

# TIMBER FOR CLADDING & FOREST DIVERSITY IN SCOTLAND

Discussion Paper to Forestry Policy Group

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## SUMMARY

*This paper examines the linkage between timber construction and likely future demands in relation to the development of a diverse, adaptable and sustainable forest resource in Scotland. It focuses specifically on the single issue of the development of timber cladding and how this presents a clear and immediate opportunity to exploit a new and rapidly expanding market for home-grown timber at the same time as improving the bio-diversity and other environmental aspects of plantation forestry. The paper suggests that the provision of suitable cladding material for current and future markets is made the target of Government action through appropriate incentive. The substantial research and promotional efforts expended by FCS, CTE and others to develop cladding in Scotland will come to little without availability of good durable timber in the immediate future. Worse than this, they will result in the import of a range of foreign timber species with relatively high embodied energy (road/ship miles) and some with highly questionable environmental and social footprints. The promotion of timber cladding in Scotland without concomitant support for maintenance and development of the forest resource to supply the demand generated, illustrates a clear disjunction between policy direction and on-the-ground delivery through forest planting strategy and support mechanisms.*

A concerted research and promotional programme by FCS and CTE into the use of timber in exterior cladding has undoubtedly fed into a marked increase over the last 20 years, celebrated and further promoted by Peter Wilson's FCS funded book "New Timber Architecture in Scotland". The authoritative Scottish Executive publication "Timber cladding in Scotland" (2002) provided a timely stimulus to a fledgling market and the follow up "Designing the Timber Façade" (*in prep.*) will add a new incentive towards quality and official endorsement for use across a wide range of building types. If the acceptability of timber cladding by Planning Departments has in the past provided a brake to its development in Scotland, this has been substantially eased as Central Government support for cladding has permeated down to Local Authorities. A forthcoming Supplementary Planning Guidance from Scottish Borders Council, for instance, will actively promote timber cladding across all building types including within predominately masonry urban environments.

Five years of strategic promotion and research effort by government has primed and informed a cladding market that is said to be doubling every two years in its demand for timber. However, in that time, there has been no complementary effort into developing the timber resource that could feed that market in a "sustainable" way with home-grown material.

The only home-grown timber species classified as durable by British Standards and that can therefore be used untreated and uncoated on buildings in Scotland are the larches (*Larix spp.*). A steadily increasing demand for this timber species since the 1980's has now led to a scarcity in many areas of Scotland, even in Highland, where there is ostensibly both the biggest demand by builders and also formerly the largest resource. A single large project such as the SNH HQ at Inverness can effectively squeeze the resource so that other smaller projects and timber builders in an area experience difficulties procuring essential material.

Small and medium scale sawmillers from Highland to Borders all report increasing difficulty in obtaining larch, particularly of a size for structural post and beam, but also of a good enough quality and size for cladding. This problem is deepening by the day as the resource shrinks. Larch needs around 60 years on most sites in Scotland to produce large enough logs to mill economically and produce a good ratio of the heartwood required for cladding.

During the period of 25 years that the cladding market has been clearly growing there has been no concomitant effort by FCS to address the growing gap between demand and supply. Indeed the research effort has been partly directed into the suitability of timbers such as home-grown Sitka Spruce to supply the market. Yet science and experience has long shown that larch is a vastly superior material with a long history of use in both ship building and cladding throughout the Northern globe.

Less durable than spruce but a lot more suitable for cladding than Sitka Spruce is Douglas Fir. It has been demonstrated by a number of projects in Scotland that home-grown Douglas Fir can be milled and profiled for cladding with ease and, with surface coating, is widely believed to provide a reasonable alternative to larch where home-grown timber is specified for buildings. Furthermore, this timber is in increasing demand for the growing, high value market of post and beam construction in Scotland.

But the story is similar to larch. While the demand has been steadily rising for home-grown Douglas fir of size and quality, the resource has been shrinking and sawmills are now reporting some difficulties in obtaining supplies in many areas of the country.

These trends have been understood at the coalface of sustainable building design and construction in Scotland for over 20 years but sporadic cries for help have not been heeded. Worse than this, there are many clear examples where good quality larch has been felled and then restocked with Sitka Spruce. One example of this is at FE's own Lael forest in Ross-shire where significant volumes of quality larch - at one time supplying the fencing requirements of the NW Highlands - were sold to the fencing market in England and not all areas restocked with larch. The reasons given for this by foresters throughout Scotland is often that deer pressure is so great that planting the species preferred by deer is a high risk strategy leading to poor restocking and high associated management costs (deer favour both DF and larch over spruce).

