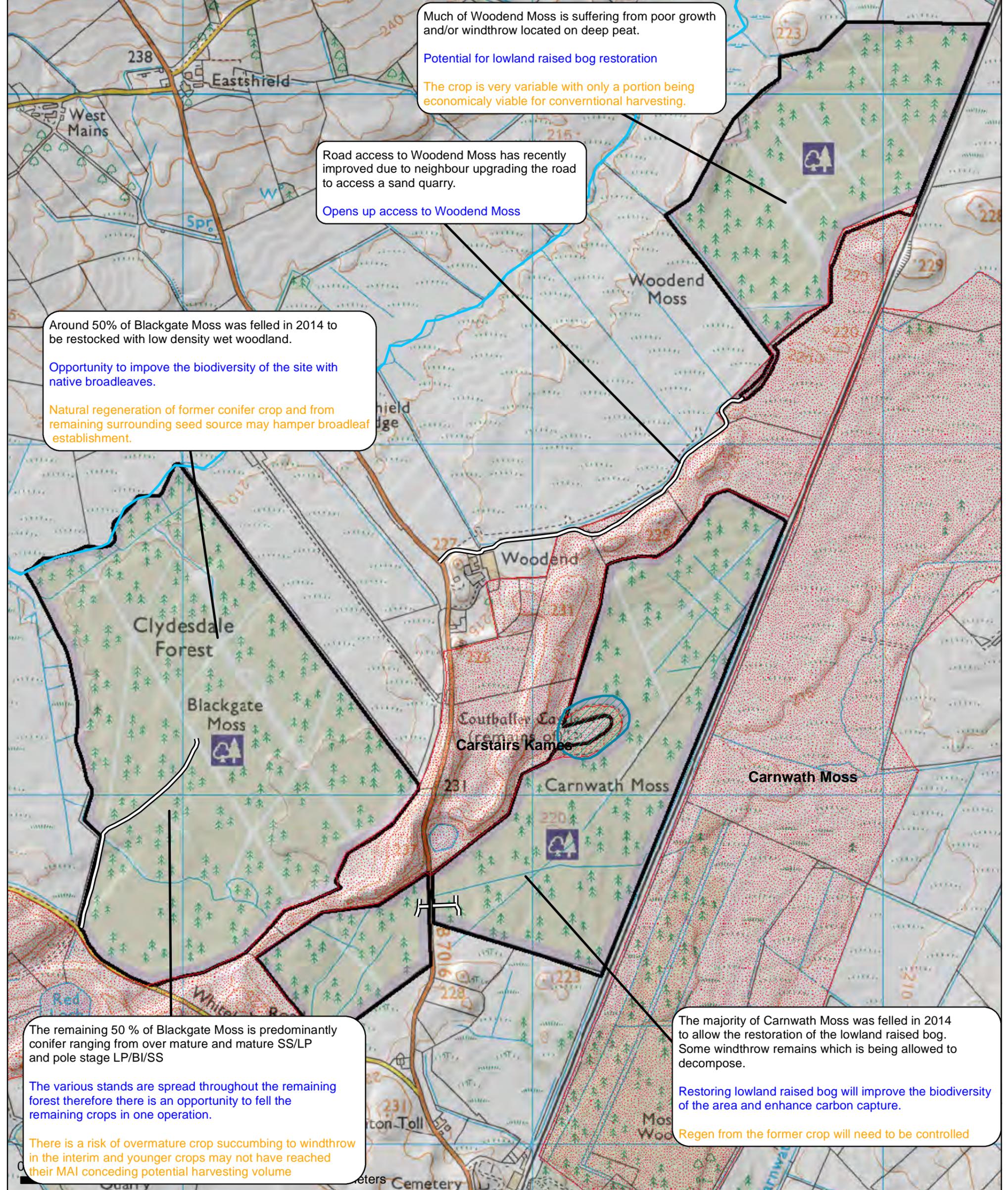
Scale: 7,000 @ A3



27 Jun 2017



- Legend**
- West Forth
 - Watercourse
 - WIAT 1K zone
 - Forest road
 - Path
- Other Habitat**
- Flower meadow
 - Reedbed
 - Abrupt view out towards urban Forth.
 - Excellent views towards Tinto Hill



Much of Woodend Moss is suffering from poor growth and/or windthrow located on deep peat.
Potential for lowland raised bog restoration
 The crop is very variable with only a portion being economically viable for conventional harvesting.

