PARTNERSHIP-BASED POLICIES AND PLANS FOR OPEN SPACE MANAGEMENT OF CASE STUDIES IN POST-INDUSTRIAL LANDSCAPES

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ABSTRACT: Post-industrial landscapes have been transformed through environmental regeneration, creating open spaces with public access. To maintain quality over the long term, working partnerships that include voluntary, community, public and private organizations will be necessary. This paper uses literature reviews and interviews to examine policies and plans for open space management through community forestry activities in the post-industrial landscapes of St Helens in the UK, where the borough council has been updating masterplans for green infrastructure. Two action plan case studies and one involving the strategic sites included in the masterplans for green infrastructure in St Helens are featured. Findings suggest that policies and updated plans can be tools for ensuring proper standards for open spaces in restored post-industrial landscapes that will be well-used by the community. However, this needs to be done in tandem with partnerships working towards long-term management by securing sufficient resources to maintain the open spaces.

Keywords: Community Forestry Activities; Environmental Regeneration; Green Infrastructure; long-term management

1. INTRODUCTION

Since the 1990s, the Mersey Forest Partnership has led environmental regeneration in the northwest of the UK through community forestry activities conducted by public, private, and community organizations. The Mersey Forest is one of England's Community Forests that have been transforming landscapes and communities in and around the country's largest towns and cities [1]. Through its partnership approach, environmental regeneration and landscaping in post-industrial landscapes have created new open spaces that are publicly accessible and require long-term management and continual enhancement. is particularly regeneration Environmental important for managing and improving the quality of post-industrial landscapes as it has been argued that 'specific pollutant problems remain and will intensify' [2]. Accordingly, consideration of 'the cumulative impacts of change' of newly created large areas of publicly accessible open spaces by incremental planting and by obtaining public access to small parcels of former derelict and other lands' is critical [3]. Public accessibility matters, since 'access to nearby nature that allows practical engagement' can lead to both economic and qualityof-life improvements, especially 'in the challenging settings of socially deprived urban areas' [4]. Simultaneously, examining policies that support and ensure long-term management is essential [5].

Long-term management is a key issue in engaging communities in green infrastructure planning, having the potential to reduce expenditures of public funds. Importantly, encouraging such participation can also bring a sense of community ownership and inclusion [6]. Although Green Infrastructure planning is primarily intended to provide quality-of-life benefits to local communities, the focus of such planning often shifts in practice, due to a portion of stakeholders giving greater priority to the achievement of economic benefits (e.g. increasing property values and place re-branding to attract new residents, fostering business growth and attracting investment [7]) over solving social and environmental issues [8]. Moreover, it is evident that there are gaps in placemaking and place-keeping, as well as a lack of mutual understanding among users, practitioners, and policy makers due to the 'complexity and the wide implications' of such plans, exacerbated by the absence of a well-established system for evaluating open space quality in the long term [9]. Long-term management is particularly important given that post-industrial landscapes contribute through their green infrastructure to restoring the ecology and improving the health and quality-oflife of residents in local communities [10], [11].

To secure the necessary funds and the time needed to sustain open space development, long-term management is crucial for ensuring 'functionality and community appeal' [12]. In the

UK, the government's '25 Year Plan for the Environment' recognizes the pivotal role of public, private, and philanthropic funding to protect and enhance the environment, including its role in developing and managing the Northern Forest, a new landscape-scale tree planting project [13]. In the case of the Mersey Forest, 'community forestry approaches' have been achieved through a partnership of over twenty years with landowners and local partners, local authorities, charities, government organizations, and the community led by the Mersey Forest team, which has secured resources for long-term management. Working in partnership enables a diverse network of individuals and groups to share expertise and diversify activities [14]. Since 2004, the Mersey Forest team has guided and moderated policy-making with the new agenda of green infrastructure in the northwest of England [1], [15]. Working in partnership to regenerate damaged landscapes arising from contamination or dereliction is critical, as it empowers local communities and promotes enthusiasm, thus building community cohesion [3].

The ultimate aim of this paper is to identify those factors that contribute to building better partnerships in environmental regeneration by reviewing local planning policies and presenting concrete examples in two case studies in which the Mersey Forest team has been involved over the past 20 years.

