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Interdisciplinary and Transdisciplinary Research to Improve Treescapes for the Benefit of People and Nature

Combined storytelling and mapping approaches for increasing community engagement with woodland creation and expansion projects

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Abstract

1. Forests and woodlands are important for biodiversity, climate change mitigation and the provision of services including recreation, timber and non-timber forest products. Land use policies currently aim to increase forest cover while also maximising the benefits of forests for people and improving community engagement with the process of creation, restoration and expansion. However, these initiatives often suffer from a lack of public support because they do not sufficiently engage with people's emotional connections to their local landscapes or fully consider the diverse views and needs of local communities.
2. We explored the use of two contrasting yet complementary methods (storytelling and participatory mapping) of community engagement, applied to a large-scale tree cover expansion project in the Forth Valley area of Scotland. In a series of workshops, we asked people to discuss the values they attach to woods and trees and what benefits they would like from local woodland expansion and creation. We used thematic analysis to explore the main themes discussed at each workshop type.
3. We found that storytelling approaches led to insights into more emotional, subjective and abstract connections and meaning, while mapping approaches tended to be more focused on practicalities and local needs. Both types of information are crucial for woodland creation and expansion to effectively serve local communities.
4. We then developed an integrative participatory approach that allowed storytelling to be integrated into mapping-based discussions, for a fuller, more holistic impression of community needs in relation to woodland creation and expansion.

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This provided additional insights into the relationships between communities and their landscapes, clustered around the themes of wildlife and nature, local places, history, stories and childhood memories, management and protection and emotion and experience.

5. We propose that a combined storytelling and mapping approach can be more inclusive and provide a more holistic understanding of the use and non-use values linking people and place.

KEYWORDS
afforestation, ecosystem services, green infrastructure, landscape, local, participatory methods, tree planting

1 | INTRODUCTION

Forests and woodlands, including in urban areas, are important for provision of habitats for biodiversity, climate regulation and a range of other services including recreation and timber supply (Brockerhoff et al., 2017; Grammatikopoulou & Vačkářová, 2021). Following large-scale woodland cover loss historically, forest restoration and creation are now identified as key tools in global climate mitigation and biodiversity recovery policies (Griscom et al., 2017) with many international initiatives pledging to plant billions of trees over the next decade (Seddon et al., 2021). Woodland creation and expansion can deliver many benefits to both urban (Willis & Petrokofsky, 2017) and rural residents (Kuczman et al., 2024), including reducing urban heat (Cheela et al., 2021), providing social spaces for recreation (Salmond et al., 2016) and reducing noise and air pollution (Chen et al., 2019; Pearce et al., 2021).

However, schemes to increase tree cover are not always successful, and often fail to consider social and cultural aspects (Erbaugh et al., 2020; Pritchard, 2021; Seddon et al., 2021), risking community support, despite overall public opinion generally being favourable (Moffat et al., 2024). This lack of support is a risk for forest and woodland creation and expansion projects, and for conservation interventions generally. While projects set out with the best intentions for community engagement, the wrong approach can be taken during planning and implementation (Holl & Brancalion, 2020) and a lack of effective communication and feelings of exclusion from decision making can lead to alienation and opposition. For example, in a large survey of urban tree planting in the United Kingdom (UK), overall support was high, but communication surrounding tree planting was often considered ineffective and this led to opposition associated with concerns over management and potential risks of trees (Moffat et al., 2024). Beyond the United Kingdom, Carmichael and McDonough (2018) found that 24% of residents in the USA issued no tree requests during a street planting programme because they felt excluded from decision making and were concerned about species choice and maintenance, with concerns driven by previous negative experiences. Across the global south, the commodification of landscapes associated with tree planting and other conservation initiatives that occur without considering local needs can limit the benefits to local communities (Coleman et al., 2021) and lead to alienation and exclusion from resources (Fairhead et al., 2012; Pritchard, 2021).

Support can be context dependent; support is often higher for restoration projects and lower for commercial monoculture stands, and certain groups of people are more likely to oppose new forest and woodlands. For example, in the United Kingdom, farmers often show low support for new forest and woodland because of potential land use conflicts (Burton et al., 2019) and support for new trees and woodland varies depending on people's values and emotions, land ownership and trust in institutions and policies (FitzGerald et al., 2021; Iversen et al., 2022). However, communication and engagement that recognise context and practices that are sensitive to local values can improve support (Kazungu et al., 2025).

Involvement of local people and inclusive decision-making is considered essential for successful conservation and restoration (Brondizio & Le Tourneau, 2016; Burton et al., 2019; Díaz et al., 2019). In recent years, there has been an emergence of theory and practice around inclusive conservation in which different knowledge and value systems are integrated, and a range of values are accounted for (Raymond et al., 2022) and evidence shows that including diverse values improves conservation outcomes (Chaplin-Kramer et al., 2023; Gross et al., 2025). People can value nature and landscapes through both use and non-use values (Cundill et al., 2017; Díaz et al., 2015), and projects involving large-scale land use change should be able to account for both. However, it is time consuming to properly involve and engage a range of local people and it can be difficult for initiatives to satisfy the needs of diverse groups (D'Souza et al., 2021), to consider the full range of issues and to account for power dynamics (Carmichael & McDonough, 2018). Doing so via the use of participatory methods can lead to new knowledge and more effective conservation action, encompassing a representative diversity of views (Lécuyer et al., 2024).