Road access to Woodend Moss has recently improved due to neighbour upgrading the road to access a sand quarry.
Opens up access to Woodend Moss

Around 50% of Blackgate Moss was felled in 2014 to be restocked with low density wet woodland.
Opportunity to improve the biodiversity of the site with native broadleaves.
 Natural regeneration of former conifer crop and from remaining surrounding seed source may hamper broadleaf establishment.

The remaining 50 % of Blackgate Moss is predominantly conifer ranging from over mature and mature SS/LP and pole stage LP/BI/SS
The various stands are spread throughout the remaining forest therefore there is an opportunity to fell the remaining crops in one operation.
 There is a risk of overmature crop succumbing to windthrow in the interim and younger crops may not have reached their MAI conceding potential harvesting volume

The majority of Carnwath Moss was felled in 2014 to allow the restoration of the lowland raised bog. Some windthrow remains which is being allowed to decompose.
Restoring lowland raised bog will improve the biodiversity of the area and enhance carbon capture.
 Regen from the former crop will need to be controlled

Legend

- The Mosses
- Couthalloy Castle Scheduled Monument
- SSSI
- Forest Access
- Dippool Water

© Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number [100021242]

Scale: 10,000 @ A3
 27 Jun 2017

Forestry Commission Scotland
 Coimisean na Coilltearachd Alba

Scottish Lowlands FD
THE MOSSES
 4a (v)
KEY FEATURES
OPPORTUNITIES
 and
CONSTRAINTS

Scottish Lowlands FD

NORTH CLYDESDALE FORESTS

HEATHLAND

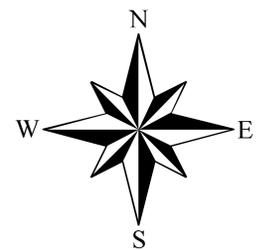
4b (i)

ANALYSIS and **CONCEPT**

Scale: 6,750 @ A0



31 Jan 2017



Legend

-  Heathland
-  Forest Access
-  Proposed Roads
-  Forest Footpath
-  OH Power
-  UG Power
-  Mains water
-  Heritage Features Point
-  Heritage Features Line
-  Heritage Features Polygon
-  <all other values>

Proposed Functional Zones

-  Productive Conifer
-  Non productive broadleaves
-  Transitional Forest
-  Public Road Corridor
-  Riparian Habitat Corridor

Diversification of crops along road corridors and visible edges has begun however some stands remain as well as natural conifer regeneration beginning to intrude.

Continue to diversify the species and age range of crops along public roads and highly visible forest edges.

Lochan feature formed as a result of former open cast mining surrounded predominantly by sitka spruce although there is pond edge vegetation.

Diversify lochan edge species to enhance biodiversity.

Some areas of severely checked growth predominantly on areas of peat or poorly restored former open cast coal mines.

Where economics allow, harvest poorer quality crops and restock with appropriate peat edge broadleaved species or manage as open habitat. Allow natural processes to dictate in areas where poor crops cannot be removed.

Upland location provides potential for renewable energy development

In designing the management coupes consider the impact of proposed renewable development.

A variety of archaeological features are located across the sites including Wilsontown Ironworks Schedule Monument.

Design future planting to protect and reveal features such as tramways whilst facilitating access within the site for wildlife management.

Larch areas next to road at Wilsontown Glen beginning to show signs of windthrow.

