ENVIRONMENTAL REGENERATION AND MANAGEMENT IN PARTNERSHIP IN THE NORTHWEST OF ENGLAND

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ABSTRACT: Built environment and cultural heritage are important aspects to improve the quality of life in environmental regeneration and management. This paper aims to compare two case studies to examine partnership for environmental regeneration and management in post-industrial landscapes in the northwest of England: conservation and interpretation of the salt heritage at Northwich Woodlands, and landscaping former coalfields with artworks at Bold Forest Park, St.Helens. Study methods used are literature reviews and face-to-face interviews with representatives from partnership organisations, e.g. Mersey Forest, local authority officers, and Friends of Anderton and Marbury. From the results, characteristics of the two projects became apparent with distinctive focuses: industrial heritage in Northwich Woodlands; and creating a focal point using collaborative artworks in St. Helens. Similarities are also found in outcomes of environmental regeneration to create wildlife areas with some statutory designations, and partnership patterns integrating sectors from public, private, and the community. For both case studies, the overriding issue is being able to develop the resources and partnerships to enable the sites to be managed and thus cherished by their communities in the long term.

Keywords: Post-industrial landscapes; Industrial Heritage; Art Projects; Community Participation

1. INTRODUCTION

1.1 Participative Environmental Regeneration in Creation of Post-industrial Landscapes in the UK

Post-industrial landscapes are brought by 'radical transformation by the industrial era', i.e., mining, in European landscape, one of the first to be faced with 'the need to restore and give new purposes to damaged industrial landscapes' [1]. However, in such damaged post-industrial landscapes, there are unused or underused lands, i.e., brownfields with unique flora and fauna, and industrial heritage in some cases [2]. In addition, in recent years, post-industrial landscapes are considered to be potential sites for creating Green Infrastructure (GI) to improve 'the health and quality of life' for the community by an 'interconnected network' with ecological process [3], [4] of blue (water) and green (open spaces) systems [5].

In the UK, processes of environmental regeneration in post-industrial landscapes are recognised in parallel to community participation in partnership with volunteer sectors and often with the community, owing to the British Urban Policies to support physical regeneration with socioeconomic regeneration [1]. Because some of these sites are not always recognised by the local community due to a lack of infrastructure or its location they can be difficult to be noticed [5]. In this way, landscape improvements can be undertaken with approval of the community and can empower the community to become engaged in long-term landscape management [1]. Therefore, creating links between the landscape and the people is inevitable for sustainability of the community and the environment [6]. Furthermore, the process can create opportunities to enhance community empowerment through local enthusiasm [7]. Partnership for community scale GI has been classified into distinctive typology patterns by characteristic, governance, and activity focuses which enables to analyse creation and management of GI from local level to city-scale [8]. In terms of the partnership capacity of the community, continuous public sector support is also necessary in long-term management in green space [9]. environmental Therefore. regeneration and management in partnership is becoming more recognised.

As a way of engaging with the community, art in the landscape is found in many cases. Artworks have been discussed to increase attractiveness for visitors and being a touristic destination, as well as to have an impact on regionally and nationally by attracting the media and the wider community which can support with increasing revenue and future funding opportunities [1].

1.2 Aims of the Study and Study Methods

This paper aims to compare two case studies to examine the role of partnership for environmental regeneration and management in post-industrial landscapes as follows. It will focus on the improvement of the built environment and cultural heritage perspectives; conservation of industrial heritage as a result of salt production at Northwich Woodlands, and landscaping former coalfields with an iconic artwork called 'Dream' at Bold Forest Park. St. Helens. There has been little discussion about the enhancement of local distinctiveness and the quality of life in brownfield land regeneration [6]. Study methods used are literature reviews regarding on environmental regeneration and cultural heritage and interviews with four representatives of The Mersey Forest, two local authority officers from St. Helens Council, one officer from Cheshire West and Chester Council, and one representative from the Community Forest Trust, and two representatives from the Friends of Anderton and Marbury.