Conservation community engagement could be improved by properly engaging with the emotional response and attachment people have with landscapes and considering how changes might affect how people identify with their local areas (Riechers et al., 2021). Place attachment, a symbolic bond to non-human elements of places (Zahnow, 2024), is important for mental health

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(Lewicka, 2011), social ties and sense of community (Plunkett et al., 2018) and affects attitudes to planning and development (Davenport & Anderson, 2005), for example in how people perceive new trees and their management (Paniotova-Maczka et al., 2021). Place attachment theory provides good evidence for the importance of inclusive and holistic community engagement. It can include both place identity (social and emotional connection) and place dependence (use value), and studies find that only by considering both and the interplay between them, can conservation be truly effective (Cundill et al., 2017).

Place attachment has been found to impact views on trees and their management in Poland (Paniotova-Maczka et al., 2021) and on wind farm developments in the United Kingdom (Devine-Wright & Howe, 2010). Considering place attachment and multiple values held by different stakeholders can reduce conflicts during protected area designation (De Vos et al., 2018) and in forest restoration (Gobster et al., 2022).

While woodland creation has the potential to increase place attachment (McGrath et al., 2024), sudden or drastic changes in landscape can have a negative impact on people and are likely to be met with local opposition (Gobster et al., 2022). Without adequate engagement, empowering local communities with understanding of ecosystem services, invisible benefits from trees, such as improvements in air quality may be undervalued relative to visible disbenefits such as tree sap on car windscreens or root damage to pavements. We therefore need a range of engagement options that are inclusive, suit diverse needs and allow for views to be properly communicated and integrated into project outcomes.

Storytelling is not only an ancient cultural practice (Boyd, 2009), but also a foundational one that is a defining feature of human cultural behaviour, such that humans have been described variously as *homo narrans* (Gold, 2002) and *homo fictus* (Gottschall, 2012). Storytelling has been used to co-produce and share knowledge and perspectives, understand the past and present, dream about the future, develop identity and explore emotions and morality (Ganz, 2001). It can bring together diverse groups through an emphasis on collective experience (Fakunle et al., 2021) and is an approach widely used to engage communities in projects including urban development (Nah et al., 2015), agricultural sustainability (Lowery et al., 2020), public health (Fakunle et al., 2021), conservation (De Groot & Zwaal, 2007) and community resilience (Goldstein et al., 2013), especially in relation to climate adaptation (Liguori et al., 2021) and disaster. For example, Goldstein et al. (2013) explore the use of narrative storytelling in collaborative urban planning for socioeconomic resilience in the USA and find that it can successfully allow for diverse knowledge and experience, and subjective and symbolic meaning to be integrated into river and wildfire management. Storytelling and other arts-based approaches to community engagement can promote positive and future-focused thinking (Mandarano, 2024), strengthen social ties (Slingerland et al., 2021), allow for deeper emotional connection (Renowden et al., 2022) and create spaces for community reflection and knowledge co-production (Wilson, 2021), and are thus a useful method to rebalance power dynamics in restoration and woodland creation settings. Storytelling approaches have been used recently to understand people's values and emotions relating to treescapes generally (Zimmermann et al., 2026). We could, however, find no published examples of storytelling being used specifically to engage local people with woodland expansion and creation.

Participatory mapping approaches involve the use of spatial information, often via printed maps or digital geographical information systems (GIS). Maps are used to guide interactive activities and discussions, and the approach has been applied to diverse scenarios in community engagement and planning. For example, it has been used successfully to gather knowledge of local activity (e.g. of coastal resource use in Hawaii; Levine & Feinholz, 2015), to understand ecosystem services provision (e.g. for conservation planning in Suriname; Ramirez-Gomez et al., 2016) and for park visitor management (e.g. mountain biking in Australia; Wolf et al., 2015). In the United Kingdom, the Forestry Commission provides a toolkit for the use of participatory GIS in planning decisions, highlighting the inclusive potential of this approach (Forestry Commission, 2011).

Specific examples of the use of participatory mapping in relation to woodland creation show that it can be effective. For example, Leys and Vanclay (2010) applied this approach to engagement with afforestation in rural communities, finding that it was able to reduce the tension associated with tree plantations by allowing participants to be more involved in decision making and to be part of a collaborative process. Participatory mapping is a useful approach because the combination of spatial information and facilitated discussion allows for a breadth and depth of local opinions and knowledge to be shared in an accessible way and gathered and recorded in a format that is useful for project planning (Eilola et al., 2021). Evidence syntheses show that is an effective tool for restoration planning, facilitating the integration of knowledge types (Durrant et al., 2023) and particularly for mapping place attachment (Brown et al., 2020).