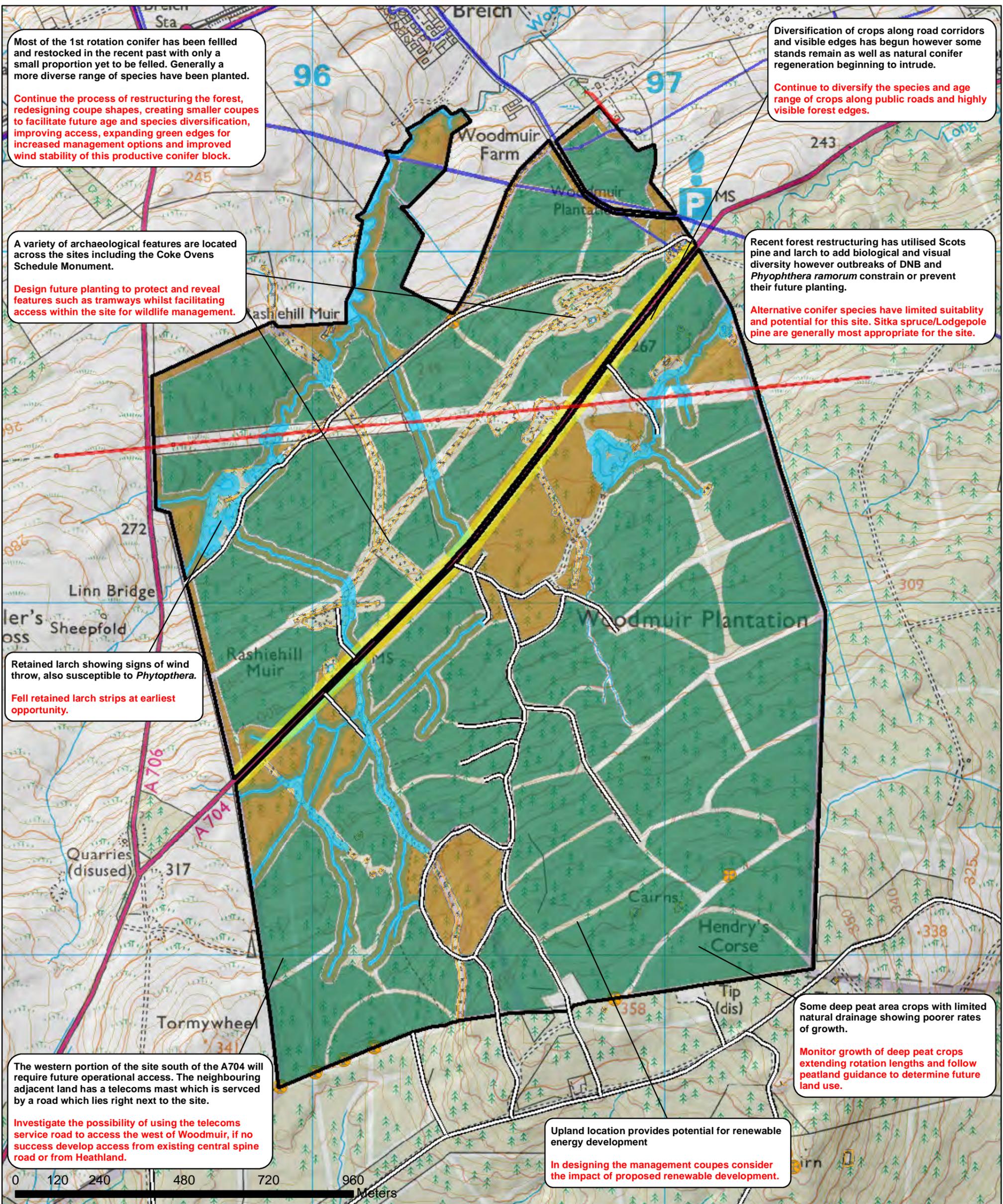
Fell dense unthinned larch in Wilsontown Glen and replace with a mix of broadleaves and shrubs at appropriate amenity densities so that minimal management intervention is required going forward.

Remnant area of larch have been left unfelled along watercourses and forest edges with adjacent fellings leading to isolated strips vulnerable to windthrow.

