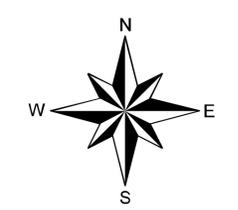




Jan 2015



Legend

- Forest Block
- Proposed Zoning**
- Exposed slopes (better soils)
- Exposed slopes (poorer soils)
- Mid slopes
- Sensitive lower slopes
- Open/Transitional ground
- Principle Riparian Corridors
- Recreation + Heritage
- Watercourse
- Forest Roads**
- Public road
- FC Road
- Potential extension route

Principle Riparian Corridors

- The situation of the forest around the reservoir makes water quality a key consideration.
- An extensive network of minor burns are present on the eastern half of the main block, whilst the western half includes the two largest watercourses.
- Many of the existing minor watercourses have little to no open ground in the immediate vicinity – in part due to historic planting patterns in the older stands (where it was common practice to plant tight up to burnsides) and also due to extensive natural regeneration, primarily of Sitka spruce.
- The extremely extensive watercourse network within and adjacent to the site (approximately 90km overall) means that there is currently insufficient budget/manpower to maintain open ground buffers around all watercourses.
- Careful consideration of design implications for water quality will be needed in terms of species choice, location of productive crops, silvicultural management regimes, drainage alignment etc.
- Identify a series of main riparian corridors across the site, selected on the basis of scale, habitat network potential, deer management potential or fish spawning routes (or preferably a combination of these) to be actively managed as semi-open riparian habitat.
- On the remaining watercourses, look to plant native broadleaves at a greater density with the intention to create heavily dappled shade, and with a minimal amount of open space along the burns, in order to minimise the potential for Sitka regeneration and thus the requirement for more intensive management.
- Utilise the extensive watercourse network to provide a series of semi-natural forest habitat networks linking both within and across the site.

Open/Transitional Ground

- Need to strike a balance between maintenance of productive capacity versus landscape or open habitat objectives.
- The principle Priority Habitat is blanket bog around the open hill tops.
- Previous efforts to create an upper margin of transitional woodland have been problematic due to heavy browsing pressure, poor targeting of soft species and prolific Sitka regeneration.
- A trial felling of Sitka regeneration on the south east corner by the Tak Ma Don road indicates that some transitional woodland is establishing, although remaining areas will likely be outcompeted by the Sitka regen in the next few years if remedial action is not taken.
- Maintain existing open areas around hill tops on the Priority Habitats and those areas too exposed for forestry.
- Where current productive crops are difficult to harvest economically (principally on steep slopes or a considerable distance from the existing road infrastructure), explore the potential for restructuring during the next rotation to convert to open ground or transitional native woodland.
- Undertake management programme where appropriate to retain transitional woodland along upper margins to increase biodiversity (e.g. for black grouse) and soften landscape impact. Elsewhere, accept Sitka regeneration and manage as productive mixed crop.
- Consider landscape impact of current forest edges, and use open ground and/or transitional woodland to soften these where appropriate.

Recreation + Heritage

- Well used network of mountain bike tracks and walking routes concentrated around main car park at east end of the site.
- Popular walking route along forest road from informal car park at west end of the site to Meikle Bin.
- Duncannon medieval village reconstruction project ongoing, involving periodic spikes in visitor numbers during organised events (e.g. Halloween).
- Scheduled Monument (Sir John de Grahams Castle – remnants of motte + bailey) located above reservoir at west end of Cairnoch, Kirk o' Muir burial ground at east end.
- Consider management implications of future species choice around key recreation areas (e.g. windthrow risk, drip lines along trail routes, amenity value).
- Consider opportunities for opening out views (permanent or temporary) along key recreation routes.
- Consider diversifying species mix to increase amenity value through use of broader range of suitable broadleaves and conifers.
- Look for opportunities to develop stands of 'big trees' where suitable for increased biodiversity/amenity value.
- Explore potential for new walking route to Meikle Bin via River Carron and Bin Burn.

Sensitive Lower Slopes

- Stands in immediate vicinity of reservoir have significant implications for water quality in terms of species choice, management regimes etc.
- Lower slopes are most prominent visually, and have greatest impact on amenity value of the site.
- Sheltered areas tend to correspond with best soils (brown earths and surface-water gleys).
- Extensive road network provides good access for future management operations.
- Some progress has been made in starting to diversify species makeup within this area.
- Where stands are suitable for thinning, look to manage under Low Impact Silvicultural System (LISS) management regimes to enhance landscape, biodiversity value and water quality. If existing stands are too old for conversion to LISS, consider doing so on next rotation, but take opportunities where possible to retain some veteran trees in perpetuity for biodiversity and amenity value.
- Adopt smaller felling coupes in visually sensitive areas.
- Take advantage of more favourable conditions by continuing to increase species diversity. If considering large-seeded broadleaves as a productive option, restrict to isolated 'islands'.

Exposed Slopes

- Approximately half the forest is on exposed ground (DAMS scores of 15 or higher), with the upper slopes generally corresponding with poorer soils (bogs and iron pans), whilst the exposed areas lower down are generally associated with better soils (peaty/surface-water gleys or brown earths).
- Historically, windthrow has been a significant problem, with sizeable areas blowing during various storms over the past decades.
- Vast majority of this area is currently stocked with Sitka spruce.
- Maintain the focus on productive crops, and where poorer soil conditions restrict potential species choice restock with Sitka or Sitka/Lodgepole mix as the principle element.
- Consider shortened rotations and/or alternate conifer species where soil conditions are better. Higher yield classes may be more suitable for pulp or chip than timber, so a shorter rotation should have a relatively minor impact on economic return whilst helping to reduce the risk of extensive windblow.
- Where site conditions permit, consider use of productive broadleaves (e.g. birch) as a biomass crop which may be less prone to windthrow, and which may also have value for improving the soil (e.g. deeper rooting species which can penetrate iron pans).
- Where appropriate, introduce areas of native broadleaves to safeguard water quality, improve biodiversity and landscape/amenity value.
- Consider coupe shape and ride width/orientation when designing next rotation to try and maximise future windfirm edges.
- Consider extending road infrastructure where existing crops are difficult to harvest economically.
- Greater landscape scale on the upper slopes offers the potential for larger felling coupes without significantly increasing visual impact.

Mid Slopes

- Undulating topography and localised ground conditions results in widely varying silvicultural potential.
- Where alternative species have been planted (principally larch, pine and a small amount of douglas fir) they are generally in small, isolated blocks that are difficult to manage individually and offer limited landscape benefit.
- Much of this area has a relatively low visual impact within the wider landscape.
- Explore options for thinning in more sheltered areas in order to achieve better quality timber as an end product.
- Take advantage where conditions are more favourable to increase species diversity (both conifer and broadleaves) in productive areas, at a scale that is easier to manage in future.
- Where appropriate, introduce areas of native broadleaves to safeguard water quality, improve biodiversity and landscape/amenity value.
- If considering introduction of large-seeded broadleaves, restrict to isolated 'islands' rather than developing networks through the forest, in order to reduce risk of impacting on red squirrel populations.
- Where visual impact in the wider landscape is minor, considering increasing size of felling coupes.