Both projects consist of multiple land-uses and landowners in the urban fringe in the Northwest of England. Northwich Woodlands are located next to



Fig.1 A map of case study areas by referencing [10] with some amendments



Fig. 2 A map of the Northwich Woodlands [11]



Fig 3. A map of the Bold Forest Park [12] with some amendments

the town centre of Northwich in Cheshire, and Bold Forest Park is in the south of St. Helens in Merseyside, within the Liverpool City Region (Fig 1-3). Interestingly, these projects are also connected by Sankey and St. Helens canals in St. Helens and the River Weaver in Northwich navigating to the River Mersey for transporting salt and coal. These are key projects of The Mersey Forest, one of two Community Forests in the Northwest of England since 1991.

The Mersey Forest has been leading a partnership with landowners and partners to manage long-term landscape management for over twenty years, and has 'evolved from a governmental inspired organisation to a community empowered organisation' [5]. It has supported the community to set up friends groups for anyone to join to manage and undertaking range of activities and events on green spaces since 1998 [13].

2. CASE STUDIES OF PARTNERSHIPS ON ENVIRONMENTAL REGENERATION AND MANAGEMENT

2.1 Outlines of Case Studies

Both case studies are good practice examples of post-industrial environmental regeneration which have supported the change in landscape that have improved the quality of the environment. Northwich Woodlands have undergone ground condition improvements to remediate past activities of salt-mining, through brine extraction and subsequent deposits of lime wastes (Table 1). Due to the excessive mining and extraction in the past, sudden historic subsidence has created several pools (known locally as "flashes") and altered the flow of water courses. As a result, there are a variety of waterways and wetland areas visited by people for bird watching and recreation.

Northwich Woodlands is comprised of a

variety of green spaces, including Marbury Country Park, a former country estate with a formal landscape; grazing land at Ashton's Flash; and community woodlands owned by the Forestry Commission at Uplands and Hopyards Woodland. Northwich Woodlands are located along the Trent and Mersey Canal with the size of 315hectares, the total sum of green spaces with some private lands (Fig. 2).

Lion Salt Works, recently completed conservation works and opened as a museum in 2015 to disseminate local history and industry of salt- making, and Anderton Boat Lift, constructed in 1875 for lifting about 15 meters high to connect the Trent and Mersey Canal to the River Weaver which had a conservation work in 2002, along with

 Table 1 Outline of the Northwich Woodlands

Project name (size of sites)	The Northwich Woodlands (315ha)		
Past industrial activities	Salt-mining, brine extraction, and deposits of lime wastes		
Landscapes	Subsidences to form pools and		
changes	creation of watercourses for salt-		
	mining and industrial activities		
Environmental	Pools and watercourses, undulating		
regeneration	landforms, and woodlands by		
and types of	landscaping		
Places of	Bird watching places and to visit		
interests of	industrial heritage (Lion Salt		
green space	Works: Anderton Boat Lift).		
0 1	travelling waterways		
Characteristics	Conservation of industrial heritage;		
of the projects	Green Flag Award, Site of Special		
and statutory	Scientific Interest (Witton Mill		
designations	Meadow)[14], 7 Sites of Biological		
	Importance[14], Green Belt[15],		
Fundings	Northwest Regional Developmente		
(main funders)	Agency, Heritage Lottery Fund		
Local	Mersey Forest, Cheshire West and		
partnerships	Chester Council, local industries		
and their roles	and businesses, landowners,		
	residents, and community and local		
	groups		
Community	Friends of Anderton and Marbury		
Other local	Saltscape Community Forum:		
groups	Northwich Business Improvement		
Browpo	Districts; Lion Salt Works Trust;		
	Cheshire Wildlife Trust; Canal and		
	River Trust; Groundwork Cheshire,		
	Lancashire, Merseyside; Cheshire		
	West Archives; Northwest		
Events and	Geological Society		
Activities on	groups Exhibition about Wildlife of		
sites	the Northwich Woodlands		
Management	Areawide management by rangers		
and	with volunteers from community		
responsible	and local groups		
organisations			
Long term	Securing the budget for the rangers		
management			
pians			