Redesign future management coupe shapes to allow for species diversification and the enhancement of riparian areas using broadleaves which could contribute to a forest habitat network linking to the Clyde Valley woodlands.

Recent forest restructuring has utilised Scots pine and larch to add species and visual diversity however outbreaks of DNB and *Phyophthera ramorum* constrain or prevent their future planting.

Where appropriate utilise alternative conifer species, elsewhere consolidate the use of Sitka spruce in pure crops or in mixture with Lodgepole pine.



Most of the 1st rotation conifer has been felled and restocked in the recent past with only a small proportion yet to be felled. Generally a more diverse range of species have been planted.

Continue the process of restructuring the forest, redesigning coupe shapes, creating smaller coupes to facilitate future age and species diversification, improving access, expanding green edges for increased management options and improved wind stability of this productive conifer block.

Diversification of crops along road corridors and visible edges has begun however some stands remain as well as natural conifer regeneration beginning to intrude.

Continue to diversify the species and age range of crops along public roads and highly visible forest edges.

A variety of archaeological features are located across the sites including the Coke Ovens Schedule Monument.

Design future planting to protect and reveal features such as tramways whilst facilitating access within the site for wildlife management.

Recent forest restructuring has utilised Scots pine and larch to add biological and visual diversity however outbreaks of DNB and *Phytophthora ramorum* constrain or prevent their future planting.

Alternative conifer species have limited suitability and potential for this site. Sitka spruce/Lodgepole pine are generally most appropriate for the site.

Retained larch showing signs of wind throw, also susceptible to *Phytophthora*.

Fell retained larch strips at earliest opportunity.

The western portion of the site south of the A704 will require future operational access. The neighbouring adjacent land has a telecoms mast which is serviced by a road which lies right next to the site.

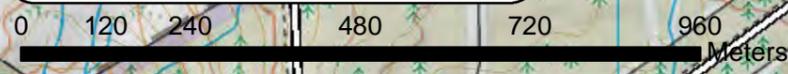
Investigate the possibility of using the telecoms service road to access the west of Woodmuir, if no success develop access from existing central spine road or from Heathland.

Some deep peat area crops with limited natural drainage showing poorer rates of growth.

Monitor growth of deep peat crops extending rotation lengths and follow peatland guidance to determine future land use.

Upland location provides potential for renewable energy development

In designing the management coupes consider the impact of proposed renewable development.



Legend

- Woodmuir
- powerline_oh
- Forest Access
- Mains water
- Heritage Features Point
- Heritage Features Line
- Heritage Features Polygon

Proposed Functional Zones

- Productive conifer
- Non productive broadleaves
- Public road corridor
- Riparian Habitat Corridor

©Crown copyright and database right [2016]. All rights reserved. Ordnance Survey Licence number [100021242]