While both storytelling and mapping are commonly used approaches for community engagement, there are limited examples where such techniques have been used together or compared directly. Brunet et al. (2018) explored the use of different techniques (including visualisation, storytelling and gamification) in planning processes that aim to integrate ecosystem services and explore the different values of these. They investigated case studies in France and Finland to understand how the above techniques can make ecosystem services actionable and found that maps were useful for visualisation of ecosystem services, when used to facilitate discussions and develop management plans, while storytelling was useful to think about future scenarios.

1.1 | Aims of this work

This work aimed to engage with diverse local groups and to test and develop approaches to inclusive community engagement with woodland creation and expansion to maximise the benefits of these interventions for local communities. Here we use both storytelling and participatory mapping approaches, explore their different

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outcomes and test a method that combines these two approaches to engagement, to account for local use values, intrinsic values and emotional place attachment. To our knowledge, this is the first time that this integrated approach has been used in the context of woodland expansion and creation.

2 | METHODS

We ran a series of workshops in spring and summer 2024 in the Forth Valley area of Scotland (including Stirling, Clackmannanshire and Falkirk council areas) in collaboration with The Forth Climate Forest (FCF). The FCF is a 10-year tree planting project in the Forth Valley, launched in 2023 and aiming to increase forest area, connectivity and urban canopy cover to provide carbon storage and support biodiversity and ecosystem services of forests. It takes a community approach to increased tree planting. FCF is implemented by Scotland's International Environment Centre (SIEC), working to deliver community change towards a net zero economy in the Forth Valley. Funders of FCF include The Scottish and UK Government, The Woodland Trust, Scottish Forestry, Stirling and Clackmannanshire councils. While there are limitations in applying our work to one case study (e.g. spatial scale, representativeness), FCF is an ideal case study because of its relatively large, regional scale, the diverse communities it encompasses and because of the range of partners involved in its implementation, allowing us to explore a variety of perspectives and knowledge types.

2.1 | Storytelling workshops

In May 2024, we held two storytelling workshops in local woodlands. Our target audience for participation was broad and included anyone living in or near the local areas with an interest in woods and trees. Recruitment was via the existing network of FCF, additional emails to local community groups (walking groups, women's institute, rotary, community councils, community woodland groups), posters in community spaces (libraries, community centres), and online via social media (local area groups on Facebook). We asked participants to come prepared with a photograph, image or object and to be ready to tell a personal (as opposed to private) story related to this that reflected the value of woodlands and trees to them.

The workshops were held in Wood Hill Wood, Alva (OS Grid reference: NS898978) and Gillies Hill Wood, Cambusbarron (OS Grid reference: NS776921). Wood Hill Wood is a Woodland Trust site on the lower slopes of the Ochil Hills and consists of a network of popular paths through native ancient woodland remnants, open grassland areas and old plantation forestry. Gillies Hill Wood is a community woodland of mainly mixed deciduous trees and is used by a variety of groups, including local schools and nurseries, walkers and cyclists.

The planned aims of the storytelling workshops were to:

1. understand people's values and connections to woodlands and trees
2. gain insight into the perceived benefits of woods and trees
3. pilot the storytelling method as a means of engaging the public with woodland creation and expansion.

These workshops were attended by three (Alva) and four (Cambusbarron) local participants and were facilitated by several members of the project team. The focus here was on depth of relationships and experience; we wanted people to be able to reflect on what trees and woodlands meant to them and how they experienced them in their daily lives, and having small groups supported the sharing of more personal stories. However, we acknowledge the small numbers here do limit the breadth and range of experiences shared. In these workshops participants and facilitators first walked together in the woodlands, discussing benefits and services associated with woods and trees, and our own experiences with them. We then shared stories in a story circle, with all participants first sharing their story unpractised to the group, and then again after reflection, discussion and feedback from the group, at which point we recorded the stories. The audio files were then combined with their chosen image, or photograph of their chosen object, to create short digital stories (see Lambert, 2002 for a fuller exploration of digital storytelling practice and associated processes, including story circles). These stories and images are available in an ArcGIS StoryMap, a link to which is also shared on the FCF website to enable public access to our work. The session also included discussions on how woodland creation facilitated by the FCF could deliver social and cultural benefits locally (see Appendix S1 for further information).

2.2 | Participatory mapping workshops

Participatory mapping workshops were held in two community centres (Raploch Community Campus and Fallin Alpha Centre) in June 2024. These locations were chosen because they are near to FCF planned tree planting locations. Raploch is an urban, city centre location and Fallin a village in a more rural setting. Our target audience for these workshops was again broad, as we wanted to hear a diversity of views, and included any local person who was interested in the topic. We did particularly want to hear from people living in or near to the locations at which the workshops were held but also welcomed those living outside of them. As with the storytelling workshops, recruitment was via the existing network of FCF, additional emails to local community groups, posters in community spaces and online via social media.

The planned aims of the participatory mapping workshops were to:

1. understand current perceptions of the services and benefits delivered by woodlands and trees locally and how these would be impacted by woodland expansion

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2. understand local uses and values of green spaces and desires for woodland expansion
3. pilot a participatory method that could be applied more widely by FCF as a means of engaging the public with woodland creation and expansion.

