Blelack and Craigmyle Estates

The group was welcomed to Logie Coldstone by John MacKay of Treeline Forestry on behalf of Gordon Drummond and Blelack and Craigmyle Estates Ltd. The 260ha of woodland managed at Logie Coldstone is predominantly Scots pine with more spruce in the northern part. The pine is of good quality and well thinned growing on a 110 year rotation. The present age structure of the woodland is lacking in stands of mid rotation age but regeneration is underway which will address this imbalance over time.

The owner’s objective is to make a positive return from his land and has diversified with forest cabins to improve his overall income. The woodland is well suited to forest based tourism from its location in Royal Deeside and with mature stand structure. The owner dislikes clearfell for aesthetic reasons and recognises the value of a quality woodland environment as the setting for his tourism business. The local market for Scots pine is such that the cabins bring in more income than the timber.

Stop 1 Strip shelterwood

Felled in 2016, pine regeneration was beginning to show in the 30+m strip with a good mast year in 2017. The dry spring has seen the loss of the initial flush of regeneration but this now appeared to be recovering. The disturbed ground of the extraction routes provided a good seed bed and the strip aligned at 90 degrees to the prevailing wind helped in seed dispersal. The heather areas were less successful and may need intervention later to promote regeneration.

The discussion inevitably turned to the impact of deer. The woodland is surrounded by farmland outside the estate’s ownership so deer management is confined to the forest area. The owner has recently accepted a move away from syndicate shooting, which provided an annual income, to management by a local group of shooters who retain the venison as payment. John has invested time in the group explaining the woodland management system and the importance of control on the regenerating areas using the level of damage incurred as a measure of success rather than relying on cull figures.

Stop 2 Scots Pine plantation

An older attempt at a strip felling system had been planted but also filled with some natural regeneration. This strip was thinned a couple of years ago using racks and taking a few trees from the matrix.
This allowed access into the stand but there was general agreement that this had been a bit late with the canopy mostly less than 1/3 of the height of the stand. The next intervention would need to try and focus on freeing the crowns of the better trees. Ideally the next thinning should be marked by the forester to ensure that the best trees were retained and opened up. The estate was fortunate to have a contractor who had built up experience of working in these type of woodlands but it is still not easy to see the trees from a cab especially in poor light conditions.

There was a certain amount of frustration in the group over the markets for small roundwood and some of the specification which are inefficient for extraction but have little obvious rationale for the mill operation. E.g. 3m Norboard chip would be more efficient for extraction in 4.0m or 4.5m lengths.

**Stop 3 Uniform Shelterwood**

The third stop of the morning was an attractive stand of mature seed trees above an established understory of 15-20 year old pine and some birch. The group agreed that no action such as respacing was required at present with racking in 10-15 years’ time likely to be the next intervention. The biomass market was helpful for reducing the cost of these operations and, if one were available, a feller-buncher would be worth trying. The removal or not of the parent trees provoked further discussion as felling them now would do a certain amount of damage to the understorey. They could be felled at the time of first thinning or left indefinitely continuing to provide an attractive overstorey. As the trees increase in size they become less suitable for the standard markets but increase in potential for niche markets…..such as building cabins.

**Stop 4 Mature Scots pine stand**

A brief stop was made to consider what to do next with this well thinned mature stand of Scots pine with spruce in the wetter flushes. Another thinning was generally felt to be the best option given the felling in other parts of the woodland and the owner’s desire to maintain a mature woodland cover. There was no urgency to initiate regeneration.
Stop 5 Reverse group shelterwood

The last stop of the morning was an interesting coupe with an alternative approach to regeneration while still retaining the aesthetics of woodland to the owner’s satisfaction.

Groups of mature trees had been left approximately 70m apart and with enough trees per group to fill a forwarder. Although predominantly Scots pine as the owner prefers, some younger Norway spruce had also been left for diversity. The approach met with the owner’s approval and should also allow the recovery of the standing timber more easily and economically in the future. The drawback is that there is less selection of good quality parent trees as the seed trees and the distribution of the regeneration may be uneven. However, the crop was of an acceptable quality and the site layout would also facilitate scarification if this is deemed necessary.

Photograph 2: Stop 5 – reverse group shelterwood

Glen Tanar Estate

At our first stop after lunch, Mike Thomson welcomed us to Glen Tanar estate on behalf of the owner Michael Bruce, and gave us an overview of the estate forest management policy. A significant proportion of the woodland on the estate is native pinewoods within the Glen Tanar nature reserve and is, therefore, managed primarily for conservation benefits. In area outside the nature reserve, however, the estate policy is to manage the woodlands through continuous cover methods. Commercial management is the priority in these areas and it was felt that encouraging natural regeneration was the most cost effective method of regenerating the woodlands.
The Long Term Forest Plan which was drawn up in 2009, therefore, focused on moving from clear fell and restock strategies to selective felling. The regime prescribed for all the woodlands (including Douglas fir, Sitka spruce and Scots pine) was for a uniform shelterwood. This was to be achieved by reducing the mature tree cover to 100 stems per hectare and scarifying. No internal deer fencing was proposed as the estate has a shield fence around it to the west and additional control was to be achieved through shooting alone.