Scale: 10,000 @ A3

31 Jan 2017

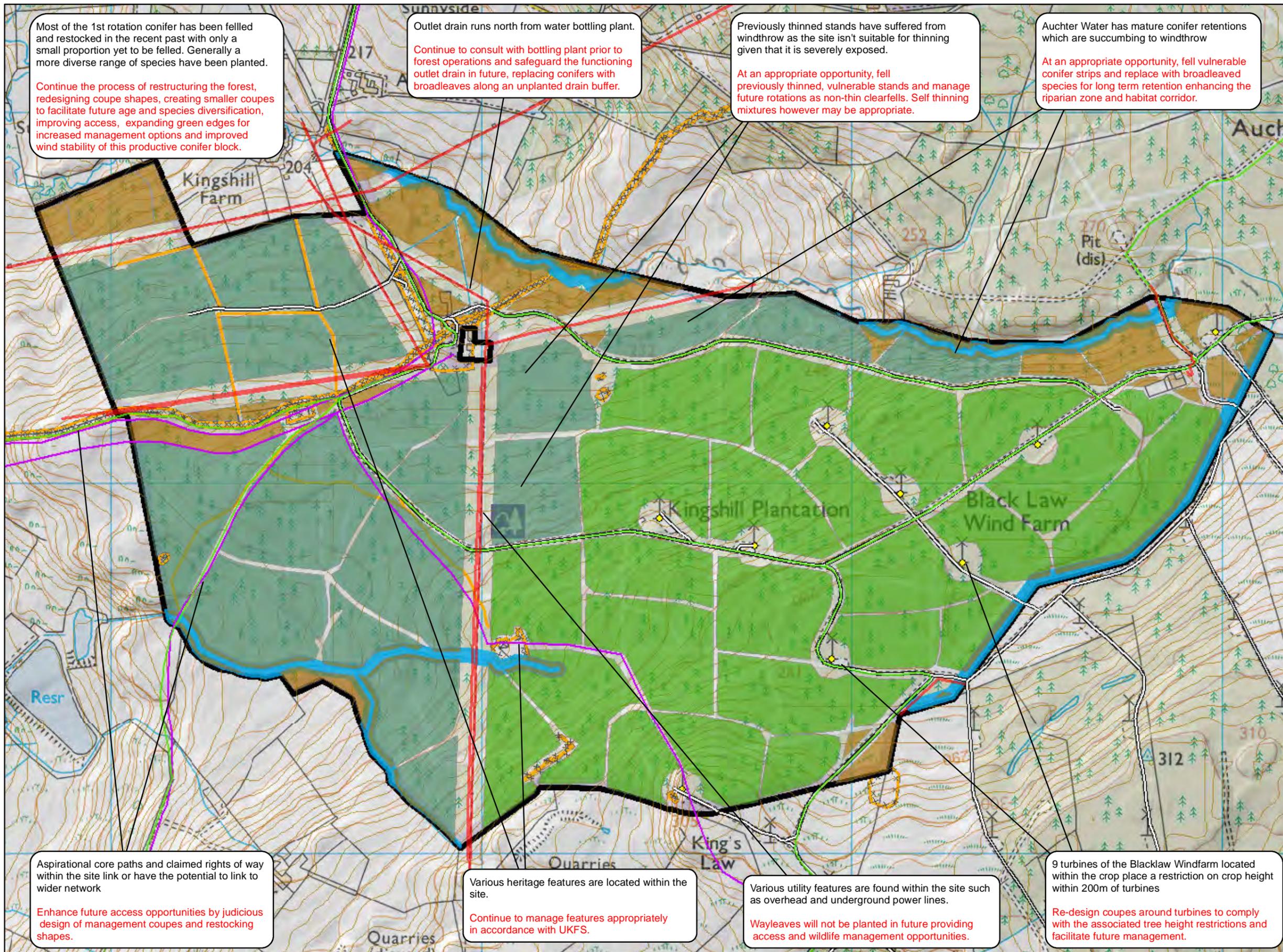
Forestry Commission Scotland
Coimisean na Coilltearachd Alba

Scottish Lowlands FD
NORTH CLYDESDALE FORESTS

WOODMUIR

4b (ii)

ANALYSIS and **CONCEPT**



Most of the 1st rotation conifer has been felled and restocked in the recent past with only a small proportion yet to be felled. Generally a more diverse range of species have been planted.

Continue the process of restructuring the forest, redesigning coupe shapes, creating smaller coupes to facilitate future age and species diversification, improving access, expanding green edges for increased management options and improved wind stability of this productive conifer block.

Outlet drain runs north from water bottling plant.

Continue to consult with bottling plant prior to forest operations and safeguard the functioning outlet drain in future, replacing conifers with broadleaves along an unplanted drain buffer.

Previously thinned stands have suffered from windthrow as the site isn't suitable for thinning given that it is severely exposed.

At an appropriate opportunity, fell previously thinned, vulnerable stands and manage future rotations as non-thin clearfells. Self thinning mixtures however may be appropriate.

Auchter Water has mature conifer retentions which are succumbing to windthrow

At an appropriate opportunity, fell vulnerable conifer strips and replace with broadleaved species for long term retention enhancing the riparian zone and habitat corridor.

Aspirational core paths and claimed rights of way within the site link or have the potential to link to wider network

Enhance future access opportunities by judicious design of management coupes and restocking shapes.

Various heritage features are located within the site.

Continue to manage features appropriately in accordance with UKFS.

Various utility features are found within the site such as overhead and underground power lines.

Wayleaves will not be planted in future providing access and wildlife management opportunities.

9 turbines of the Blacklaw Windfarm located within the crop place a restriction on crop height within 200m of turbines

Re-design coupes around turbines to comply with the associated tree height restrictions and facilitate future management.

Scottish Lowlands FD

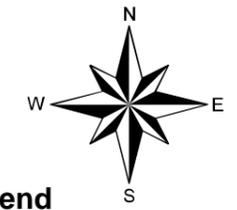
NORTH CLYDESDALE FORESTS

KINGSHILL
4b (iii)
ANALYSIS and **CONCEPT**

Scale: 10,000 @ A3



14 Sep 2017

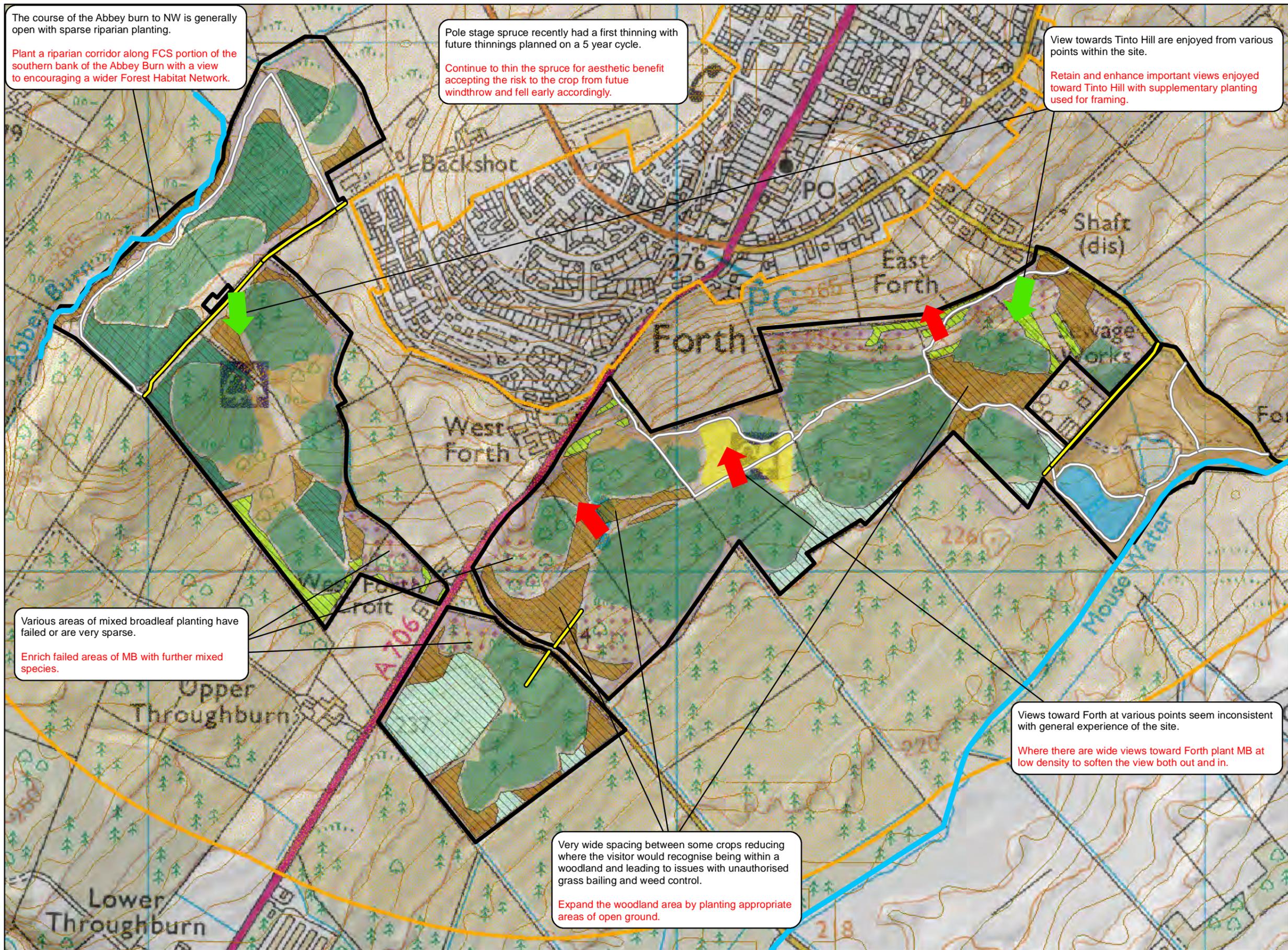


Legend

-  Kingshill
-  Overhead power
-  Wind turbine
-  Forest road
-  Core path
-  Claimed right of way
-  Heritage Features Point
-  Heritage Features Line
-  Heritage Features Polygon

Proposed Functional Zones

-  Productive conifer
-  Short rotation conifer
-  Non productive broadleaves
-  Riparian corridor