Larch and Douglas fir are not the only species that can be used for cladding in Scotland and there are both "minority conifers" and hardwoods which are also suitable. Indeed oak, elm and sweet chestnut for instance all reach the BS durable classification allowing them to be used untreated in external applications. Oak cladding in Scotland is currently being imported (mostly from France) but there is potential for the supply of home-grown material. Currently the resource is too small to supply anything other than very small projects.

The Timber Development Programme (FCS TDP) identifies the need for further development and research into "Quality Broadleaves" and the growing of oak and other durable hardwoods for cladding is clearly a possible area of focus where demand is already clearly demonstrable.

In general terms, the time is right for a strategic effort into growing the best timbers to supply the burgeoning timber cladding market in Scotland. Home-grown timber will become increasingly the preferred choice as sustainability goals become mainstreamed. It will be a serious wasted opportunity if the forest resource cannot meet that demand.

Targeted planting incentives for larch, Douglas fir, certain minority conifers as well as oak could make a significant impact on ensuring future supplies of home-grown cladding material at the same time as diversifying the forest resource and thereby achieving a range of Government environmental and social objectives. It was amply demonstrated by WGS through the 1980s

how a small added incentive through enhanced planting grants for specific species (native broadleaves and SP under that scheme) could make a really marked difference on the ground.

If the supply of home-grown cladding timber does not match growing demand in the coming years, the Scottish Government's efforts to promote cladding – a part of the drive for sustainability in construction - may perversely lead to highly unenvironmental outcomes (not to mention wasted economic opportunities) through increasing importation of foreign material. Some of this material – eg larch from Russia and Cedar from Canada is of highly questionable provenance in terms of its ecological and social impacts.

Increased planting of the species mentioned above would be likely to find support from wildlife conservationist and landscape interests in Scotland as part of forest diversification objectives. Indeed it accords well with FCS and other Government bio-diversity Strategies.

## **SUMMARY AS BULLET POINTS**

- 1. The Scottish Government have expended considerable research and development efforts into the promotion of timber cladding in construction over a period of around 10 years. The market is now doubling every two years yet only a small percentage of the material is supplied by Scottish forests.**

**“The Executive is working to remove barriers to durable use of timber in construction which can substitute for more energy intensive materials and retain the carbon fixed in the timber”.**  
Source : SCCP

- 2. The leading edge of sustainable construction in Scotland has been utilizing home-grown larch as its preferred cladding material for around 25 years and demand is now beginning to outstrip supply throughout the country.**
- 3. The demand for home-grown DF has also been steadily increasing over 25 years and its potential both as a cladding and structural building material is further increasing that demand as part of the overall drive for low embodied energy materials in construction.**
- 4. During this period of increasing demand for home-grown larch and Douglas fir, well supported by Government promotion and policy, there have been no concomitant efforts to expand or even maintain the supply through FE's own planting programmes or FCS strategies or support structures.**
- 5. Worse than this, restocking with these species has actually decreased in favour of SS which is better able to deal with the mismanaged and excessive numbers of three species of deer throughout the country.**  
**“Actively manage wild deer to minimize losses to woodland establishment and growth”**  
Source : draft Strategy for Wild Deer in Scotland
- 6. Along with larches and Douglas fir, a small range of minority conifers and hardwoods grown in Scotland make suitably durable cladding material. Of these oak is particularly notable as an established timber of choice by architects.**  
**“Encourage the hardwood timber sector” . Source FCS SFS**
- 7. The time is now right for a strategic effort to establish new resources of these species to supply the existing and future expanding market for timber cladding as part of the drive for sustainability in construction. This effort should be seen as**

only “making sense” of all the promotion and research into cladding carried out by FCS and CTE to date.

“encourage small businesses supplying local markets” . Source FCS SFS

8. **Specific enhanced rates of planting grant and associated support for the primary durable species, larch, Douglas fir, a small range of minority conifers and the durable hardwoods, oak, elm and sweet chestnut should be put in place as soon as possible to capitalize on rapidly growing demands and in recognition of the long time frame before material becomes available. A period of 10 years of enhanced rate of grant is recommended.**
9. **The promotion of timber cladding without a concomitant effort to encourage re-stocking and expansion of the Scottish forest resource of the required species is a disturbing example of lack of policy integration of a type that Government currently seeks to address.**

“ A broader range of forestry related businesses ...including new value-adding enterprises, local timber processing based on softwoods and hardwoods...”

“Promote development of the quality and diversity of timber resource required by the full range of existing and potential markets”. Source : part of FCS SFS Vision Statement

10. **In the absence of sufficient home-grown (or other sustainable) timber cladding supplies, promotion of timber cladding as part of sustainable construction by the Government will perversely lead to increased foreign timber imports and negative environmental and social outcomes. Indeed this is already happening with “Siberian larch” entering Scotland in significant quantities, much of which is known to be from unsustainable and even illegal forest operations.**