



Geo-Environmental Spatial Imaginaries: Reframing Nature Using Soft Spaces and Hybrid Rationalities

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This article introduces the idea of hybrid rationalities as a complement to and extension of existing scholarship on hybrid governance and hybrid infrastructure. The research presented here also contributes to work on soft spaces and spatial imaginaries, which has mainly focused on planning and regeneration, by extending consideration to geo-environmental imaginaries and environmental soft spaces. A case study of the Mersey Belt region, which stretches between Manchester and Liverpool in England, reveals the ways in which multiple forms of new rationalities have been absorbed into the work of those looking to promote strategic environmental thinking that works at landscape scale, that is above the level of the individual site. In the process, multiple new geo-environmental spatial imaginaries have been created as part of the process of attracting funders and stakeholders. These new spatial imaginaries have been accompanied by experiments in creating new environmental soft spaces, supported by increasingly hybridized forms of governance in which the roles and rationalities of different stakeholders have to some extent blurred. In the process, actors have shaped, and shared distinctive understandings of how projects to support nature can be used to support wider goals such as addressing climate change, economic regeneration and social well-being.

Keywords: spatial imaginaries, urban nature, soft spaces, hybrid governance, hybrid infrastructure, hybrid rationalities

INTRODUCTION

As world leaders grapple with the need to transition to a net-zero carbon economy, the future uses for former extractive landscapes associated with coal mining and peat excavation will necessarily rise up the policy agenda across the world. While extensive critical scholarship on new and expanding sites of extraction has focused on issues of dispossession and ecological damage (Frederiksen and Himley, 2020), less is known about the tensions that emerge when established extractive industries decline or terminate, when issues can emerge around site neglect, dereliction, reclamation, or modification for new social, environmental or economic uses. This paper addresses these issues by examining the ways in which multiple forms of rationality are invoked, and new governance spaces developed, in the search to secure funds for transformative site interventions in a context of public sector funding constraints.

For local leaders trying to shift dominant narratives of post-industrial decline, sites previously hosting extractive industries present both important challenges but also possibilities for improving local quality of life and sparking economic recovery (Vainikka, 2015; Perrone et al., 2020). It is

at such junctures that a new politics of sustainability can emerge, in which strategies of urban entrepreneurialism collide with environmental interests, where the move toward creating vibrant post-industrial economies comes to depend on cleaning-up the legacies of the past (While et al., 2004). Although major post-industrial cities such as Manchester and Liverpool in the UK have achieved some success in revitalizing their economies while redeveloping derelict sites in their urban cores, this has been accompanied by concern about growing socio-spatial inequalities at city-region scale (Hodson et al., 2020; Deas et al., 2021).

In ex-industrial sites where developer interest is limited, such as on the urban fringes, low land values and the high costs of environmental remediation can combine to make new commercial activity financially unviable without costly state subsidy. In such situations environmental projects of varying kinds can become an attractive alternative to leaving sites unused or derelict. Rather than presenting a blank canvas on which local political actors can begin to re-imagine their urban areas, however, multiple interests invariably emerge among landholders, residents, statutory authorities and others, making claims for how best to regenerate the sites vacated by extractive industries. Some well-known cases, from the IBA-Emscher Park in the Ruhr to a host of smaller scale projects, exemplify the successful transition to landscapes that combine environmental, social and economic benefits (Perrone et al., 2020). These potentially transformative projects often come with their own tensions relating to the specificities of the site and their relationship to their surrounding areas, among them: should sites be restored to nature or new industries sought to help compensate for jobs lost; how should the cultural histories of the sites and their surrounding communities be recognized; should altered landscapes be restored to some notion of “pristine nature” or reinvented as recreation landscapes, for instance with spoil heaps smoothed out to become gentle grass and tree covered hills; and, should historical features be preserved, with elements of industrial infrastructure retained, interpreted or repurposed?

This article explores some of these tensions, examining attempts to reimagine post-industrial urban and peri-urban landscapes through the use of multi-functional green infrastructure to mitigate and adapt to climate change. As Mell (2019, p. 19) argues, our understanding of green infrastructure has evolved over time, informed by a growing evidence base, but at its heart lie some key principles:

“connectivity, access to nature, the development of an integrated form of landscape and urban planning, a multidisciplinary approach to management, a growing awareness of the multi-scalar benefits of investment in landscape, and finally the establishment of multi-functional social, ecological and economic benefits from a green infrastructure resource.”

Green infrastructure in this sense is a form of hybrid infrastructure, with an emphasis on connectivity and access to networks of green spaces that provide benefits both to natural ecosystems and human populations (Benedict and McMahon, 2006; Mell, 2019, 2022). Drawing on a

case study from North West England, the aim of the paper is to examine the multiple forms of rationality promoted and harnessed in urban greening projects that act as a form of hybrid infrastructure intended to deliver multifunctional benefits.

Since the 1970s, North West England has been a crucible for work inspired by the notion that ecological restoration can be productively aligned with efforts to address the socio-economic consequences of deindustrialisation. These efforts have involved a range of alternative spatial imaginaries of varying durability and with very different geographies, applied to the urbanized ex-industrial belt along the River Mersey, linking the cities of Liverpool and Manchester (Haughton and Allmendinger, 2015; Hincks et al., 2017). Attempts to develop strategies that connect ecological restoration and socio-economic revitalisation, and to promote a variety of associated spatial imaginaries, began with a short-lived planning strategy for the Mersey Belt in the early-mid 1970s. This was followed by the 25-year public, private and third sector Mersey Basin Campaign, a subsequent private sector originated Atlantic Gateway proposal that briefly gained some political traction after 2010, and the current Great Manchester Wetlands initiative, with its flagship Carbon Landscape Project (Dembski, 2012, 2015; Harrison, 2014; Deas et al., 2015; Hincks et al., 2017; Barton et al., 2021).

In this article, we introduce the notion of assembling environmental soft spaces and creating environmental spatial imaginaries that embrace hybrid rationalities, in particular as new policy imperatives emerge, for instance responding to funding opportunities around the role of green space in promoting healthy living. The paper builds on previous work in the planning and economic development literatures on soft spaces (Allmendinger and Haughton, 2009, 2010; Allmendinger et al., 2015), spatial imaginaries (Hincks et al., 2017) and “assembling the region” (Allen and Cochrane, 2007; Cochrane, 2020), exploring these concepts in the context of environmental policy.

The empirical research findings outlined below draw on this framing to help understand how local actors, often working within soft spaces of governance, have sought to reimagine post-industrial landscapes by emphasizing their value as unique natural assets that are part of the rich cultural and industrial heritage of the area. In the process, new spatial imaginaries have been produced by actors from diverse sectors, including in this case local Wildlife Trusts and other local environmental bodies, local government, the private sector, Natural England, the Environment Agency, museums, university academics, scientific advisors, organizations promoting healthy lifestyles, “friends of” and community groups. Data was gathered through two rounds of semi-structured interviews. The first, from 2012 to 2015, involved scoping the range of economic and related environmental governance initiatives in the Mersey Belt. A total of 30 interviews with key actors from public, private and voluntary sectors were undertaken, involving 34 participants. A second round of 23 interviews with 26 public, private and voluntary sector participants was undertaken in 2018, focusing on environmental initiatives in the urban and peri-urban areas between Liverpool and Manchester covered by the Great Manchester Wetlands Partnership.

CHANGING RATIONALITIES FOR INVESTING IN NATURE AS HYBRID INFRASTRUCTURE

Urban greening initiatives appear to be expanding around the world (Cooke, 2020), informed by a growing evidence base about the range of potential benefits they offer, from helping tackle climate change to making local areas more attractive to live in and visit. Research seeking to identify the range of resultant benefits has helped to support the case for policies promoting urban greening, evident in the rapidly expanding academic and technical evidence base around terms such as green infrastructure, nature-based solutions, natural capital, and ecosystem valuation (e.g., Counsell and Stoneman, 2018; *eftec Environmental Finance Countryside*, 2019; Mell, 2019, 2021; DEFRA, 2020). Each of these terms and the debates about multi-functionality that have grown around them can be seen in part as responses to policy-makers, primarily in the public sector, looking for justification and guidance to help allocate scarce resources amid the clamour of competing demands.

Seen from this perspective, work on green infrastructure and natural capital can be viewed as embodying instrumental and normative thinking about the value of policies to improve the environment (Cooke, 2020), meeting societal imperatives such as addressing climate change. Green infrastructure projects to create or expand urban forests or develop sustainable urban drainage systems, for example, can be accompanied by claims about their recreational value and their role in improving biodiversity, reducing water run-off to help prevent flooding, and contributing to carbon capture. These multiple rationalities can all underpin funding bids. Where monetary values can be ascribed to them as ecosystem services or natural capital, then the arguments become even more persuasive to certain funders (Mell, 2021). At one level, this can be seen as a reflection of the growing economization of decision-making about collective public infrastructure, where reductive cost-benefit types of analysis come to the fore, favouring interventions that are more easily quantified in monetary terms. Responding to concerns about crudely reducing natural processes to imputed economic values, however, it is important to note work undertaken under the rubrics of natural capital and ecosystems services to broaden understanding of the benefits of nature, exposing new thinking around their identification and measurement (see Counsell and Stoneman, 2018 for more detail on each approach). Most recently this has led in the UK to a new policy for promoting “net biodiversity gain,” which requires developers proposing new projects to find creative ways of minimizing bio-diversity loss on site and—where this is not possible—providing compensatory schemes elsewhere (we return to this later).

Rather than revisit discussion about the different ideological underpinnings and techno-rationalities associated with particular terms such as green infrastructure and natural capital, the focus of this article is on how these emergent ideas have helped increase the range of rationalities deployed by those seeking to build support for urban and peri-urban greening initiatives, often driven by the search for new funding (Mell, 2021). As **Table 1** illustrates, many of these rationalities

remain strongly rooted in some of the longstanding concerns of environmental management (such as flood risk management), mediated through contemporary concerns such as climate change. Other rationalities echo earlier concerns about landscape management and aesthetics as promoters of human satisfaction (Mell, 2019), but again mediated by contemporary sensibilities such as the need to contribute to mental and physical health by improving accessibility to nature.

Distinctive governance challenges result from this framing of nature as a form of hybrid, multi-functional infrastructure that can serve multiple purposes. This means that environmental policy must interact with different policy areas associated with particular institutions and governance geographies. Local governments, for instance, work to clear territorial boundaries that are relatively settled, while water utilities work to boundaries that reflect ownership or management of assets and infrastructure, and flood management initiatives typically relate to river catchment geographies or drainage systems. Actors focusing on the environment often start from the viewpoint that nature does not recognize administrative boundaries; rivers flow across them, flood waters regularly breach them and migrating birds fly above them. Even attempts to draw boundaries around particular aspects of nature, such as river catchments, habitat areas or landscape character areas, necessarily fail to capture the richness and dynamism of natural processes.

Adding to this complexity, different governance geographies tend to fall in and out of favour, as exemplified by the rise and fall of regional government in England during and after the Labour governments of 1997–2010, and the growing policy emphasis on city-regions in the period since. A further dynamic in the recent rescaling of environmental policy has been the influential report to the UK government, *Making Space for Nature* (Lawton et al., 2010), prompting a growing acceptance by government that environmental interventions work better if planned at the landscape scale, rather than as a collection of smaller sites (DEFRA, 2018). Larger sites with buffer zones, stepping-stone sites and connecting wildlife corridors were all presented as fundamental to promoting biodiversity and habitat management while addressing the imperative to address changing species range in the context of climate change.

The rescaling of ideas, actions and structures was given further momentum by the election in 2010 of a new UK government that embarked on a decade of austerity cuts to public spending, part of which involved dismantling regional governance structures while promoting alternative governance geographies based on city-regions and other sub-regional configurations. Taken together, these trends have seen both a rescaling of environmental governance initiatives and, as public sector resources have dwindled, more work on identifying new rationalities for investing in nature. In many ways, work on green infrastructure can be seen as a response to this dynamic governance landscape, as actors work to fill the gaps and bridge across different policy spaces.

One fruitful way of thinking about the dynamics of alternative environmental governance arrangements is to draw on recent geography and planning scholarship on the intersection of territorial and relational spaces (Allen and Cochrane, 2007;

TABLE 1 | Rationalities for investing in urban nature as a form of hybrid infrastructure in North West England.

Rationality	Key mechanisms
Climate change adaptation	Flood risk management: sustainable urban drainage systems – water filtration, re-wetting dried-out mosses to reduce fire risk and increase water retention during peak wet spells. Investing in woodlands and water bodies for their cooling effects to address urban heat waves.
Climate change mitigation	Carbon sinks and storage: re-wetting peatlands and wetlands such as fens, tree-planting and meadow restoration.
Nature conservation	Stepping-stone sites and wildlife corridors to assist species movement for genetic diversity, biodiversity and migration related to climate change.
Brownfield site restoration	Pollution control via water filtration and spoil tip removal or bioremediation and greening, wetland restoration, and creating lakes in areas of subsidence for both wildlife and amenity values.
Connectivity for people and wildlife, rescaling nature – from patches to landscape scale interventions	Wildlife and people corridors. Improving access to sites and connecting locations, creating new recreational opportunities for walking and cycling and promoting active transport.
Economic regeneration rationalities. Attracting funding and creating jobs and training in areas of social deprivation	Opening up land for housing, industrial units and other development, including recreation and tourism.
Social rationalities – community engagement	Health and well-being for communities, including addressing mental health benefits of volunteering, improving access to local landscapes, and skills development and employability initiatives.
Landscape interpretation and creating spatial imaginaries that embrace past and future	Cultural histories and interpretation, community engagement, pride and sense of belonging, inspiring action toward sustainable futures.

Source: Authors. This table is not intended as a full list, but rather as representing some of the rationalities encountered in North West England (see later sections for further elaboration).

Massey, 2007), and soft spaces, fuzzy boundaries and spatial imaginaries (Allmendinger and Haughton, 2010; Haughton and Allmendinger, 2015; Hincks et al., 2017). Work on relational geographies and their relationship to territorial thinking has been inspired by research on the “South East” region of England which uncovered its malleable delimitation, changing over time and varying among different actors (Allen et al., 1998). The south east of England, it revealed, was not simply “out there” as a fixed, neutral territorial container for policy, but instead was continuously being made and re-made in multiple ways. Thinking about space relationally in this way revealed something of the realities of how actors and institutions necessarily created and worked across both territorial and relational space in myriad, dynamic ways. Thinking about space relationally then becomes an invitation to think about governance territories as involving continuing processes of assembling actors, institutions, ideas, representations and cultural practices. A region in this sense can be viewed less as a static object—a container in which actors might act—and more as a fluid set of processes of assembling and dissolving coalitions of interest around particular ideas about coherent territories for different purposes, whether an economic geography such as a travel-to-work area or an environmental geography.

The original formulation of soft spaces and fuzzy boundaries in planning was a response to the finding that much of the strategic work influencing spatial policy occurred outside the formal processes of statutory local government land-use planning. For example, the development of strategic policy in the Thames Gateway and its sub-areas tended to be organized around new geographies that involved parts of more than one local government area (Allmendinger and Haughton, 2009). These new arrangements were seen by the actors involved as helpful

in breaking out from the formal arrangements for producing statutory plans within clearly defined political territories, potentially affording greater creativity and accelerating the policy-making process.

Thinking in terms of soft spaces and fuzzy boundaries helps to uncover the ways in which actors cooperate in multiple ways to try to develop some new notion of what constitutes a coherent region for their specific purposes. Cochrane (2020, p. 538) refers to the processes of assembling new governance spaces as less a search for structured coherence or adherence to fixed units of territorial government, and more a series of acts of “territorial promiscuity,” as new governance spaces are continuously being “defined and redefined, stretched and bounded.” For the purposes of this paper, this earlier work is important because of its emphasis on how changing hybrid rationalities explain the creation of new spatial imaginaries for government spaces, embodying the dominant policy logics of a particular moment in time and place.

Our work suggests a parallel process of bricolage, which draws on alternate and multiple rationalities, blending old and new thinking to assemble funding bids for strategic environmental interventions (see Cleaver, 2012). This focus on hybrid rationalities in relation to environmental interventions extends recent scholarship on hybrid forms of state-capitalism and hybrid urban governance arrangements, in which ever changing constellations of actors are brought together in new governance ensembles. The movement of actors across sectors, for instance between the public and private sectors, further blurs the distinctiveness in how different types of actors understand problems and potential solutions (Mulligan et al., 2020; Taşan-Kok, 2021; Gibson et al., 2022). Examining these trends in relation to the grant-seeking activities of governance ensembles

in the environmental sector reveals a parallel hybridization of rationalities that reflects the blurring of relationships within and between governance ensembles.

To advance action around new spaces for nature, and thereby attract funding and gain some level of public recognition and acceptance, coalition-builders need to develop a repertoire of tools that go beyond institutional branding, creating new spatial imaginaries to reflect the essence of a new soft governance space. Examples like the Thames Gateway, the Oxford-Cambridge Arc, the Northern Way or the Northern Powerhouse all, in various ways and with varying success, attempted to embed new spatial imaginaries in the public and political mind (see Haughton and Allmendinger, 2015; Hincks et al., 2017; Valler et al., 2021). For environmental management and landscape planning, **Table 2** provides examples from North West England, organized around broad categories of scale, to illustrate the diverse range of rationalities employed in creating new spatial imaginaries with a geo-environmental basis (these are discussed in more depth in the next section).

The need to secure public funds, especially in the context of austerity and the continuing rise of highly competitive discretionary grant funding, has provided a large part of the impetus for both creating soft spaces of governance and developing accompanying spatial imaginaries to legitimize them. Work on institutional pluralism suggests an alternative yet related form of logic based on how actors with diverse ideological and intellectual framings of policy imperatives, when drawn into new governance ensembles, will seek to avoid conflicts that derail a partnership, in the process having to rationalize pragmatic compromises. As Nunes and Parker (2021) discuss in relation to social enterprises working in such contexts, there can be tensions between more “purist” approaches that seek to retain a stakeholder’s commitment to its own institution’s aspirational values, and the more pragmatic “survivalist” need to attract funding to ensure their work can continue. It is potentially helpful, then, that new soft space governance arrangements premised on new spatial imaginaries

can emerge—or dissolve—as actors come together to broker compromises in search of new funding.

This is important because of the changing ways that policy-makers attempt to rationalize their support for nature projects, drawing increasingly on assetization and accompanying models for the financialization of natural capital services to justify initiatives such as green infrastructure and ecosystem services. But it is important not to view this purely as another form of quasi-marketization and the selling of nature by unprincipled actors to find new funds to support their policy ambitions. Instead, new geo-environmental spatial imaginaries sometimes provide a creative rationale for committed if pragmatic actors from diverse sectors to justify investing in nature, in a world where economic benefits have primacy. This is not to say such arrangements are not without tensions, but nor are they inherently or wholly problematic.

GEO-ENVIRONMENTAL SPATIAL IMAGINARIES, NATURE AS MULTI-FUNCTIONAL INFRASTRUCTURE AND THE CHANGING SCALAR GOVERNANCE OF NATURE IN NORTH WEST ENGLAND

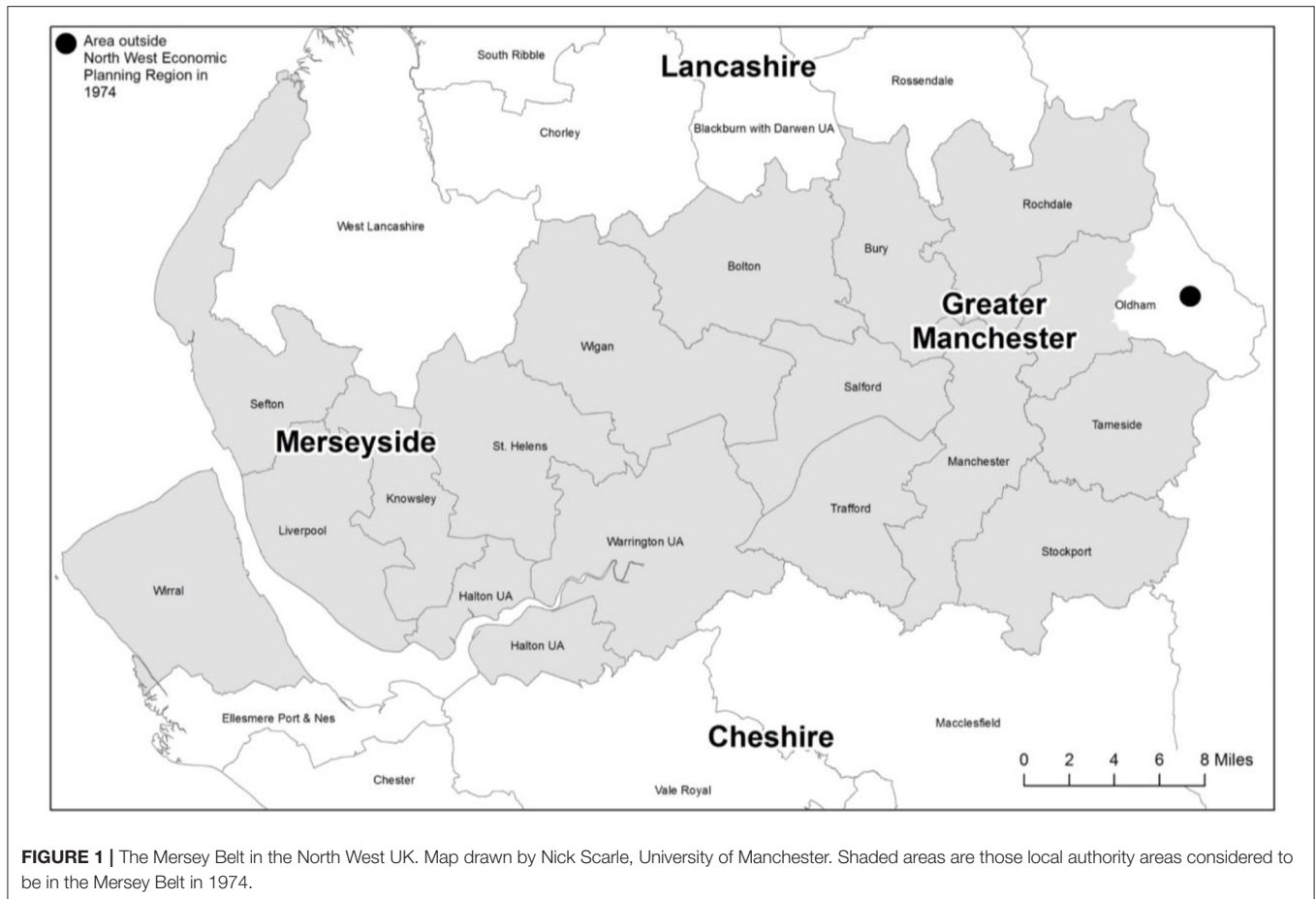
This section draws upon interview evidence to explore the context underlying the emergence of new environmental governance spaces since the mid-1970s in the Mersey Belt, the ex-industrial urban corridor connecting the Liverpool and Manchester conurbations (**Figure 1**). In the process we demonstrate how the on-going rescaling of policy and governance structures has been driven in part by policy actor efforts to link environmental and regeneration policy agendas (see also Mell, 2022).

The environmental governance ensembles of the Mersey Belt have proved dynamic and adaptable, repeatedly rescaled and re-organized over fifty years as the political context has evolved, old

TABLE 2 | Scaling new geo-environmental spatial imaginaries: examples from North West England.

Scale	North West England examples
Regional scale imaginaries	Mersey Belt Atlantic Gateway and Landscapes for Prosperity
Catchments and sub-catchments	Mersey Basin campaign (MBC), and its associated River Valley Initiatives, which mirrored the MBC structure of linking the public, voluntary and private sector at the local level (Tippett et al., 2007). Environment Agency catchment and sub-catchment areas, e.g., Mersey Catchment, Lower Mersey Catchment area, River Glaze sub-catchment
Sub-regional agencies and imaginaries	Regional parks Great Manchester Wetlands Community Forests, such as City of Trees in Manchester and Mersey Forest. Carbon Landscape Local Nature Partnerships. e.g., Greater Manchester, Morecambe Bay
Landscape character areas	English Nature landscape character designations, such as wetlands, mosslands, flashes, pondsapes
Protected sites, often designated in local plans of one or more local authority areas	e.g., Local nature reserves

This table excludes permanent statutory national protected area designations, such as National Parks, Areas of Outstanding Natural Beauty, and Sites of Special Scientific Interest.



funding streams have dried-up and new sources have emerged. Despite this dynamism, it is important to recognize that there have been important continuities, not so much in terms of institutional structures or spaces of governance, but of key individuals who have played a defining role. This has meant some level of continuity in ideas too, perhaps most notably in terms of support for the concept of regional parks and the notion of environment-led regeneration. As new rationalities for informing policy interventions have come to the fore, these existing ideas have endured, informing emerging thinking about the multi-functionality of nature as a form of hybrid infrastructure.

The term Mersey Belt first appeared in preparatory work for a North West Regional Strategy in the early 1970s, inspiring many young planners drawn to its promotion of the idea of regional parks (Deas et al., 2015; Barton et al., 2021). Initial attempts to develop strategy for the Mersey Belt quickly foundered, partly because no governance mechanism was established for it, but also because central government's agenda began to shift from regional scale interventions to a focus on inner cities. However, the idea that regeneration and environmental goals could and should be combined at the sub-regional scale proved more durable (Barton et al., 2021).

It took another 10 years before an opportunity arose to put into practice some of the thinking that informed the Mersey

Belt. The Mersey Basin Campaign (MBC) was a 25-year initiative (1985–2010) to restore water quality in the River Mersey. Established as an independent cross-sectoral organization covering multiple local authority areas, the geography of the MBC broadly approximated to the catchment of the River Mersey. By adopting the Mersey in its title, it immediately created a recognizable if indeterminate spatial imaginary that would resonate with the public. Primarily justified as an initiative for restoring water quality in the context of long-term pollution and accelerating deindustrialisation, from the start the MBC involved cross-institutional collaboration, in particular involving the regional water utility and multiple local authorities. In addition, the MBC quickly developed an approach that transcended the purely environmental, adopting a holistic approach that would seek to stimulate economic and social regeneration across its territory through its environmental actions, thereby building support among regional stakeholders and funding bodies.

Three features of the MBC experience can be highlighted for the purposes of this article. First, the leaders of the MBC proved adept at responding to new opportunities as they arose, adapting its boundaries to fit whatever funding opportunities arose. This “territorial promiscuity” allowed MBC to draw support from local stakeholders keen to utilize it as a vehicle for procuring resources:

nobody ever tried to nail us down too hard on the boundaries. We deliberately tried to keep them waffly. The world doesn't stop at local government boundaries. They are historical things, they have, in some respects, no meaning any more on key issues (Environmental NGO 9 2013).

the one thing that was the driver of its success was its flexibility. Its flexibility was that it wasn't a hard geography. It wasn't driven by local authorities. It was driven very much by a sense of place and therefore it operated very much at a number of spatial scales (Government Agency 2 2013).

Second, the MBC set up a series of river initiatives on a sub-catchment basis, helping to harness local interest in its work, widening its community engagement and consolidating its institutional legitimacy in the process:

We call it nested geography... you have to think at that scale [regional and sub-regional]... but then you can't really work at that scale, so you have to think locally. Some issues operate locally but not at a strategic scale, but it's all one big pot of problems (Government Agency 1, 2013).

Thirdly, interview data revealed that many of those who worked in and with the MBC went on to work in other organizations around the region, taking with them their enthusiasm for its distinctive approach of working at sub-regional scale, nested within a larger scale, and endeavouring to ensure environmental projects complemented social and economic objectives. With actors moving regularly between environmental NGOs, government agencies, local government, universities and the private sector, the distinction between the different sectors in terms of motivations and rationalities has to a degree blurred. The subsequent hybrid governance arrangements have benefited from this shared knowledge, understanding and experience. In new institutionalist terms, this has been a form of negotiated pragmatism, keeping diverse partners together.

Alongside the MBC, two other sub-regional initiatives emerged during the late 1980s and provided important models for new ways of working on environmental initiatives at scale, again serving as incubators and disseminators of new ideas across the North West and beyond. The first, the Groundwork Trust, was important because of its rootedness in a community-based approach, engaging and training volunteers as part of the wider effort to restore derelict land and create new recreational spaces for communities in the process. A national network of Groundwork Trusts grew in time, but the first was established in St Helens, a town in the former Lancashire coalfields suffering from the effects of de-industrialization. The funding and broad framework came from a government agency of the time, the Countryside Agency, which was looking to create a 5-year experiment in building new relationships between a freestanding town and its surrounding countryside. As one of those involved from the start explained when interviewed, this loose mandate left plenty of scope for interpretation and application:

the key thing about it was that it was working with local people and responding to local need. Immediately, as the project

programme began to take shape, it moved in from the countryside and into the urban area, initially through the schools... We said, well, we are responding to local need, this is where the projects need to be... The by-line of the initial ... Groundwork project was 'making good between town and country'. We always had that focus, but at the same time we were very, very interested in making progress with these big issues and making a contribution, increasingly, to urban regeneration in its widest sense (Former environmental NGO, 2013).

In developing this approach, the Groundwork Trust followed the lead of the MBC in pursuing a formula that emphasized environment-led regeneration:

The Mersey Basin Campaign was never an environmental programme. I used to say that at every conceivable presentation I did... We were never an environmental project in a narrow sense. Neither was Groundwork. Very early on Groundwork was producing publications on helping business to grow in a better environment (Environmental NGO 6 2013).

Secondly, alongside the MBC, two Community Forests, the Mersey Forest and City of Trees (formerly Red Rose Forest) provided a further illustration of sub-regional thinking that tried to connect environmental improvements to economic and social regeneration. Both created powerful new spatial imaginaries around urban trees and forests, in effect projecting a preferred vision resulting from their activities as well as focusing attention on existing woodland habitats. Formed in 1992, the Mersey Forest gained a reputation both for its work on the ground and its role in generating new thinking and funding models. Its website gives a sense of this journey, arguing that it has prospered because it delivers strong financial benefits for its backers while providing a wide range of local benefits (Mersey Forest, 2022). As well as addressing climate change challenges and habitat loss, it claims to empower communities and benefit the local economy by creating jobs, helping tackle ill-health and improving the attractiveness of the area.

Recognizing that both national and local government bodies were increasingly expecting funding cases that could demonstrate measurable economic and regeneration impacts, the Community Forests helped bring together regional actors to develop a programme of work around green infrastructure. The concept of green infrastructure was subsequently deployed across the North West, developing further as the institutional context for sub-national governance began to change.

From the late 1990s to 2010, successive national Labour governments promoted regional scale institutions such as the Regional Development Agencies. The primary focus of the North West Development Agency (NWDA) (2009) was on economic growth, but with a parallel commitment to sustainable development. As initial funding for Community Forests came to an end in the late 1990s and early 2000s, they necessarily began preparing new funding bids but initially encountered limited support from the NWDA (Horwood, 2020). However, NWDA proved more amenable when the case for funding emphasized the quantifiable benefits of what came to be known as green

infrastructure. The result was a blossoming of regional and sub-regional scale thinking that sought to find new ways of linking regeneration ambitions to environmental policy, leading to the creation of dense regional networks of policy actors such as the North West Green Infrastructure Think Tank and the North West Climate Change Adaptation Group (Carter et al., 2015).

Toward the end of its lifespan, as it worked on preparing a new draft regional strategy, the NWDA commissioned an ambitious study, *Adapting the Landscape*. This was produced in cooperation with the Mersey Basin Campaign, Natural England and the major private land-owner Peel Holdings, with local authorities apparently initially excluded because of concern that one of them, Manchester, might oppose the study (Dembski, 2012, p. 107). Echoing some of the ideas articulated in the Lawton report, *Adapting the Landscape* argued that investment in a range of green infrastructure projects would help address the emerging climate change agenda. This would mean promoting regional parks once again, alongside work on urban forestry and nature-based solutions to flood risk management at the regional scale. In many ways this approach exemplified the emerging policy and scholarly emphasis on the multi-functionality and inter-connectivity of natural assets (Lawton et al., 2010; Mell, 2019).

From the Mersey Basin Campaign to *Adapting the Landscape*, then, it is evident that while initial work to build new soft spaces of environmental governance was often essentially top-down in origin, subsequent efforts to extend stakeholder engagement and community involvement helped the new institutions access local knowledge and build local legitimacy. Potentially powerful spatial imaginaries such as the Mersey Belt emerged, briefly attracting policy interest before fading as the support required for their long-term viability failed to materialize. Nonetheless, some of the ideas involved proved more enduring. One of the distinctive findings of the first round of interviews in 2013 was the extent to which institutions shared ideas about how best to take forward environmental work at scale within the Mersey Belt region. We can also see how new rationalities were arrayed to justify environmental projects. This is evident in the ways in which green infrastructure thinking around multi-functionality and connectivity was used to validate public investment in environmental projects by stressing the economic and social impacts of investment, in addition to the more direct recreational and ecological benefits.

FUNDING CHALLENGES AND INNOVATION UNDER AUSTERITY AS NEW RATIONALITIES: ATLANTIC GATEWAY AND ADAPTING THE LANDSCAPE

New governments on election can bring about rapid changes in policy rationalities, as they respond to changing circumstances while also seeking to distance themselves from their predecessors and detail their own political agenda. *Adapting the Landscape* was an outcome of the elaborate multi-scalar governance structure for environmental policy produced under the Labour governments of 1997–2010. These arrangements were disrupted by the

election of a new Conservative-led government in 2010, and the abolition of the regional government architecture developed by the previous Labour administration (Pike et al., 2018). In its place, what was claimed to be a different approach, reflecting a changed set of rationalities codified in the Localism Act 2011, informed the implementation of new arrangements for sub-national governance. These involved the creation of an array of more disaggregated bodies as part of a continuing devolution agenda aimed at city-regions and emerging combined authorities. Alongside this was an extensive series of cuts to government spending at all levels, reflecting a parallel set of rationalities about the need for financial rectitude in the wake of the global financial crisis of 2008 and the longer-term desire to check the growth of the state (Blyth, 2013). These austerity measures impacted with particular severity on local government (Hastings et al., 2017), fundamentally altering the opportunities for funding environmental projects for the next 10 years.

Environmental actors had to adjust quickly to this new governance and funding context. The abolition of the NWDA created a strategic vacuum for economic development policy-making at the regional level, while also removing an important funding source for environmental projects. Local actors were instead invited in 2011 to create Local Economic Partnerships (LEPs), envisaged as cross-cutting individual local authorities, often linked to emerging geographies for combined authorities and city-regions such as Greater Manchester. In an attempt to fill the strategic policy-making void left by the NWDA, Peel Holdings, a leading local landowner that had contributed to *Adapting the Landscape*, sought to elevate its existing Ocean Gateway initiative, an ambitious multi-decade development proposal extending across the Mersey Belt. Ocean Gateway was recast as the Atlantic Gateway and presented as a *de facto* regional development plan around which prospective public sector partners could reorganize their policy priorities. A development prospectus called for public infrastructure investment to help open up around 50 development sites, mostly owned by Peel. To deliver this, Peel proposed an Atlantic Gateway LEP, but local political opposition saw the idea rejected and the initiative was instead repackaged as a strategy to help guide the work of the region's newly formed LEPs (Harrison, 2014; Deas et al., 2015). Peel Holdings was an important private sector actor for the new LEPs because it owned and managed the Manchester Ship Canal, including adjoining sites which, with investment, could accommodate significant development. With some of its site proposals over the years attracting considerable local community and political opposition, