

Timber Quality Steering Group. Meeting at Northern Research Station, Monday 25th June 2007

Present:	Colin Forsyth (CF)	- Chair, PB Forestry Lands
	Richard Ogilvy (RO)	- Christie Elite Nurseries Ltd
	Alan Corson	- Forest Enterprise (England), York
	Barry Gardiner (BG)	- Forest Research, Timber Properties Programme
	Shaun Mochan (SM)	- Representing James Jones
	Derek Nelson	- Forestry Commission Scotland
	Graham Gill	- Forest Enterprise, FDM Kielder
	Jim Dewar (JD)	- Forestry Commission, Corporate and Forestry Support
	Roger Coppock	- Forestry Commission (Scotland)
	Steve Lee (SL)	- Forest Research, Conifer Breeding Programme
	Tim Liddon (TL)	- Tilhill Forestry Ltd
	Christine Cahalan	- Bangor University
	Gordon Callander	- Callander's sawmill
	Stuart Kennedy (SK)	- Aberdeen University
	John Moore (JM)	- Napier University

Apologies: Chris Jones, David Leslie (substituted by Shaun Mochan), John Morgan, Geoff Cooper, Michael Fairgrieve, Philip Turner (permanent substitute representing Napier University will be John Moore)

1. *Introduction:* CF welcomed everybody to the meeting and especially people who had not attended before including Christine Cahalan, John Moore, Shaun Mochan and Stuart Kennedy.
2. *Minutes of the last meeting:* The minutes of the last meeting (Kielder, 1st Nov 2006) were taken as a true record.
3. Matters arising:
 - i. *Economics of improved planting stock:* The proposed Information Note by Guy Watt and SL on the economics of planting improved Sitka spruce was seen as an important output. SL agreed that this should be completed before the end of March 2008.
 - ii. *Climate change:* SL gave a presentation received from Duncan Ray of FR who had been commissioned by FC(S) to investigate the likely impacts of climate change on many aspects of forestry and silviculture including species choice and wood quality. The Group wanted to know if the paper supporting the presentation (not seen) would be widely available or was a confidential internal FCS document. The Group would at the least like to see the section of the report relating to Timber Quality.
Action: BG to ask Simon Hodge for permission to distribute pertinent sections of the report to Group members.
 - iii. *Lammas growth and double whorling* – have yet to be added to the branching model within the timber quality model.
 - iv. *Green Logs/ Red logs:* SM gave a presentation on the work he is doing whilst on secondment to James Jones investigating the practical use of acoustic tools on both the standing tree and logs in the forest and at the sawmill. The objective is to help the sawmiller improve profitability by more accurate screening of construction grade timber at an earlier stage. SM's work includes processing in the mill based on acoustic quality and not top diameter. Trials including an acoustic tool on a harvester head are planned for 2008. Presentations to the wider industry are planned for late 2007

4. *Separation of the Programme Advisory Group (PAG) from the Conifer Timber Steering Group (CTSG).* JD explained that since the Kielder meeting in November of last year the programs covered by the PAG including conifer breeding and conifer timber quality had expanded (now included yield modelling, broadleaf breeding and bio-fuels amongst others) and the CTSG (this Group) was no longer suitable as a pseudo PAG. He thanked the Group for being prepared to take on the role of the PAG but this was no longer necessary. JD and SL explained that members of the Group could be heard at the PAG via JD or any one of the country representatives. DN represents Scotland on the PAG; Chris Jones represents England on the PAG and they are both members of this Group. England is represented on the PAG by Andy Mason (FE (E)). JD suggested that this Group could put forward items for the PAG agenda if they wished to. The PAG should see the minutes of this Group and there should be a link between web-sites.
Action: SL and JD
5. *Impact of the PAG on conifer breeding.* SL explained how the new PAG had asked for a review of conifer breeding which was now underway. Out of a FR total spend of £11m, conifer breeding receives £750k and is the largest single spend. Recent retirement of the project leader for clonal forestry technologies in particular means that now is an opportune time to investigate if conifer breeding is presenting good value for money. SL explained that no quick decisions were made at the first PAG meeting where it was decided that the future of clonal forestry technologies should await the independent expert review to be carried out in the first week of July by Dr Yill-Sung Park of Canada. The PAG review had now been extended to include broadleaf breeding. The PAG was due to meet again in August.
Action: SL to keep the Group informed of developments.
6. *Clonal forestry - report from last meeting.* SL gave a summary of recent clonal forestry literature mainly taken from a review carried out by David Thompson of Coillte (Ireland), assisted by recent e-mail exchanges with colleagues in Canada and New Zealand. The main finding was one of promise which had generally not developed into practical exploitation in many cases. RO reminded the group that some companies in USA are now planting millions of plants produced by Somatic embryogenesis (SE) but it was not known if they were truly tested clones which could be taken in and out of the cryo-store (liquid nitrogen) without any problem. There is a high degree of random selection for genotypes which are amenable to the SE process quite independent of adaptability or economic traits – out of 100 embryos, only 2 or 3 finally reach the testing stage (*addition since the meeting*: thought to be nearer to 30 or 40 for Sitka spruce derived from immature embryos). TL also reminded the group that SE was being used in Ireland to bulk up scarce improved seed. SL said that there were no SE-derived trees in the ground in GB. The Group asked that as much as possible the Dr Park review of SE and cryo work done to date by FR should be distributed amongst them.
Action SL to distribute non-confidential parts of the Dr Park report.
7. *Work by Napier University on timber from (i) Kershope forest and (ii) Baronscourt (Northern Ireland):* JM presented his finding from the above two studies carried out in conjunction with FR. JM explained that his objective was to investigate the strength, stiffness and stability of Sitka spruce. The finding from Kershope was that Sitka was easily C16 material based on strength and could be encouraged through breeding and silviculture to become C24, but that it only just made C16 based on stiffness (Modulus of Elasticity – MoE – related to microfibril angle) and was a long way from C24. The danger here was making sure Sitka did not slip below C16 for stiffness. Breakdown of the variance components illustrated the large variation between trees within families (exploitable through breeding), and between battens within logs (generally due to variation from juvenile to mature wood within the log). The Baronscourt study was designed to verify the work of Brazier and Mobbs (1993) on a single site. Spacing varied from 6'x6' to 18'x18' on a site planted in 1949 and respaced at age 11. Generally

speaking, the Brazier and Mobbs report was verified – that spacing should not exceed approx. 7'x7' if the objective is the production of C16 battens. The data from Baronscourt will also be used to help validate the FR TQ model and to build a batten performance model.

8. *Presentation by Aberdeen University PhD student:* SK gave a presentation of his work to date investigating the genetic variation and heritability of traits such as MoE, microfibril angle, MoR and other timber quality traits within a 20-year old Sitka spruce progeny test growing in northern Scotland. SK is 18 months into the 3-year study co-funded by Scottish Forestry Trust. SKs work was seen to be of high value in contributing to the Sitka spruce Timber Quality model and developing correlations between the acoustic tool for standing trees and microfibril angle.
9. *Next Meeting:* CF brought the meeting to a close. It was suggested that meetings should remain 6-monthly and the next meeting should be in Wales or the Marches area, with perhaps the meeting after that being in the Aberdeen area. A Wales or Marches meeting would be an opportunity to discuss Douglas Fir and Larch.
Action: SL and BG to distribute possible meeting dates to Group members – likely to be October or early November.

Steve Lee
29 June 2007