Relevant literature for this study was identified using search engine platforms such as Google Scholar, with keywords including 'environmental regeneration', 'local planning policies', 'St Helens', 'long-term management', and 'open space'. The St Helens Council has adopted a number of planning documents over the past years, including the Core Strategy Local Plan (adopted in October 2012), Saved Policies of the 1998 Unitary Development Plan, Joint Merseyside and Halton Waste Local Plan (adopted in July 2013) and the Bold Forest Park Area Action Plan (adopted in July 2017). This study examined two cases-Bold Forest Park and Colliers Moss Common—using relevant maps and by reviewing planning documents, including statutory and non-statutory plans for open space management in St Helens, with a focus on postindustrial landscapes. Bold Forest Park is a priority area identified in local statutory plans to promote better quality of open spaces for community assets. The case of Colliers Moss Common demonstrates the importance of securing resources for continuous management, and serves as a best practice model for creating community open space and promoting nature conservation in England [16].

This paper also incorporates interviews with representatives from the Mersey Forest team and a local authority officer from the planning department of the St Helens Council in order to identify the main issues regarding long-term management. The interviews were held in August, 2018, and lasted approximately one hour each.

2. RESEARCH SIGNIFICANCE

Environmental regeneration and landscaping in post-industrial landscapes have created publicly accessible open spaces that require long-term management and continual enhancement. Policies and updated plans by local governments can support to form the basis for introducing planning tools to promote environmental regeneration for their long-term open space management to secure the resources. This study focuses on open space management in post-industrial landscapes for long-term; and collaboration by working in partnerships in the process of making and delivery of policies and plans.

3. OPEN SPACE MANAGEMENT POLICIES IN ST HELENS

With the increase in the transformation of postindustrial landscapes and the creation of green spaces, long-term management has become a key issue in maintaining the quality of the environment.

As a potential reference for local governments considering or undertaking the restoration of postindustrial landscapes, this paper examines policies and plans supporting the Mersey Forest Partnership in the management of post-industrial open spaces in the Borough of St Helens, in the Liverpool City Region. With an area of approximately 13,900 hectares [17] and a population of 183,200 in 2021 [18], St Helens developed rapidly during the Industrial Revolution through coal mining and glass making, which has left a legacy of damaged landscapes [17], [19]. The St Helens Borough Council has been involved in planning and revitalizing these post-industrial landscapes since the 1980s [5], [16], transforming them into a variety of open spaces. With many operational landfill sites now having planning permission for open space post closure, the Council is presented with further opportunities. However, the requisite restoration requires a certain time frame, in some cases ten years or more. To maintain the quality of open spaces that meet appropriate standards while serving the various needs of the local community, it is important to consider planning policies that support and ensure long-term management [5].

The St Helens Council has undertaken open space management through its overall policies for protecting such spaces and promoting green infrastructure for 'health, recreation, tourism, and biodiversity', as well as supporting economic viability and combatting climate change [18]. During the past 25 years, the Council has worked

closely with the Mersey Forest team to create a network of community woodlands. To protect open space, the Council has used the designations of 'statutory registered site' and 'Green Belt' to secure land for creating and maintaining green space over the long term. According to the local plans adopted in St Helens, the overall policies are relevant to open space management. To devise an area-wide strategy for green infrastructure at the regional level, the Council worked closely with the Mersey Forest team to enhance existing and newly created networks of community woodlands.

3.1 Protection of Open Space and Promoting Green Infrastructure

Because open spaces within urban areas are under constant pressure from housing developers, a sufficiently robust policy framework is necessary. The St Helens Council has adopted a policy of not permitting development that would lead to the loss of an existing open space of specific value or where the development adversely affects the amenity of an open space or a Green Belt [16]. Protection of open spaces is promoted in terms of multi-functionality; for example, recreation, capacity to provide quality public open spaces, conservation of nature, and contribution to culture and education [16]. Open spaces can be connected by strategic networks of greenways [18], including privately-owned land, with 'major linear features' such as 'river valleys, canal systems and disused railway lines' (Fig. 1). Thus, the St Helens Council has sought to promote increased public access and develop a network of linear greenways [16]. The St Helens Council has been active in promoting the value of green infrastructure to local communities and increasing

