

Limited Species Range
 - Increase species diversity to improve adaptability to future pests/diseases and climate change, and to increase biodiversity, niche timber products and visual amenity
 - 70% of existing woodland is Sitka spruce and Lodgepole pine

Semi-natural Forest Habitat Networks
 - Newly acquired central open area provides opportunity to develop extensive forest habitat networks across the site.
 - Existing forest habitat networks are largely confined to external fringes of the site.

Ride Networks
 - Good existing ride network in Merkins, which has benefited from recent clearance of spruce regen.
 - Auchentorlie and Auchineden have a limited number of rides, restricting operational access for ongoing management.

Pests + Diseases
 - Site already has DNB-infected pine stands, and is in the high risk zone for developing *P. ramorum* on larch.
 - *C. fraxinea* is not thought to be present but has been found in nearby woodlands to the south.
 - Extensive birch dieback on WGS plantation north of Cochno Hill

Recreation
 - Potential to create a visitor attraction of regional significance
 - Potential to increase economic benefit to the local area
 - Extensive consultation already undertaken with large numbers of existing + potential users. Response to the potential for increased recreation opportunities has been largely positive.
 - Network of formal and informal walking and riding (horses + mountain bikes) routes already present on site.
 - Little provision within existing plantations for recreation opportunities.
 - Multiple high points within the site are popular walker destinations, with viewpoints across large parts of the site.
 - Existing plantations are often densely planted close up to entrances, reducing appeal of key recreation entrances.
 - John Muir Trail route through Merkins may restrict potential for commercial restocking along the course of the trail.
 - Potential for increased visitor numbers to be utilising operational road network.
 - Some existing recreational users of the Kilpatrick Hills may be unhappy with large amounts of formal recreation features being installed on site.
 - New routes may increase the disturbance of species such as black grouse and osprey.

Climate / Soils / Elevation
 - Better quality soils across various areas over the site, particularly to the south, increases the range of species suitable for planting.
 - More sheltered areas on the south and north eastern edges of the site offer increased silvicultural options.
 - Poor quality soils and deep peat across extensive areas of the site, particularly to the north, restricts range of suitable species.
 - Upland elevation of large areas, in combination with estuarine location of site, increases exposure levels and windthrow risk.
 - Planting on unsuitable ground has resulted in substantial areas of check/dieback

Harvesting Access
 - Access into Auchentorlie via Thompson's quarry recently secured, and new road constructed by Scottish Power along main wayleave.
 - Planned roads programme will improve harvesting access for much of the existing plantations.
 - Majority of existing woodland sufficiently mature to minimise impact of browsing
 - Currently no road access into Merkins or Knockkuppe.
 - Some areas of existing plantations are difficult to harvest economically (more than 500m from current or planned roads)
 - Difficult access to existing planting on steep ground and crags.

Lochs + Reservoirs
 - Water quality paramount for reservoirs acting as operational water suppliers.
 - Several other water bodies are maintained, although they do not currently supply water.
 - A number of the lochs and reservoirs are fished by angling clubs

Restructuring / Age Diversity
 - Newly acquired central areas offer opportunity for new woodland creation
 - Ongoing felling and restock programme is starting to diversify age range.
 - Existing plantations have very limited range of age classes, having generally been planted over 2-3 year period.
 - Conifers are generally exceeding critical height, and extensive windblow is already present across the site.

Watercourses
 - Riparian woodland planting in appropriate locations can improve water quality and link disconnected habitats.
 - Potential impact on ease of accessibility of productive areas when harvesting
 - Extensive use by otter for feeding and movement

Utilities
 - Utilise mandatory open space to increase habitat quality.
 - Reduce visual impact through careful planting design
 - Utilities require periodic access for maintenance and may require buffer zones for safety.
 - Main overhead power lines have a strong impact on the landscape

Browsing Damage
 - Majority of existing woodland sufficiently mature to minimise impact of browsing
 - New planting at Cochno Hill vulnerable to browsing
 - Localised deer population with potential to become extensive as new planting progresses.
 - Roe widespread while Red are present primarily in the north and east of the block.
 - Livestock (sheep + cattle) accessing site in multiple locations
 - Grey squirrel pose potential threat to young crops

Designated Areas
 - Increases biodiversity potential over the site.
 - Several SSSIs are present on site and managed under agreed plans and several others are immediately adjacent to site.
 - Course of Antonine Wall WHS runs through southernmost edge of the site, and associated buffer zone extends up southern slopes of Kilpatrick Braes to the ridge.

Landscape
 - Newly acquired central areas offer opportunity to soften existing internal hard edges.
 - Felling + restocking programme offers opportunity to improve views to and within the forest
 - Central plateau offers a very wild + remote feeling, despite it's proximity to significant population centres.
 - Existing even aged plantations take little account of landscape features and sit quite starkly in the wider landscape.
 - Southern areas of the site, particularly around the Kilpatrick Braes, are highly visible from wider Glasgow area.

Community
 - Involve local community in design and planting of woodland.
 - South slopes of Kilpatrick Braes in WIAT area
 - Educate local communities on the Forest Cycle
 - Potential to increase economic benefit to the local area
 - Small isolated block south of A82 adjacent to residential areas in Old Kilpatrick
 - Little previous management means that communities are not used to large scale forest operations.

Archaeology
 - Creation of buffers around sites of interest provides opportunity to diversify forest structure and create internal views.
 - Protect and enhance sites whose context is lost under canopy
 - Range of sites of archaeological interest present, potentially limiting planting and operational activity

Biodiversity
 - Protect and enhance environment for existing species, including black grouse, osprey, otter, pine marten, cuckoo, yellow meadow ant.
 - Preserve and extend ecologically valuable woodland habitats
 - Link habitat development between forest and new planting areas to maximise benefits for both open space and woodland habitats.
 - Diversification of grassland/health habitats through removal of intensive grazing and creation of young woodland will provide a greater variety of niches for FC priority species such as black grouse.
 - Balance of habitats will increase niches for woodland and open habitat bird species
 - Loss of productive area and deforestation due to open habitat restoration
 - Small areas of designated woodland (ASNW + LEPO) present on southern slopes of Auchentorlie and Gavinburn

Legend

- Kilpatrick Hills
- Designated Areas
 - SSSI
 - Scheduled Monument
- Utilities
 - Power line
 - Gas
 - Water

Scale: 1:20,000 @ A1



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Forestry Commission Scotland
 Coimisean na Coilltearachd Alba
Kilpatrick Hills FDP
 Scottish Lowlands Forest District
Opportunities and Constraints