the development of marinas to travel by waterways [2]. These conservation projects were mainly funded by Northwest Regional Development Agency, a government organisation which promoted regional development (abolished in 2012), and Heritage Lottery Fund supported by the proceeds of National Lottery. It is managed by the ranger service from the Cheshire West and Chester Council and supported by the community and local Friends Group FoAM, it has also received the Green Flag Award. This is the benchmark national standard, which recognises and rewards the best green spaces in the country. For protection for wildlife and green space, a Site of Special Scientific Interest (Carey Park) [14], seven Local Wildlife Sites [14], and a Green Belt [14]-[16] for conserving undeveloped green fields by British planning system have been designated. Fig.6 illustrates Ashton's Flashes, in fragile foundation by subsidence [14] to limit accesses by fences around the site. It is now used for grazing in dry seasons and becoming a marshland in wet seasons [2].



Fig. 4 Lion Salt Works



Fig.5 Anderton Boat Lift



Fig. 6 Ashton's flash

Bold Forest Park was formerly a moss land with diverse wildlife and nature. After coal-mining and quarrying activities during the 1950s to the 1980s, a programme of environmental regeneration was undertaken in the 1990s to create green spaces through the reclamation of spoil heaps into community woodland (Table 2). Bold Forest Park also includes privately owned agricultural land, designated as a Green Belt [12], [17], [18] (Fig.3), as well as protected areas for wildlife. This includes a Local Nature Reserve (Colliers Moss Common North) [12], and 11 Local Wildlife Sites [12] in the project. The undulating landscapes created by spoil heaps resulting from coal-mining activities (Fig.7) and soil generated by housing development are now becoming new landmarks with great views, such as Sutton Manor.

Bold Forest Park consists of five green spaces, 320 hectares in total, such as Colliers Moss Common with a variety of wildlife areas, as well as woodlands and grassland owned by the Forestry Commission. There is a private owned golf course, an area of 51.5 hectares, included in the Bold Forest Park Area Action Plan and called to be 'recreation hubs' with green spaces [12]. Farmlands are located around green spaces with 63 percent of an area size of 1159 hectares of the park, also designated as Green Belt (Fig. 3) [12].

Table 2	Outline	of the	Bold	Forest	Park
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ruore 2 o utime	of the Bold I ofest I and
Project name	The Bold Forest Park (320ha of green spaces: 1808ha)
Dest in destrict	Graf mining
activities	Coal-mining
Landscapes	Spoil heaps created from coal-
changes	mining activities and a hill created
changes	himming activities and a min created
	by soli constructed by a housing
	development
Environmental	Reclamation of spoil heaps to form
regeneration	hilly landscapes and tree planting;
and types of	environmental improvements and
green space	landscaping surrounded by
0 1	agricultural lands
Places of	Big Art Project called the Dream.
interests of	Viewpoints to the surroundings
green snace	and green spaces created by
green space	and green spaces created by
Changetenistics	Automatic anitic Dia Auto Ducie at
Characteristics	Artworks with Big Art Project,
of the projects	environmental regeneration; Local
and statutory	Nature Reserves (Colliers Moss
designations	Common North)[12], 11 Local
	Wildlife Sites[12], Green Belt[12],
	[17], [18]
Fundings (main	Northwest Regional
funders)	Developmente Agency, EU
Local	Mersey Forest, St. Helens Council,
partnerships and	local industries and businesses.
their roles	landowners, residents, and a
	community group
Community	Friends of Colliers Moss
groups	
Other local	
groups	
Events and	Events and management with the
Activities on	community
sites	5
Management	Site based management by St.
and responsible	Helens Council, Mersey Forest
organisations	Forestry Commission and private
	landowners
Long term	Bold Forest Park Area Action Plan
management	(2017)
nlans	(2017)
Project name	The Bold Forest Park (370ha of
(size of sites)	rice bolu rolest raik (52011a 01
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The woodlands and marshlands of Colliers Moss Common (North and South) are connected by a pedestrian bridge over the railway line between Manchester and Liverpool. Community Art has been used on the site to engage with the local community, such as "pit wheels" used for coal mining are featured in the design of a pedestrian bridge which has become a focal point of the Common (Fig.8).