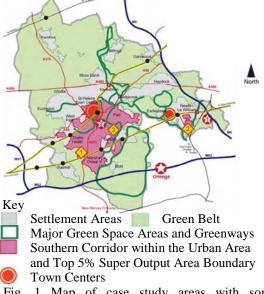


Fig. 1 Map of case study areas with some amendments [18]

additional open spaces for 'positive uses' by protecting, managing, and enhancing them with detailed policies [18].

The Council also recognizes derelict land for its 'existing or potential value as open space'. According to a survey of open space in 1990, approximately 505 hectares of land were classified as vacant or derelict, with the ability to provide functionality as open space [16]. This ensures that the derelict land will be transformed into open spaces such as woodlands or grasslands, with increased biodiversity, giving rise to the need for improving access by local communities and establishing sound management aimed at the conservation of biodiversity [18]. One approach to transforming vacant or derelict land into open space in St Helens is represented by the near-decade-long Wasteland to Woodland project.

In 1994, the St Helens Council became a founding local authority partner in the Mersey Forest Partnership. Since that time, over 3,750 hectares of new habitat and woodland has been created, with the aim of increasing that total to 8,000 hectares in the long term [18]. The St Helens Council supports the delivery of The Mersey Forest Plan through policies within its adopted local plans and through the promotion of additional areas for further development of the community forest. The Mersey Forest Plan is a long-term strategic guide to the work of the Forest team and its partners. The Plan has been recognized within the National Planning Policy Framework as a material consideration in preparing development plans and deciding planning applications. The Council played an important role in transforming vacant and derelict land into woodlands via such programs as the above-mentioned Wasteland to Woodland project, which recognized the potential and character of the southern and eastern areas of the borough [16]. The Mersey Forest Partnership has long promoted the benefits of regenerating postindustrial landscapes for reasons of 'health, recreation, tourism and biodiversity', as well as for reducing the negative impacts of climate change through its policies and activities, including the setting of woodland cover targets and developing a working partnership to support community forestry activities [1], [18]. The partnering of public and private landowners, local authority officers, government organizations, and the community was coordinated by the Mersey Forest team, which played a key role in transforming the post-industrial sites into green open spaces.

The Wasteland to Woodland project extended from 1989 to 1998 [20], creating at least 300 hectares of new habitat and woodlands in St Helens [18] through large-scale tree planting on parcels of derelict land, including former colliery sites. Much of the land was privately owned, with no public

access; thus, the project emphasized the economic benefits of large-scale environmental regeneration as a way of attracting investment. It also aimed at meeting the needs of the community through accessible woodlands close to the urban population, where possible [20].

The strong partnership program was led by a steering group composed of representatives of public and private landowners, local authority officers, and government organizations, and was coordinated by the Groundwork Trust, an environmental charity. The individual projects became known by the names of the former collieries on which they were sited and were transformed into publicly accessible woodlands. They included Sutton Manor, Clock Face, Moss Common (formerly Bold Moss Common), and Lyme & Wood Pits (Fig. 2) [18]. The sites consisted of spoil heaps, making up approximately 75 percent of the total project area of 330 ha [20] and have been included in the plans for Town in the Forest and Bold Forest Park. They have contributed

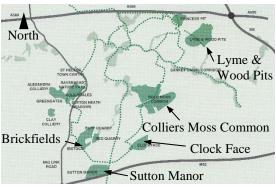
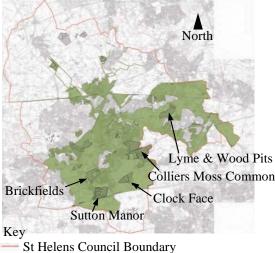


Fig. 2 Map of former collieries sites with some amendments [20]



- Woodland Planting Links
- Areas for potential tree and woodland planting Recent woodland (0-20 years)

Fig. 3 Map of the area for tree planting with some amendments [21]

