



Key drivers for land manager decision making in Loch Lomond and the Trossachs National Park and opportunities for addressing constraints to woodland creation

Summary Briefing - SEFARI Fellowship with Loch Lomond and the Trossachs National Park Authority

Background

Current Scottish Government forestry policy emphasizes sustainable management and forest expansion¹. Increased uptake of woodland creation has occurred in recent years in response to improved application processes, favourable grant rates and increased promotion, with 11,200 hectares of new planting in Scotland in 2018-2019 (an increase of 4,100ha from the previous year), 11,050ha of in 2019-2020 and 10,660ha in 2020-2021². Within Loch Lomond and the Trossachs National Park (LLTNP) the National Park Partnership Plan³ includes a target of 2000 additional hectares of woodland in the park by 2023. A Trees and Woodland Strategy⁴ was developed in 2019, to drive further sensitive woodland expansion across the National Park. Analysis undertaken for this strategy identified over 23,000 hectares of land in 'preferred' areas for new woodland, with a further 38,000 hectares in 'potential' areas. However, the area of new woodland creation in the park in 2018-2019 (258ha)⁵ is considerably less than the rate required to achieve the 2023 target. In addition, some previous woodland scheme proposals in the park have not progressed due to land management constraints⁶. To address constraints to woodland creation the Park Authority launched a small-scale planting grant⁷ in 2020 and developed a fellowship in partnership with the [Scottish Environment, Food and Agriculture Research Institutes](#). This briefing presents summary findings from the fellowship research, which focused on identifying key constraints to woodland creation uptake and opportunities for enhancing future uptake.

¹ <https://forestry.gov.scot/forestry-strategy>

² Forestry Statistics: <https://www.forestresearch.gov.uk/tools-and-resources/statistics/forestry-statistics/>

³ <http://www.lochlomond-trossachs.org/wp-content/uploads/2018/02/NPPP2018-23-web.pdf>

⁴ <https://www.lochlomond-trossachs.org/park-authority/publications/treesandwoodlands/>

⁵ Data from [Indicator 1](#) (Woodland Creation) for the National Park Plan.

⁶ See: <https://www.lochlomond-trossachs.org/park-authority/what-we-do/national-park-partnership-plan-2018-2023/delivering-partnership-plan-year-1/key-indicator-1-woodland/>

⁷ See: <https://www.lochlomond-trossachs.org/park-authority/how-we-can-help/funding-grants/tree-planting-grant-scheme/>

Research Context

Previous research on farmer attitudes to environmental management proposes three dimensions of influences as: i) *ability to adopt*, which relates to finances, labour, environmental constraints etc.; ii) *willingness to adopt*, which relates to behavioural dimensions (attitudes, values and norms); and iii) engagement with farmers (including advisors, networks and local governance structures)⁸. Recent research on uptake of woodland creation has included a focus on ‘nudges’, defined as interventions which influence people’s choices without limiting their options or altering their relative costs⁹. Nudges can be used to facilitate behavioural change, by reducing perceived constraints, including through overcoming mis-conceptions about trade-offs or profitability through deliberation and shared learning¹⁰. Facilitating behavioural change requires understanding of decision ‘pathways’ and ‘moments of change’ (e.g. a change in ownership or an emergent market) and specific interventions may be required at different stages of the decision making process to facilitate land managers committing to new woodland creation¹¹. Potential nudges for stimulating woodland creation cover a variety of options including dissemination of user-friendly information, peer-to peer communication, reducing bureaucracy, highlighting benefits and the use of exemplar projects, and public commitments to woodland creation¹². Notably, previous research on landowner attitudes to woodland creation¹³ identified a lack of qualitative research on the influence of cultures, networks and regional context on decision making processes, and how these may change in response to knowledge exchange and experience.

Research Method

To address the emphasis on the importance of qualitative and regional studies of landowner attitudes towards woodland creation (above), this research established a framework for assessing ability and willingness to adopt factors, as well as the role of knowledge exchange and ‘nudges’ in encouraging woodland creation. Interviews were conducted with five key stakeholders, 17 landowners and land managers operating at different scales and in different regions of the National Park and nine forestry agents and consultants taking forward woodland schemes in the park. In addition, three workshops were organised following the completion of the final report, to communicate key findings and disseminate relevant information (e.g. on woodland carbon and farm woodlands) to a wider audience.