In these workshops, participants (18 in Raploch and 7 in Fallin) were asked about how they used and valued woods and trees, the perceived benefits and services of trees and woodlands within their local areas, and where they would like to see woodland creation and expansion. Large, printed maps of the areas were used to frame the discussions; these were placed on walls and tables and annotated by participants in small groups, facilitated by members of the project team. Each workshop lasted for 3 h and included a welcome from the project team, with an introduction to the research project and the services provided by trees and woods. This was followed by facilitated group work where participants discussed the places locally where services and benefits could be found from trees. After a break, we then presented information on FCF, after which we asked the participants to return to the map-based discussions and to consider how the FCF plans could enhance the different ecosystem services and benefits they have been considering, and to annotate on the map where they think would be the best (and worst) places to create or expand woodlands to deliver these improvements. We then came together as a whole group at the end of each session to summarise the main points and agree on final map annotations. Here we considered common (or different) ideas from their group discussions and any trade-offs they perceived which could cause dilemmas around woodland expansion plans (see Appendix S2 for further information). These annotated maps have been digitised using ArcMap and are publicly available on the same ArcGIS StoryMap as the stories described above.

2.3 | Combined storytelling and mapping

After the first round of workshops, we combined the two approaches into a workshop approach that referred to the maps and previous map-based discussions but also asked participants to share stories on the value of woodlands and trees. We did this to add a new dimension to our engagement activities with the aim of gaining a more holistic understanding of how people value and use woods and trees, and where local woodland creation would be most welcome and beneficial. We hypothesised that further encouraging the links to place in the stories with the use of maps would allow for useful local information and knowledge to be shared and that facilitating stories to be fully developed within the mapping approach would deepen the emotional and attachment value of these.

The combined workshop was facilitated by three members of the project team and attended by nine local participants and an artist who observed and visually recorded the stories told. The participants included a random subset of those who had attended the mapping workshops (three people) and responded to our invitation, along with six participants recruited as for the previous workshops. This workshop followed a similar format to the earlier map-based workshops but included a short presentation of the project progress at the beginning, with space for participants to give feedback on this and to have input on the ArcGIS StoryMap. We then proceeded with map-based discussions and stories, using the same story circle approach as in the storytelling workshops but without audio recording the stories; instead, these were recorded in written form by a member of the project team (see Appendix S3 for further information). We included an artist at this point to gain some visual representation of the stories told, without there being a need for participants to bring along an image, as this was a barrier for some in the initial storytelling workshops, and we wanted some imagery to use in the public facing outputs of this work.

All community engagement activities were approved by The University of Stirling's General University Ethics Panel on 29th February 2024 (ethics reference GUEP 2024 18058 13052), and informed consent was obtained from all participants in written form.

2.4 | Thematic analysis

Thematic analysis of the stories and map annotations was carried out according to the methods described by Braun and Clarke (2006). All the stories and mapping discussions were transcribed and coded, and themes were identified and reviewed (Table 1).

TABLE 1 The steps taken in the process of thematic analysis of storytelling and participatory mapping workshop outputs (adapted from Braun and Clarke (2006)).

Step	Description
1. Becoming familiar with the data	Transcribing and reading the stories and mapping outputs, making notes of initial impressions.
2. Creating codes	Systematically coding the dataset.
3. Searching for themes	Collating the codes in themes.
4. Reviewing and defining themes	Checking the fit of themes with the dataset and codes and creating a thematic map of final themes.

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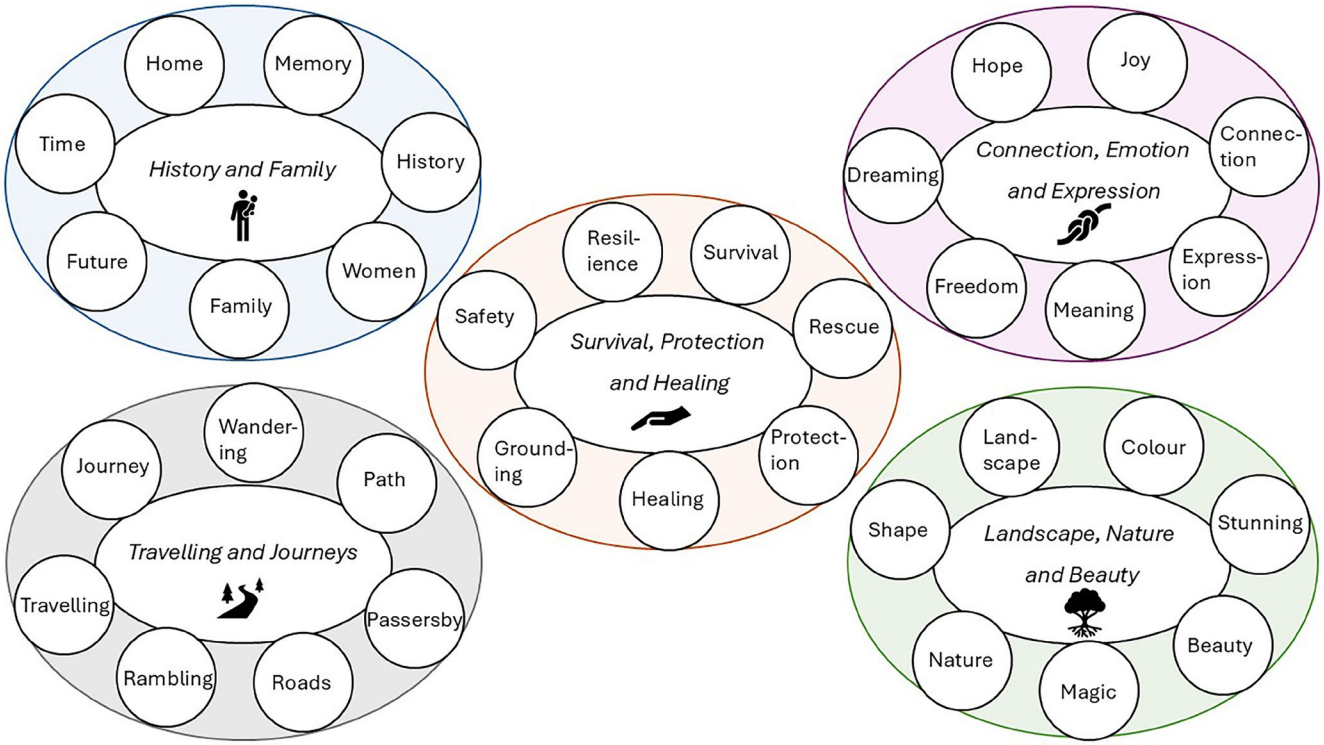