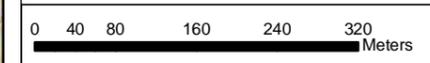


Scottish Lowlands FD

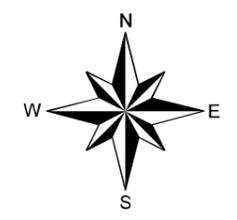
THE NORTH CLYDESDALE FORESTS

WEST FORTH
4b (iv)
ANALYSIS and CONCEPT

Scale: 7,000 @ A3

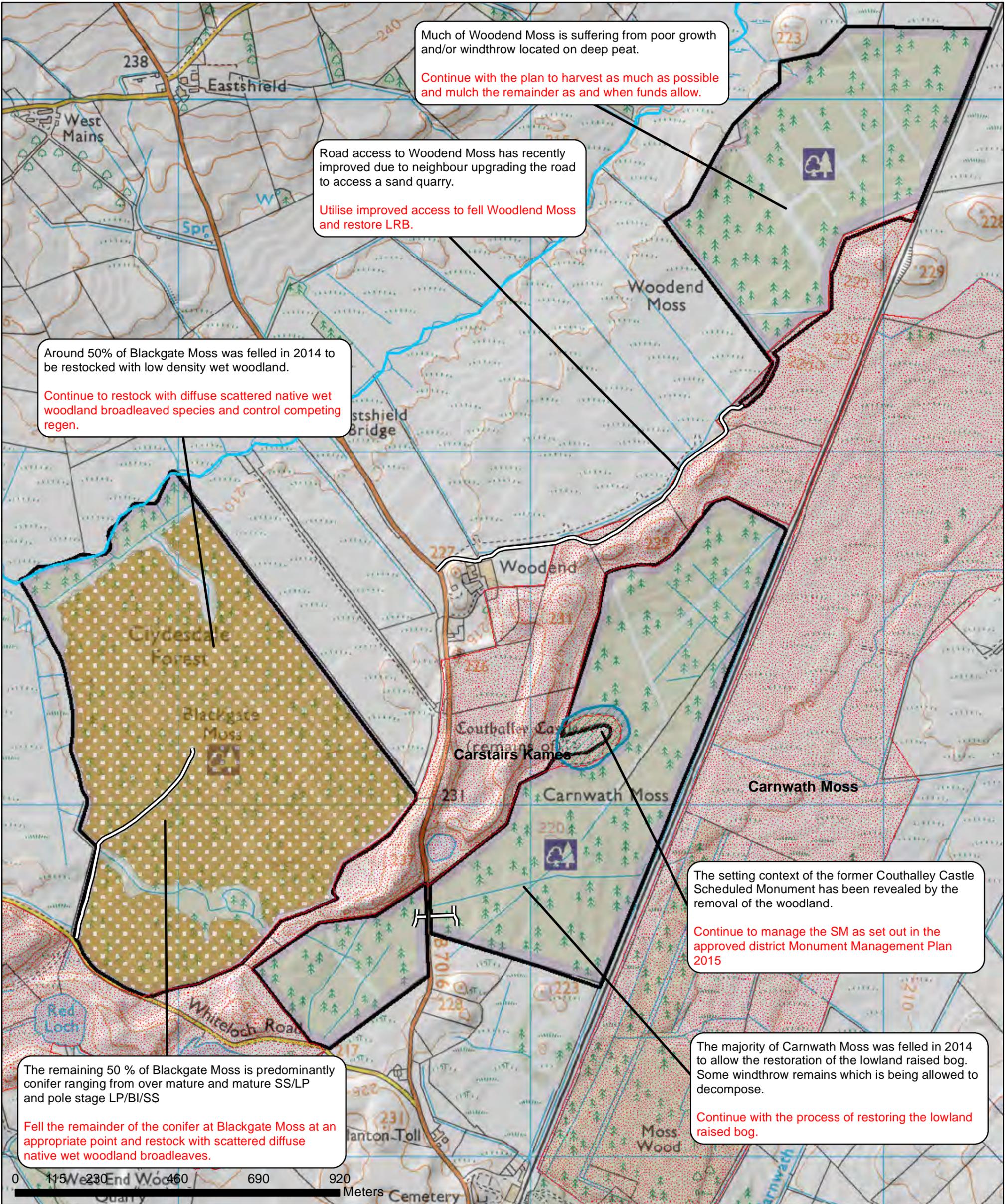


31 Jan 2017



Legend

- West Forth
- Existing Woodland**
 - Productive conifer
 - Broadleaves
 - Scattered scrub
 - Watercourse
 - WIAT 1K zone
 - Forest road
 - Path
- Other Habitat**
 - Flower meadow
 - Reedbed
- Proposed woodland expansion**
 - Conifer
 - Mixed broadleaves
 - Wet woodland
 - Woody shrubs
 - Abrupt view out towards urban Forth.
 - Excellent views towards Tinto Hill



Much of Woodend Moss is suffering from poor growth and/or windthrow located on deep peat.
Continue with the plan to harvest as much as possible and mulch the remainder as and when funds allow.

Road access to Woodend Moss has recently improved due to neighbour upgrading the road to access a sand quarry.
Utilise improved access to fell Woodend Moss and restore LRB.

Around 50% of Blackgate Moss was felled in 2014 to be restocked with low density wet woodland.
Continue to restock with diffuse scattered native wet woodland broadleaved species and control competing regen.

The setting context of the former Couthalley Castle Scheduled Monument has been revealed by the removal of the woodland.
Continue to manage the SM as set out in the approved district Monument Management Plan 2015

The remaining 50 % of Blackgate Moss is predominantly conifer ranging from over mature and mature SS/LP and pole stage LP/BI/SS
Fell the remainder of the conifer at Blackgate Moss at an appropriate point and restock with scattered diffuse native wet woodland broadleaves.

The majority of Carnwath Moss was felled in 2014 to allow the restoration of the lowland raised bog. Some windthrow remains which is being allowed to decompose.
Continue with the process of restoring the lowland raised bog.



Legend

- The Mosses
- Non Productive Diffuse Native Wet Woodland
- Couthalley Castle Scheduled Monument
- SSSI
- Forest Access
- Dippool Water

©Crown copyright and database right [2016]. All rights reserved. Ordnance Survey Licence number [100021242]

Scale: 10,000 @ A3

13 Feb 2017

Forestry Commission Scotland
Coimisean na Coilltearachd Alba

Scottish Lowlands FD
THE NORTH CLYDESDALE FORESTS

THE MOSSES

4b (v)
ANALYSIS and **CONCEPT**