

Continuous Cover Forestry Course

by Ken Hume

“For human character to reveal truly exceptional qualities, one must have the good fortune to be able to observe its performance over many years ... and that, if in addition, it has left its visible mark upon the earth, then there can be no mistake.”

The Man Who Planted Trees – Jean Giono, 1954

My own woodland in The Chiltern Hills was previously owned by Kenneth Rankin – founder of the Economic Forestry Group. Rankin had applied a philosophy of planting vacant spots with quick growing conifers and in my case with Douglas Fir, European Larch and Western Red Cedar to supplement what was thought to be primarily a beech woodland. In reality, I have found 23 different types of trees growing in our woodland including the wild service tree on the woodland boundary margins.

When our conifers were relatively small they posed no great management challenges but now aged 55 years old and some over 100 feet tall it is now no mean task to fell and extract some of these trees without causing major damage. That aside, the quandary faced by every owner is which trees should be selected for the chop and how should these be removed to allow the remaining trees to grow on and hopefully also start natural regeneration.

In September 2013 I had the good fortune to be supported by Woodland Heritage to attend one of the Continuous Cover Forestry courses run by Andy Poore and David Pengelly of SelectFor at Stourhead.

In 1889 Lord Kelvin stated (abbreviated) that:

“unless you can express what you are dealing with in numbers then you might well know something about it but it’s hardly the beginning of science”

There is no doubt in my mind that both Pengelly and Poore subscribe to Kelvin’s approach and have developed an existing continental quantified approach to CCF to a point where information gathered in English woodlands can now be used to aid informed decision making about harvesting.

During the summer of 2012 Hume & Russell undertook a detailed survey of Rankin’s woodland to count, measure, estimate age and identify the species of each and every tree growing in the woodland and then to map these on an Ordnance Survey map. Without realising it at the time we had established the very expression in numbers of the data needed to implement a CCF approach to woodland management (and keep Lord Kelvin happy).

The CCF approach relies very much on establishing the basal area of trees present in a defined area of



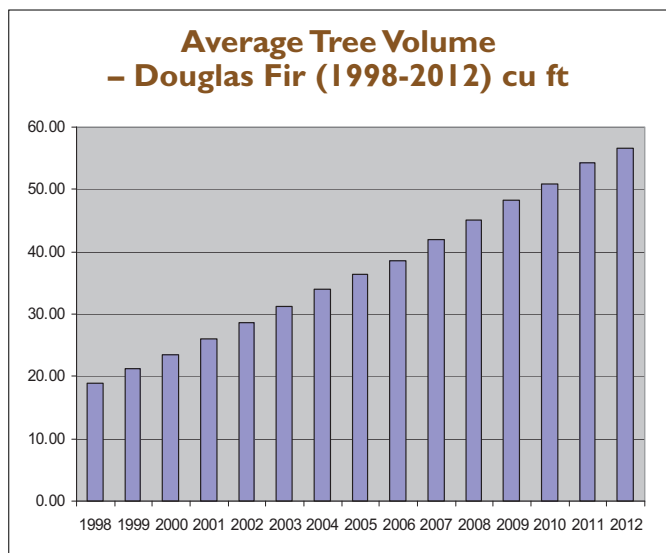
Andy Poore (left) and David Pengelly.

Oxfordshire Woodland Group Sep 2013

woodland [Marteloscope] and for each tree species a target optimal basal area has been established. When I ran the numbers on our Larch woodland I found that we were at least 6 times overstocked. The problem then remained as to how best to reduce the numbers of standing trees whilst endeavouring to maintain the standing volume of timber present in the woodland.

A sustainable approach to forestry was famously practised and developed by Merve Wilkinson over the period 1938-99 in his coastal woodlot in British Columbia. Over a 60 year period, Wilkinson demonstrated that he was able to take out 25% more timber volume than was originally standing in 1938, and yet still preside over a 10% increase in standing volume. He was of the opinion that to cut any 50-60 year old Douglas Fir trees was lunacy as over the period between 50 to 75 years the tree will treble or quadruple in volume and also that a 180 years old tree will have a value 1,300 times that of a 60 year old tree. Merve concluded: *“The essential ingredient in effective woodlot management is time”* (Wilkinson, 1996).

Wilkinson’s statistics are quite dramatic and so I put these to the test and plotted the actual increase in standing volume of 20 Douglas Fir trees growing in our woodland measured annually over the past 15 years and found that the standing volume had trebled.



Knowing that Rankin's Larch woodland was grossly overstocked I set about preparing a plan with Nick Keighley of FaceNorth Forestry to determine which trees we should take down. We decided that the first trees to be felled should create a long access track running along one side of our Larch wood so that subsequent fellings could be then felled diagonally



Nick Keighley and a Ferrari alpine tractor.

Oxfordshire Woodland Group Sep 2014

across the woodland and extracted using a Ferrari alpine tractor fitted with a rear mounted winch. This tractor proved to be the cat's whiskers, especially when operating in the tightly stocked woodland doing no damage to the trees or ground.

Forestry Commission regulations permit an owner to take down 5 cubic metres per quarter without the need to obtain a felling licence and so if this work is done at the end of one quarter and the beginning of the next then the allowance can effectively be doubled making for a more cost efficient approach to felling.

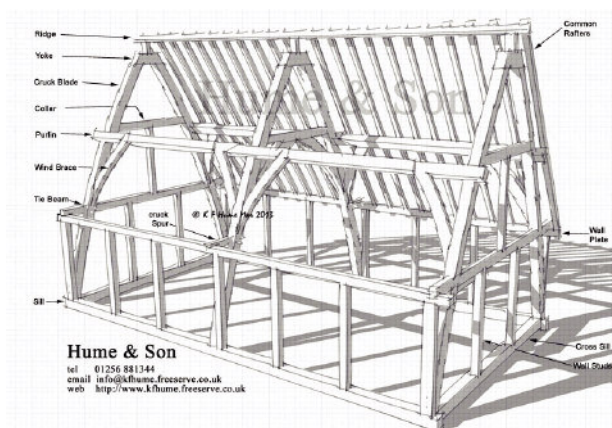
We took down about 20 larch trees yielding very useable timber now destined to be converted to form all of the parts needed to make a 2 bay



10 cu m Larch logs.

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cruck timber-framed building (see below). About 8 cubic metres of timber are needed to construct the main frame.



Rankin's 3 hectare woodland is capable of producing sufficient volume of useable timber, on a fully sustainable basis, to produce one 4 bay (or 2 x 2 bay) timber framed buildings per year, *ad infinitum* and so the question remains:

Why do our small woodlands stand idle?



Refs. HUME, K.F. & Russell H.L., 2012. *Uses of Timber other than Oak in Timber-Framed Building Design & Construction. Unpublished Research Paper (M.Sc.).*

Bournemouth University.

WILKINSON, M., 1996. Silvicultural Systems Program - Notes to the Field. *British Columbia*, Vol 3 - July.

Hume & Son – Masters in Timber Building Design, Engineering and Conservation

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