FIGURE 1 The five themes identified in the participant stories on the value of woodlands and trees, and the main coded words associated with each theme (shown in small circles around the main themes).

3 | RESULTS

3.1 | Themes from storytelling

Five main themes were identified from the stories (Figure 1) collected from the seven participants across the two storytelling workshops. These themes are associated with personal elements of people's connection to trees and woodlands, for example, memories of family, bringing of joy and meaning, and associations with concepts such as resilience, beauty and history. For example, one story described the tree species rowan (*Sorbus aucuparia*) as 'giving me hope for the future, that we've not forgotten our roots' while another focused on an apple tree 'and a lot of happy memories'. There was also an element of people's experience of being in woods and forests, mainly expressed through stories covering travelling and journeys, and the shapes and colours of woodlands and trees.

3.2 | Themes from mapping

Six themes were identified from the participatory mapping outputs (Figure 2). These themes and the codes of which they are composed are mainly practical and utilitarian in nature, with a focus on access, education and services provided by trees and woods and have a local, community focus. As well as benefits provided by trees and woods, there was also recognition of potential risks, or impacts of woodland creation, and negative behaviours that have been associated with past interventions related to green space provision.

3.3 | Themes from combined storytelling and mapping

Five themes were identified from the outputs of the combined workshops (Figure 3) and these show overlap with both the storytelling and mapping themes presented above, suggesting that the approach was able to successfully combine the methods and allow for more holistic exploration. Nature was identified as a theme in some form in all three approaches, and this theme illustrates the value of the combined technique. In the storytelling workshops, nature was mainly considered in an experiential sense, in the mapping workshops reference to nature was more direct and via habitats and species, while in the combined approach both elements were present when nature was discussed. Additionally, in the combined approach we identified themes of 'Local History and Memory', linked to the 'History and Family' and 'Children, Community and Education' themes from the storytelling and mapping, respectively, and again in the combined approach the more abstract and emotional representations of these were merged with the more practical and place-based representations. The main value added with the combined approach is in the merging of the specific link to local places missing from some of the

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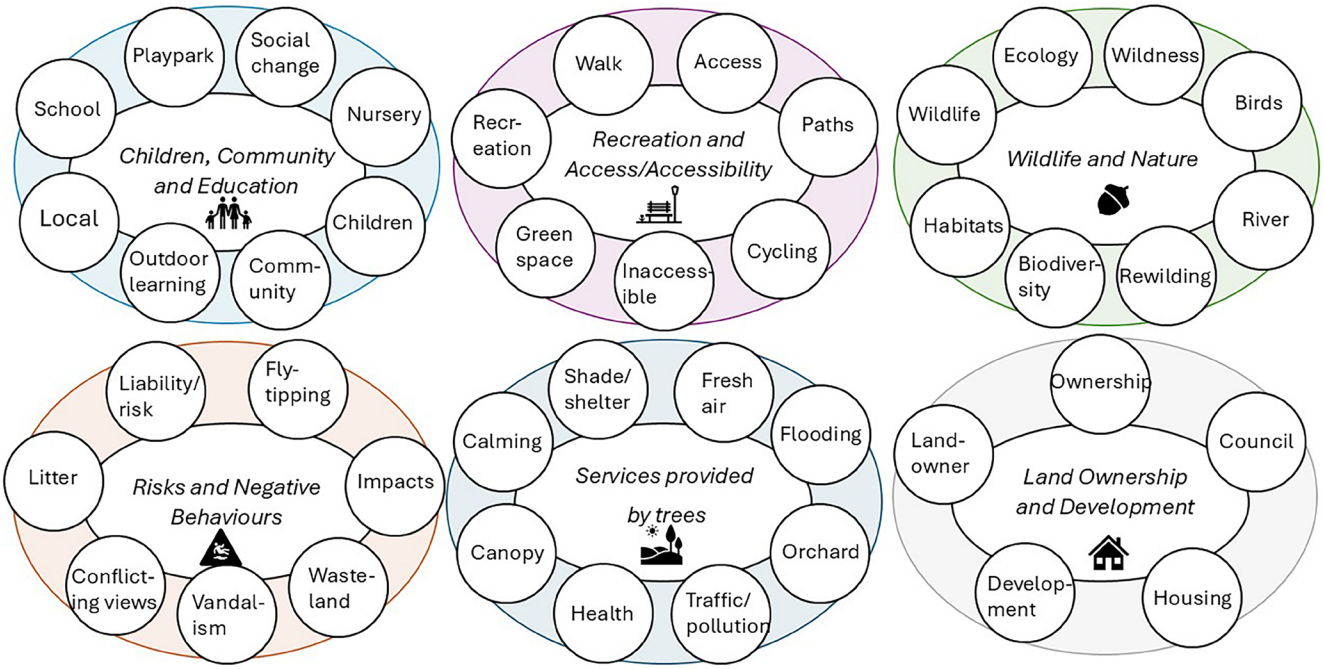