There is also a Big Art Project called 'Dream' Northwest mainly funded bv Regional Development Agency and European Regional Development Fund [19]. The sculpture is the key output of collaborative work of the artist and the member of the community who worked in the coalmines, reflecting the community's wish to have something new and looking to the future. The process of the collaborative work was documented on a Channel 4 TV programme and the project is widely known. It is located on the highest point of Bold Forest Park, on the former coalfield, Sutton Manor (Fig.9) and is an important local focal point.



Fig.7 Landscaping at Sutton Manor



Fig.8 A bridge at Colliers Moss Common



Fig. 9 A sculpture at Sutton Manor

2.2 Partnerships of Case Studies

2.2.1 Partnership of Northwich Woodlands

The Northwich Woodlands partnership includes Cheshire West and Chester Council, the Mersey Forest, Forestry Commission, Canal and River Trust, local industries, businesses and community groups. The well-established Friends of Anderton and Marbury (FoAM) and other local groups in the area (Table 1) to undertake a programme of events. FoAM was founded in 1999 and now has a membership of over 240; it continues to play an active role to manage the sites. Area-wide management is undertaken by Cheshire West and Chester Council and Forestry Commission rangers, supported by volunteers from community and local businesses. Important tasks for the future are to secure the budget to be able to continue to manage the habitats created.

2.2.2 Partnership of Bold Forest Park

Partnership of Bold Forest Park includes St. Helens Council, the Mersey Forest, Forestry Commission, local industries and businesses, landowners, residents, and a community group called Friends of Colliers Moss. The Friends of Colliers Moss was founded in 2016 to undertake events and management on sites.

Table 3 A timeline of the Northwich Woodlands

1970's	1975 Environmental improvements at
	Marbury Country Park
1980's	1987 Environmental Regeneration at Furey
	Wood
	1989 Cheshire West and Chester Land
	Regeneration
	Unit to start environmental regeneration(-
	2005)
1990's	—
2000's	2006 Vale Royal Borough Local Plan (-
	2015) (Northwich Woodlands identified)
	2007 Supplementary Planning Document
	5, Landscape Character, Vale Royal
	Borough Council
2010's	2012 Saltscape Landscape Partnership (-
	2017)
	2015 Local Plan (Part One, adopted),
	Cheshire West and Chester Council
	2016 Northwich Business Improvement
	District Green Infrastructure Plan, Mersey
	Forest (Northwich woodlands identified)
Table 4	A timelines of the Bold Forest Park[20]
1970's	—
1980's	1986 Economic Strategy
	1987 Ravenhead Renaissance established
	1989 Wasteland to Woodland (-1998)
1990's	1998 St. Helens Unitary Development Plan
	1998 (-2013)
2000's	2003 The First City Growth Strategy
	(Public-private partnership)
	2005 Forestry Commission District Valuer's
	Report
	2006 St. Helens Town in the Forest Strategic
	Vision Document (Forest Park identified)
	2008 City Growth Strategy (-2018) (Forest
2010	Park identified)
2010's	2012 St. Helens Core strategy (Bold Forest
	Park identified)
	2016 St. Helens Local Plan (2018-2033),
	Scoping Consultation Document (Bold
	2017 Dold Equat port Area Astic - Disc
1	2017 Bold Forest park Area Action Plan

2.3 Planning Timelines of Case Studies

A planning timeline of Northwich Woodlands can be described as project based, starting from environmental improvements at Marbury Country Park in 1975, then Cheshire County Council Land Regeneration Unit to take over environmental regeneration during 1989 to 2005 [14], and more recently through the Saltscape Landscape Partnership (2012-2017) supported by the Heritage Lottery Fund [21] (Table 3). The importance of good access and connections to Northwich town centre have been discussed by developing Green Infrastructure in Northwich Business Improvement District Green Infrastructure Plan by Mersey Forest, since Northwich Woodlands are closely located to the town centre [22].

Northwich Woodlands has been identified in Vale Royal Borough (reorganised into Cheshire West and Chester Council) Local Plan (2006; saved policies until 2015) [15]. However, a recently published Local Plan (2015) by Cheshire West and Chester Council mentions only selected sites but not entire Northwich Woodlands [16].

A planning timeline of Bold Forest Park has been led by planning system, starting from strategies in the 1980s and a development plan in the 1990s (Table 4). Forest Park has been identified in the 2000s, and it appeared in documents such as St. Helens Town in the Forest Strategic Vision Document (2006) [23], and City Growth Strategy (2008) [24]. In the 2010s, Bold Forest Park has been identified in statutory documents as follows; St. Helens Core strategy (2012) [25], and St. Helens Local Plan (2016) [18], and the Bold Forest Park Area Action Plan (2017) [12]. St. Helens Local Plan (2016) is discussing about a release of Green Belt [18], which may also have effects to the future development in the area, such as a development opportunity site identified in the Fig. 3.

3. CONCLUSIONS

From the results, the two case studies present good examples of environmental regeneration and management creating community green spaces in post-industrial landscapes. There are similarities in outcomes of environmental regeneration creating wildlife areas with some statutory designations, and partnership with the public, private and community.

Moving forward there will be distinctive focuses to promote local characteristics: most likely around industrial heritage in Northwich Woodlands, and active recreation and collaborative artwork in St. Helens. In both Northwich Woodlands and Bold Forest Park the community and local groups are actively participating in running events and exhibitions, as well as assisting to manage their green spaces.

In terms of planning timelines, differences have been found as follows. The series of action are creating a timeline in Northwich Woodlands from environmental regeneration by Land Regeneration Unit by the local government to the recent project of Saltscape Landscape Partnership, but an entire site of 'Northwich Woodlands' is not mentioned in the recently published planning documents in the local government. However, in Bold Forest Park, it is based on planning, so that the site had been continuously mentioned in planning and strategic documents by the local government.

There are similarities in outcomes of environmental regeneration creating wildlife areas with some statutory designations and partnership patterns.

DISCUSSIONS

Williamson (2003) [3], Handley et. al. (2007) [4], Miyagawa et. al. (2017) [5] has described a potential for creating network of GI, therefore, the two cases illustrated possibilities to contribute for enhancement of the environment. Partnership patterns are also in common with a range of group of people including public, private, a non governmental organisation, community groups and community. Partnership approach is important in creating links between landscape and the people are necessary in creating sustainable community and the environment which is suggested by Ling et. al. (2007) [6]. It may also contribute to urban regeneration aspects for participation and empowerment of community noted by Davies (2014) [1], and Roe (2014) [7], as well as to engage in long-term landscape management [1]. In addition, Healey (1997) shows above patterns of partnership including community with an inclusionary approach can be effective to build capacity for collaborative governance [26]. The case of Northwich Woodlands demonstrates a good practice in having voluntary participation in management to help rangers by a Friend's group.

For both case studies, the overriding issue is being able to develop the resources and partnerships to enable the sites to be managed and cherished by their communities in the long term. The recently published UK's government's '25 Year Plan for the Environment' acknowledges that there needs to be long-term direction with flexibility to adapt to new evidence and circumstances: 'the right mix of public and private funding and financing for projects that protect and enhance natural assets will be crucial' Increasing pressures on local authority [27]. budgets has meant the need to consider innovative funding and land holding mechanisms in order to realise the natural capital benefits the two case studies provide.

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