On the basis of this plan the estate applied for LISS grant funding through SRDP. The contract paid for marking of the trees to be retained, bracken control and scarification. However, it has also proved very difficult to vary as it is such a complex and interlinked system of grant payments. This has meant that it has been difficult to adjust the plan in response to experience gained on site.

Stop One

The first site that we looked at was mature Douglas fir. On one side of the road was Douglas fir planted in 1961 that has been selectively felled from about 600 stems per hectare down to 100 stems per hectare in 2013 followed by scarifying. A number of small gaps were apparent in the canopy where windblow had occurred. In addition, Mike informed us that the disturbed soil from the scarification had disappeared within 12 months due to the fertility of the ground.
Walking around the site, there was a small amount of birch and Douglas fir regeneration but nothing was becoming established. The grass and other competitive weeds were certainly an issue but the limiting factor seemed to be the deer. Despite a significant annual cull it seems that the deer numbers are still too high for successful establishment without fencing. As the group disturbed a couple of deer within the wood on our walk about it would seem that the keepers are certainly facing a tough challenge. Mike informed us that the estate are now intending to fence these areas for regeneration.

On the other side of the road was Douglas fir of the same age which had been thinned down to 200 stems per hectare in 2017 and scarified. The basal area of the overstorey is now 26 which should be sufficient for Douglas fir to regenerate. However, there appeared to be a lack of cones in the overstorey in order to provide the amount of seed required and some in the group thought that the overstorey trees were not yet at their optimum coning age.

The quality of the overstorey was very high. Mike explained that the retained trees had been selected on size, crown depth and spacing. Currently the larger logs are sold to Kirriemuir but if the trees were retained for a longer period of time they might be suitable for specialist markets such as A J Scotts.

A final discussion point for the group was how to control the ground vegetation. Some suggested that by selectively felling from quite a high density to low density in one go, the opportunity had been lost to use the shade of the overstorey to control the grass competition. Another suggestion was that on the continent, larch is used for its natural grass suppression abilities and whether that could be used here to help establish a mixed crop.
Stop Two

The second stop was at a mixed conifer stand of Sitka spruce, larch and Scots pine. It was planted in 1952 and selectively felled in 2016 to 100 stems per hectare. A good amount of Sitka spruce has regenerated on the higher slopes under the Scots pine, although the seed trees are at the bottom of the slope in a wet pocket. There is also sporadic larch regeneration but almost no pine and very little broadleaves.

Mike told us that the areas where there had been no advanced regeneration had been recently scarified. However, he thought the pine were simply too young and had not taken advantage of this window of opportunity. He was particularly concerned about the Sitka spruce regenerating on the higher slopes as there had already been a percentage of drought crack in the mature Sitka spruce that had been felled. Given that the annual rainfall in Deeside is low for Sitka spruce and projected to get drier, he was understandably worried that these trees would not be commercially viable in the future.

As ever the group had a mix of views and opinions on Mike’s predicament. Anecdotally, drought crack is worse where the water table goes up and down, not where it is consistently dry so some thought that the Sitka spruce on the slope might not be at that high a risk. Others thought that the young Sitka spruce could be preferentially felled at first thinning to create opportunities for the pine to regenerate when the overstorey trees are more mature. Some suggested removing the seed trees to prevent more regeneration and yet others said that Deeside was too heavily dominated by Scots pine and that the Sitka spruce should be retained in order to increase diversity.

From here the conversation veered into plant health generally as it was noted that even if the drought crack is not significant it can increase the likelihood of secondary infection such as Elatobium. This prompted others to ask what the current risk of Phytophthora was to the larch element of the stand. At present, Phytophthora infection has only been identified in individual trees in the north east and even then it has always been a secondary infection on an already stressed tree.

In conclusion, Mike told us that he is currently in the process of reviewing the LTFP for the estate. The intention is to continue with continuous cover management on the majority of the commercial blocks, except where the wind risk is considered too high. However the specification is likely to change, for instance with more focus on gradual thinning rather than selective felling and not looking at regenerating Scots pine blocks until they are at least 80 years old. Fencing is also going to be included as part of the standard management.

Our thanks go to John and Blelack and Craigmyle Estates and to Mike and Glen Tanar estate for sharing with us their experience and lessons learned and we wish them well as they continue to manage these fine woodlands under CCF systems.

Hester Robertson & Claire Wightman
Photographs courtesy of Simon Stuart