Landowner woodland creation aspirations

Landowners and managers expressed a relatively high level of interest in woodland creation at a range of scales, suggesting that the National Park’s current short-term woodland creation target is broadly consistent with current levels of interest. Nevertheless, a degree of hesitancy was evident among some owners and managers in relation to taking forward new schemes, due to uncertainties around future agricultural support and carbon funding and the perceived challenges of undertaking woodland creation in the National Park (among other factors). This reinforces the importance of identifying current constraints to woodland creation and providing additional support measures where required.

Key factors influencing uptake

The key factors identified as influencing uptake of woodland creation were organised into three main themes: i) individual, social and cultural; ii) economic – markets, profitability and incentives; and iii) environmental constraints, capacity and resourcing. A third cross-cutting theme was also identified,

⁸ Mills, J., Gaskell, P., Ingram, J., Dwyer, J., Reed, M. and Short, C. (2017) [Engaging farmers in environmental management through a better understanding of behaviour](#). *Agriculture and Human Values* 34, pp. 283-299.

⁹ Moseley, D., Dandy, N., Edwards, D. and Valatin, G. (2014) [Behavioural policy ‘nudges’ to encourage woodland creation for climate change mitigation](#). Forestry Commission Research Report. Forestry Commission, Edinburgh.

¹⁰ Thaler, R.H. and Sunstein, C.R. (2008) *Nudge: improving decisions about health, wealth, and happiness*. Yale University Press.

¹¹ Ambrose-Oji, B. (2019) [Characterising land managers to support woodland creation efforts in Scotland](#). Research Summary produced for Central Scotland Green Network and Scottish Forestry. March 2019.

¹² Valatin, G., Moseley, D. and Dandy, N. (2016) Insights from behavioural economics for forest economics and environmental policy: Potential nudges to encourage woodland creation for climate change mitigation and adaptation? *Forest Policy and Economics* 72, 27-36.

¹³ Lawrence A., Dandy, N., and Urquhart, J. (2010) [Landowner attitudes to woodland creation and management in the UK](#). Forest Research, Farnham.

relating to knowledge transfer, expertise and engagement (Figure 1). Key findings included recognition of the importance of succession and/or change in ownership as a critical intervention point for uptake of woodland creation (or other land use changes), due to the resistance to change associated with embedded land use models. In addition, market factors (rising timber and forest land values and the emergence of carbon markets) are increasingly influential, with a recognition by most land managers of the need to diversify their holdings due to market shifts and uncertainty relating to agricultural payments and the long-term viability of hill farming. While grants were seen as fundamental to enabling woodland creation, this was weighted against the compatibility of new woodland with existing business models and the potential risks associated with scheme failure and the timescales required for generating income from forestry.



Figure 1 Key factors influencing new woodland creation by landowners and land managers

The interviews revealed regionally specific narratives within the National Park, including perceived regulatory constraints and feedback delays relating to the sensitivities associated with woodland creation in the park, reduced uptake linked to higher grant rates in other areas (linked to the Central Scotland Green Network¹⁴ grant top up) and the high existing levels of conifer forest as driving (apparent) negative perceptions of productive forestry in the region. The steep slopes in parts of the National Park were also identified as a limiting factor, with the low level of farm and estate sales also linked to low uptake of woodland creation, due to the embedded land use models on long term holdings and the links between landownership change and afforestation identified in this and previous studies¹⁵.

Increasing uptake of woodland creation

Four key themes were identified in relation to addressing barriers and increasing uptake of woodland in the National Park. These are summarised below.

i) Managing perceptions of undertaking woodland creation and building trust

This research identified a perception among some landowners/managers and agents that undertaking woodland creation in the National Park is challenging relative to in some other parts of Scotland (see above), with these regionally specific barriers resulting in higher costs and a requirement to reduce the conifer component of mixed schemes. These constraints were perceived as reducing scheme profitability and increasing financial risk, resulting in decreased uptake of woodland creation. Further

¹⁴ The [Central Scotland Green Network woodland creation top up grant](#) provides a specific and relatively high level of additional planting support not available outside of the Central Scotland area.

¹⁵ Dandy, N. 2012. [Understanding private land manager decision-making: a framework for forestry](#). Forest Research, Farnham.

dialogue and trust building between the National Park Authority and forestry agents offers scope for increasing clarity around the requirements of the Park Authority and the challenges faced by agents in relation to progressing schemes.

ii) Achieving financial tipping points

Despite hesitancy on the part of some landowners to undertake woodland schemes, market factors, perceived threats to hill farming and agricultural support, farmer demographics and/or succession, and favourable grant rates, may collectively be creating a 'tipping point' for some landowners to consider altering their embedded land use or farming models, or selling their land to forestry investors. The National Park Authority (in addition to Scottish Forestry) have an important role to play in increasing the flow of information, to improve clarity and transparency in relation to carbon markets. Planting grants represent a key enabling factor for woodland creation and a further 'locational premium' (i.e. grant top-up) offers scope for increasing woodland creation in the National Park, in conjunction with supporting afforestation of the preferred and potential areas within the Trees and Woodland Strategy.

iii) Managing risk and uncertainty

Risk and uncertainties occur in relation to environmental factors (grazing pressures, fencing challenges, tree disease and weather), financial risks (loss of grant payments, uncertainties around agricultural support and carbon income) and regulatory factors (approval delays, requests to alter scheme designs and increased costs). These factors can increase resistance to altering an embedded land use model without a significant intervention (e.g. a change in ownership). Risk is currently managed through grant support and using advice, including from National Park and Scottish Forestry woodland officers and through employing forestry agents, who play a key role in supporting owners in identifying opportunities and navigating the grants and regulatory systems. Increasing local-level woodland advisory officer capacity (through the National Park Authority and/or Scottish Forestry) offers opportunities for trusted local contacts to nudge landowners towards suitable and relevant schemes. Trusted intermediaries and advisors, stable long term support mechanisms and clear and consistent policy direction represent critical aspects of managing risk and uncertainty going forward.

iv) Building confidence and nudging woodland creation uptake at different scales

Individual and social factors play an important role in influencing new woodland creation, including cultural barriers to afforestation linked to farmer identity. Despite the potential for land sales to 'release' land for afforestation, 'whole farm buyouts' may also create resistance to afforestation due to the potential impacts on hill farming communities. The incremental development of a farm-forestry culture is therefore important for building farmer confidence to undertake woodland creation to diversify and enhance the financial viability of their farm holding. Critically, a lack of confidence, or capacity barriers, can translate into land managers failing to undertake new activities, regardless of their underlying values or the potential economic viability of alternative land uses. Peer-to-peer communication/learning and sharing of experiences of woodland creation across networks can counteract resistance and build land manager confidence to allow them to consider changing their land use model.

These findings have implications in relation to the policy interventions and support measures which are likely to have the greatest impact on land managers, the potential role of 'nudges', and the key position of forestry advisors in relation to supporting land managers in making the decision to undertake woodland creation. Facilitated networking, particularly at local levels, offers scope for information sharing using trusted intermediaries in combination with expert input (e.g. on carbon markets or agroforestry), to build confidence and signpost viable and acceptable routes to diversifying holdings and altering land uses. In addition, enhancing forestry and woodland related skills and experience across the land management sector represents an important opportunity for enhancing land manager confidence and facilitating incremental shifts in land management cultures.

Reflecting the findings above, key recommendations from this research include:

- i) Retaining and promoting the National Park Tree Planting Grant Scheme and exploring options for expanding this scheme, through working with Scottish Forestry and other stakeholders to develop a gateway scheme for <5ha proposals.
 - ii) Exploration with Scottish Forestry and other stakeholders of the potential for an additional locational premium for incentivising new planting within the potential and preferred areas identified in the National Park's Trees and Woodland Strategy.
 - iii) Provision of financial support by the National Park Authority/Scottish Forestry, and promotion of existing support, for consultants to carry out woodland options appraisals.
 - iv) Assessment of the potential for increasing Scottish Forestry/National Park Authority capacity to provide advisory visits, support for scheme applications and for liaising with consultants to advise on potential scheme sensitivities.
 - v) Development of a local-level programme of informal engagement with land managers facilitated by the National Park to discuss key issues and share experiences relating to woodland creation and wider activities.
- i) Developing a process of ongoing dialogue and engagement with forestry agents operating in the National Park as a forum for sharing information and for raising issues/perceived constraints and approaches for managing these.
 - ii) Developing a webinar/site visits series to facilitate local/regional information sharing on 'hot topics' (e.g. carbon and agroforestry) and recent woodland creation schemes.
 - iii) Development of a programme of training and a 'woodland creation for farmers' training day with relevant partners (e.g. Scottish Forestry, Woodland Trust Scotland and NFUS).
 - iv) Follow up with land managers identified in this research who are potentially interested in new woodland creation to assess progress and ongoing barriers, utilising the National Park as a test bed for assessing constraints and emergent woodland creation opportunities.

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