FIGURE 2 The six themes identified from the participatory mapping discussions on the value of woodlands and trees and the main coded words associated with each theme (shown in small circles around the main themes).

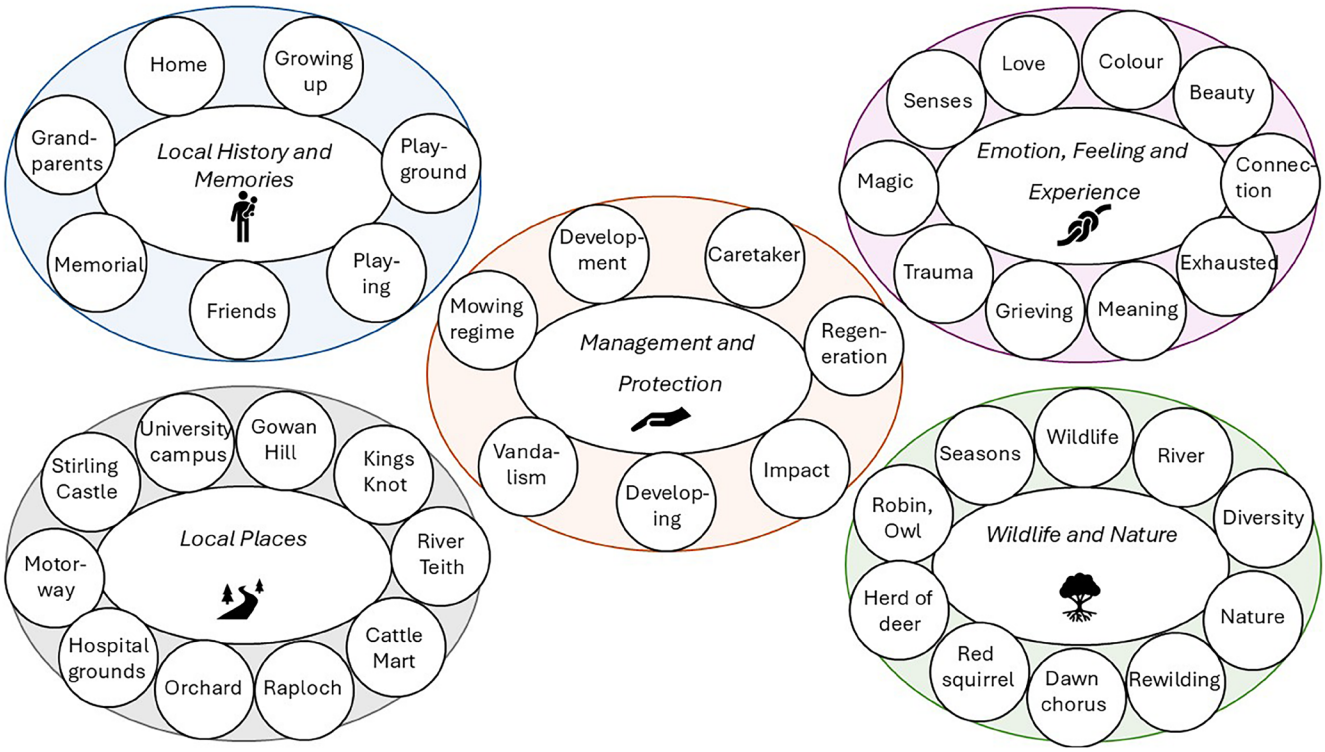

FIGURE 3 The five themes identified from the combined storytelling and mapping discussions on the value of woods and trees and the main coded words associated with each theme (shown in small circles around the main themes).

original storytelling content and the more personal and emotional connections not well accounted for with the mapping approach. However, there are some elements that have been lost during the combined approach—there was less of a focus on potential risks and negative behaviours associated with tree planting (although vandalism was considered, included in the theme 'Management

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FIGURE 4 Artist's interpretation of the combined mapping and storytelling workshop stories associated with the themes of (a) Wildlife and Nature, (b) Emotion, Feeling and Experience, (c) Local History, Stories and Childhood Memories, (d) Management and Protection and (e) Local places. All images created by Orla Stevens.

and Protection' [Figure 3]), and on the services provided by trees (although biodiversity, mental health benefits and recreation were present, across several themes [Figure 3]).

The artist's interpretation of stories and discussions at the combined workshop provided engaging and accessible visuals to represent the themes identified (Figure 4). These will be used to communicate our results to the general public and to share the outputs with the local communities who worked on this project with us. These images will also be used further by FCF in their engagement and publicity materials.

4 | DISCUSSION

We have explored the different knowledge that can be gleaned from community engagement activities using the techniques of storytelling and participatory mapping. We find that these yield contrasting but complementary insights into how people use and value trees and woods and suggest that an approach that combines the two techniques can provide a more comprehensive understanding of local needs in relation to woodland creation and expansion. This combined approach fulfilled our aim of bringing together practical needs, place and emotional attachment elements in an inclusive way, for a fuller and more holistic understanding that can maximise the benefits of woodland creation for local communities.

4.1 | A global perspective on inclusive forest and woodland creation and expansion

Our case study from Scotland, United Kingdom provides insights into local perspectives, and ways of engaging effectively with these, important in a global context. Around the world, reforestation policies and commercial interests are driving forest expansion (Global Forest Coalition, 2020), restoration and forest protection projects risk local and indigenous livelihoods and exclude people from decision-making (Nkansah-Dwamena, 2025). Where local people are not included in the decision making and planning process, opposition is likely, as seen in many urban tree planting projects (Carmichael & McDonough, 2018). Adopting inclusive approaches, as described here can allow for effective community engagement, which, if used to drive policy and practice decisions can create a fairer and more sensitive pathway for forest and woodland expansion, suited to local needs and desires (Kazungu et al., 2025).

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4.2 | Storytelling for deeper and emotional connection and understanding of local values

Being able to understand and represent emotional and attachment values is an important element of community engagement with woodland creation and expansion, and we found that our storytelling approach, using a story circle, led to insights into people's emotional and experiential connections to tree and woods, and allowed for the importance of themes including history, family, beauty and protection (Figure 1) to be discussed. These themes are similar to those identified by storytelling approaches in other contexts, such as those identified by Paschen and Ison (2014) in their systematic review of storytelling interventions in research into environmental resilience and sustainability. The values associated with these themes (including family, aesthetics and symbolic) have also been attributed to trees in other studies (Austen et al., 2022; Hansen-Moller & Oustrup, 2004). Being able to account for these factors can substantially increase support for forest and woodland creation; for example, if the importance of aesthetics is included in management plans it can inform the choice of species and planting regimes to be utilised (Speak et al., 2022), while an appreciation of local values and history can inform practices that limit the impact on the wider landscape (Gobster et al., 2022), or local access. In the context of our case study, the development and integration of inclusive storytelling and mapping has allowed FCF to better acknowledge and represent the spiritual connections people have to trees within their wider community engagement activities.

4.3 | Mapping for in-depth spatial knowledge of local needs, uses and desires

As well as considering emotional and connection-based values of trees and woods, woodland creation initiatives also need to be guided by more practical considerations at a local scale and to understand how people use and value their local areas (Hansen-Moller & Oustrup, 2004). Our use of participatory mapping was able to provide a wealth of local knowledge and identified both benefits and risks of woodland creation (Figure 2). This approach has been found to be useful for identifying use values and potential conflicts in other studies, including in conservation (Ramirez-Gomez et al., 2016), park management (Wolf et al., 2015) and restoration (Tourinho et al., 2023). In the context of woodland creation, having access to local knowledge is invaluable for testing the practicalities of planting plans. For example, in our mapping workshops, while many benefits including flood prevention, shade and fresh air were discussed, the potential risks of trees were mentioned many times, with risks and negative behaviours associated with tree planting and woodland creation identified as one of the themes (Figure 2). This highlights the value of this approach in avoiding potential conflicts surrounding tree planting and woodland expansion (Gobster et al., 2022; Moffat et al., 2024) and this information should be used by woodland creation projects and land managers to prioritise the type and location of new trees and woods to reduce the risk of negative outcomes.

4.4 | Combining storytelling and mapping for deeper understanding

The storytelling and mapping workshops demonstrated that each activity produced a different, but complementary, type of understanding and engagement: while mapping deals effectively with the specific and objective relationships between people and the landscapes they live and work in (Brown et al., 2020), storytelling focusses interpretation based on social, historical and cultural locations (Paschen & Ison, 2014). While the themes identified from the two workshop types were quite different, there was some overlap and the approaches complemented one another; in the storytelling workshops the use of images linked the often more abstract stories to a location, while in the mapping workshops many of the discussions and examples given took the form of narrative stories, but this occurred prompted by the maps rather than through the formal facilitation of a story circle.

Combining the approaches allowed for both place and emotional attachment to be discussed together, thus enabling place attachment to be better represented in the discussions. In the themes identified in the combined workshop (Figure 3), we can see overlap with the storytelling (e.g. history, emotion, protection and nature) and the mapping workshops (e.g. wildlife and nature, management, local areas). By combining these two different but complementary techniques, we can account for emotional attachment to landscape and for local use values, associated with place in a relevant way for woodland creation and expansion. We did note however, that certain themes represented in the participatory mapping workshops, notably ecosystem services and risks and negative behaviours associated with trees could be more thoroughly included in the combined results. These are key concerns for urban tree planting and woodland creation (Roman et al., 2021) and a modified design, that included more explicit facilitated discussions of these elements could encourage them to be identified and explored by participants.

Our combined approach represents a potentially more inclusive engagement practice; both participatory mapping (Brown et al., 2020; Eilola et al., 2021) and storytelling (Wilson, 2021) approaches are considered inclusive, but each has limitations that our combined approach can overcome. Participatory mapping has been found, due to social barriers, to have a bias towards male participants in some contexts (Lim et al., 2021), and the group method often employed can allow a small number of voices to dominate discussions, but these issues can be overcome by the potentially more accessible story circle design. Sharing stories and emotional connections can require that participants feel at ease, and basing these stories around maps and local places can make the exercise less abstract and facilitate the sharing of ideas.

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Our holistic approach might be especially valuable for tree planting in urban and suburban locations where interactions between people and trees are most frequent, or in woodland creation projects involving changes in land use in and around agricultural landscapes with aesthetic or cultural value for nearby communities. These scenarios pose a risk of public opposition (Dunn et al., 2020), conflicts (Burton et al., 2019) and for trade-offs in services and disservices of trees and woods (Roman et al., 2021), and our proposed approach can identify these in an inclusive way. Beyond forest and woodland creation and expansion, there are other applications for this combined approach, including in protected area designation and restoration projects, where inclusive participation and the integration of diverse and place-based values are integral to success (Raymond et al., 2022; Chaplin-Kramer et al., 2023; Gross et al., 2025).

4.5 | Limitations and future directions

There are several limitations to our approach, in terms of both the individual workshops and the combined approach which we have piloted. The storytelling workshops are limited by their small sample size, which means that we cannot assume that the perspectives shared are representative. Conducting more of these workshops could have maintained the small group dynamic, conducive to sharing personal stories, while allowing for a larger overall sample size. In the mapping workshops, we were able to reach a larger number of people, but the demographic was mainly older adults and those already involved in community projects. Participants' age affects perspectives and level of support for woodland creation (Dunn et al., 2020) and being able to reach a larger and more diverse participant population would better represent overall public opinion and increase the knowledge types and values we could include.

In our combined approach, the insights gained were valuable, but the differences between the information gained here and in the individual workshops, and crucially, information missing in the combined approach, need to be considered carefully. The holistic nature means that some elements might be lost, and refinement of the process could ensure that this does not impact the applicability and value of the information gained for practitioners, or of the process as an engagement tool.

The participants who attended the final, combined workshop were a mixture of new participants and those who had already attended a mapping workshop, and this could have affected our results. We had already built relationships with some participants, which may have influenced how comfortable they were with sharing personal stories, and the existing experience from the mapping workshop could have allowed for a greater depth of insight to be developed, regardless of the combined workshop approach. When developing this approach for future engagement, it would be useful for participants to attend a combined workshop without previously engaging with another workshop form, and this will be necessary to fully test the effectiveness of our approach.

5 | CONCLUSIONS AND RECOMMENDATIONS: IMPROVING COMMUNITY ENGAGEMENT FOR MORE EFFECTIVE AND REPRESENTATIVE FOREST AND WOODLAND EXPANSION AND CREATION

Effective community engagement is essential to maximise support for forest and woodland expansion and creation and to ensure that projects are inclusive and guided by diverse local views, values and place attachment. In our study, both storytelling and participatory mapping approaches were found to be valuable community engagement tools that provide contrasting but complementary knowledge of local needs and desires. Our map-based discussions uncovered a wide range of relevant local knowledge and informed our understanding of patterns of community use and needs but lacked intimacy and emotional connection. The stories told in our storytelling workshops were deeper and more emotional but lacked the direct connection to place and local needs. By piloting a method which combines these into an integrated participatory approach, we were able to account for use and non-use values and place attachment, thus providing more holistic knowledge to underpin woodland creation and expansion projects. This type of understanding can help projects to avoid conflicts and ensure the support of local communities by including their values and needs in decision-making. We thus recommend integrated storytelling and participatory mapping as an inclusive approach that can enhance community engagement to maximise the benefits of forest and woodland creation and expansion.

AUTHOR CONTRIBUTIONS

Sarah Greenwood, Elisa Fuentes-Montemayor, Catherine Cowie, James Levine, Piran C. L. White, Michael Wilson and Sandra Engstrom contributed to project design and workshops. Sarah Greenwood led the writing of the manuscript and conducted thematic analyses; all authors contributed to drafts and gave final approval for publication.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

Anonymised, coded transcripts of the workshops are available in the University of Stirling repository DataSTORRE: http://hdl.handle.net/11667/273.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

Appendix S1. Storytelling workshop programme.

Appendix S2. Participatory mapping workshop programme.

Appendix S3. Combined storytelling and mapping workshop programme.

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