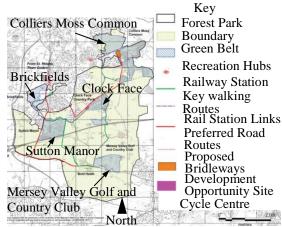


Fig. 4 Map of Bold Forest Park with some amendments [22]



Fig. 5 New woodlands at Sutton Manor (Source: Miyagawa, photo taken in 2014)

significantly to the transformation of the southern part of St Helens into an area of both economic and environmental regeneration (Fig. 3-4) [21], [22]. While newly planted mature woodlands can have a positive impact on regenerating and enhancing anarea [1], [21]. Over one-third of all the woodlands in St Helens have been recently regenerated, and the newly planted trees require substantial time to grow to maturity [21]. To support and guide this landscape transformation, the St Helens Council published 'Town in the Forest' in 2006, which offers a woodland strategy and provides guidance on the creation of a suitable network. The plan identified sites for developing woodlands which would contribute to and enhance the landscape character of the area, adding diversity and distinctiveness [21].

The plan aimed to promote greening and developing linear forests in urban areas, particularly in the urban fringe, through renewal processes and connecting green infrastructure to community woodlands, so that the regenerated area would also contribute to the rural economy [18]. This not only can create direct employment, but can also provide a healthy working environment in leafy settings to attract inward investment and contribute to

increasing property values [21]. Thus, the economic benefit of improving the image of the area through environmental regeneration was suggested [21].

The Town in the Forest Strategic Vision Document analyzed the area in terms of transport network, nature conservation, education, recreation, and regeneration opportunities. It identified the sites, including Sutton Manor, Clock Face, Colliers Moss Common (formerly Bold Moss Common), and Lyme and Wood Pits, of woodlands created within the past 20 years and identified areas of potential tree and woodland planting (Fig. 3; Fig. 5-8) [21]. The plan suggested that a network between



Fig. 6 New woodlands at Clock Face (Source: Miyagawa, photo taken in 2017)



Fig. 7 New woodlands at Colliers Moss Common (Source: Miyagawa, photo taken in 2017)



Fig. 8 Restoration works at Lyme and Wood Pits (Source: Miyagawa, photo taken in 2018)

these open spaces be developed to create a woodland framework around the sites (St Helens Council, 2006). The Mersey Forest Plan for St Helens also suggests a 20-30% increase in woodland planting on the urban fringes, which includes key sites [1], [21].

3.2 Nature Conservation and Site Protection

The St Helens Council issued its Policy for Nature in 1986, which recognized the importance of ensuring wildlife conservation, providing informal space for recreation and education, and improving the image of the borough [16]. Accordingly, the multi-purpose value of trees, woodlands, and hedgerows were to be protected and enhanced by the Council [18]. Statutory site protection was adopted for areas such as local nature reserves, ancient woodlands, local wildlife, and geological sites, in order to secure the continuity of open spaces and enhance protection of the natural environment. For example, the northern part of Colliers Moss Common was designated as a local nature reserve, a statutory designation [23]. Sutton Manor, Clock Face, Colliers Moss Common, and Lyme & Wood Pits were designated as local wildlife sites, a non-statutory designation locally registered within north Merseyside to recognize ecological diversity [24]. The St Helens Council acknowledged the importance of biological, educational, and community interests and value on these sites [16], and consequently developed a masterplan for green infrastructure which is now recognized as one of the main statutory planning policies along with the Core Strategy and the Local Plan.

3.3 Green Belt

The Green Belt in St Helens was designated in 1983 to control urban sprawl, conserve the countryside, support urban regeneration, and ensure 'the permanence and protection of Green Belt boundaries', as well as promote the inclusion of land in the Green Belt [16], [25]. The release of the Green Belt for land supply is a sub-regional issue in the Liverpool City Region to be considered in terms of sustainability to minimize the impact on the remaining Green Belt [18].

The Green Belt in St Helens is located around the urban fringe and extends into the urban area. Approximately 50% of the borough is categorized as 'rural' (Fig. 1) [16]. Most of the land within the Green Belt in St Helens in the north of the borough is high-quality agricultural land; however, it also includes seven golf courses. In the south, the Green Belt includes newly created community woodlands on former colliery sites and agricultural lands [18]. The Green Belt thus encourages the creation of a

network of open spaces with an area-wide environmental policy for conservation.

4. CASE STUDY OF STRATEGIC AREAS IN THE SOUTH OF ST HELENS

4.1 Bold Forest Park: A Case Study

Bold Forest Park was recognized as a priority area to increase green infrastructure within the core strategy and local plan in St Helens [18]. The Bold Forest Park Area Action Plan was adopted in 2017 to regenerate 320 hectares of land with the legacy of raised spoil heaps of the former collieries industry [22]. The vision of the Action Plan was to 'create new economic opportunities through sustainable development' by promoting leisure and tourism and establishing networks of open spaces as assets for attracting more local communities [18]. The plan aimed to support the local economy by increasing opportunities for recreation [22] through the promotion of the park as a gateway to the town and serves as a model case for managing the largescale open spaces of former collieries. The Mersey Forest Plan also recognizes that the area represents potential sites for leisure activities by 'improving tourist infrastructure and creating new visitor attractions' [1].

Most of the area is designated within the Green Belt, with five recreation hubs, including Sutton Manor, Clock Face, and Collier Moss Common, connected by key walking routes, road links, and proposed bridle ways to enhance the network and improve access. There are two railway stations between Liverpool and Manchester close to Brickfields and Colliers Moss Common, which makes Bold Forest Park easily accessible by train. The M62 motorway transects Forest Park, adjacent to the Griffin Wood and Sutton Manor. The Mersey Forest team is seeking a partnership to find resources to deliver on the aspirations of the Area Action Plan that is still being developed.

4.2 Colliers Moss Common: A Case Study

Collier Moss Common, formerly Bold Moss Common, is a former mossland complex which was subject to tipping from the former Bold Colliery and Bold Power Station (Fig.7). In 1990, ownership of the site was transferred from the National Coal Board to the Groundwork Trust St Helens, Sefton, and Knowsley, which subsequently undertook an ecologically-led restoration to create a valuable community asset from derelict land. Restoration was completed in 1994. In 2005, the site was designated by the St Helens Council as a local nature reserve in recognition of the site's ecological and social importance.

The Groundwork Trust for St Helens went into

receivership in 2006, and the land was declared bona vacantia, coming under the remit of the Duchy of Lancaster as owner of last resort, with no provision for management of the open space. This led to vandalism and anti-social behavior. Having unsuccessfully attempted to obtain government assistance to address the problem, the St Helens Council requested that the Community Forest Land Trust (CFLT) acquire ownership of the land and initiate a partnership-led approach to a solution. The CFLT took ownership in 2014. It is run by a board of five voluntary trustees and, with no regular funding, must generate income to carry out its activities.

As site owner, the CFLT has facilitated a range of bids for external funding. A total of £213,000 in external funds have been generated for the improvement of the site from a variety of funding sources. Concurrently, a number of funding bids have been unsuccessful, underlining the need for continuous management through the securing of funding, as the absence of sustainable management plans can, as noted, result in anti-social behavior. The site is part of the Collier Moss Common Recreational Hub in the Bold Forest Park Area Action Plan.

5. DISCUSSION

The industrial landscape of St Helens developed over the course of 250 years [20]. In contrast, policies for open space management and action plans for the transformation of post-industrial sites have existed only since the 1990s. Environmental regeneration requires extensive time for trees to grow into mature woodlands due to the complexity of the 'greening' process, and 'the results are often only partially successful' [26]. Open space management policies in St Helens continuously identify strategic sites, e.g. Sutton Manor, Clock Face, Colliers Moss Common, and Lyme & Wood Pits, to promote environmental regeneration with long-term management (Fig. 2-4). For example, in the Forest Strategic Vision Document in 2006, St Helens sought additional planting to increase the connectivity between woodlands created at different times, making the networking of green spaces a key issue. Sutton Manor, Clock Face, and Colliers Moss Common were categorized as 'natural and semi-natural sites', which include woodlands, grasslands, and former collieries and quarries [27]. This demonstrates activities that can transform industrial sites to places of environmental regeneration, open to nearby communities, where hill-shaped landforms can become an area landmark. Lyme & Wood Pits was a former colliery and a waste disposal site, and is being reclaimed in the process of waste disposal operations (Fig.8). Following the restoration and the creation of new

access to surrounding neighborhoods, it has opened as a country park [18]. Based on the Green Flag Award scheme, which sets management standards for parks and open spaces in England and Wales, Sutton Manor, Clock Face, and Lyme & Wood Pits exhibit quality of management, while Collier Moss Common needs further improvements in the quality of its green open spaces, access, security, facilities, maintenance, and use by different groups of people [27].

This study presented two case studies involving action plans and described strategic sites from a plan within the masterplans for green infrastructure in St Helens, UK. The 2017 Bold Forest Park Area Action Plan is a statutory planning document focused on the economic impact (as manifested in, for example, increased leisure and tourism opportunities) of developing Forest Park as a subregional tourist offering located between Liverpool and Manchester. The case of Colliers Moss Common suggests that continuous management and fundamental conditions of environmental quality are required for further improvements and enhancements, as is made clear from the open space assessment described in the previous section. The case studies presented here show that establishing working partnerships is one of the priority issues in sustainable Green Infrastructure planning, a point that has been echoed in a number of previous studies [6], [14], [28], [29]. The case studies also underlined the importance of partnerships involving a variety of organizations to ensure effective longterm management by enhancing the assets and functions of Green Infrastructure for social, economic, and ecological benefit [28], [29].

In an interview conducted for this study, a former planning officer of the St Helens Council noted that long-term open space management is critical and that securing the necessary resources can be highly challenging [9], [30]-[34]. Collaboration with experts possessing specific skill sets is also important. The same planning officer added that the quality of the open space matters: If the open space is not well-managed, 'it can cause problems and bring no benefits to the community'. Collaboration is particularly crucial for the landscaping of former landfills, which requires the involvement of experts in waste and mineral management, ground maintenance, as well as the planning department. The quality of open space can only be ensured when such partnerships are in place based on a long-term strategic maintenance plan.

In St Helens, Mersey Forest has led the partnership in applying for funding and undertaking projects, while the St Helens Council has updated relevant plans for green infrastructure planning. Thus, partnership has played a key role in collaboration among a wide range of people to deliver the plan and undertake long-term

management. This requires securing regular funding to maintain open spaces, which has been an ongoing issue. The UK government policy, the 25 Year Plan for the Environment, recognizes the significance of securing a mixture of public and private funding and financing with various partners for long-term management [13]. This point is reinforced in the two case studies, and constant efforts by the Mersey Forest and St Helens Council in securing resources for maintenance and improvement are the key to providing neighboring communities with high-quality open spaces in the area's post-industrial landscapes.

6. CONCLUSIONS

In Helens, through environmental regeneration, networks of publicly accessible open spaces have been developed, supported by policies for their long-term management. Over the past decade, green infrastructure masterplans have been revised and published by the St Helens Council, alongside the area-wide Mersey Forest Plan. In terms of the delivery of these plans, the Mersey Forest Partnership continues to secure resources from public and private landowners, local authorities, charities, government organizations, and the community. This is also highlighted in the adopted local plans as well as in The Mersey Forest Plan, which identifies priority areas for planting more trees, as a recommendation to enhance community forestry activities. In response to local planning policies and to address local issues, action plans have been created and updated to meet the needs of the area and the community in accordance with the progress of environmental regeneration for further enhancement. Key restoration community woodland projects on former collieries represent a variety of open spaces and demonstrate that post-industrial landscapes can be a driver of recreation development and community engagement.

To promote long-term open space management, policies and updated plans can form the basis for introducing planning tools for maintaining sufficient standards in restored post-industrial landscapes that can be well-used by the community. However, these policies and action plans need to be developed through appropriate partnerships in order to secure the resources necessary for the long-term management of the open spaces they create. By doing so, it may be able to meet the needs of the area and the community in accordance with the progress of environmental regeneration for further enhancement.

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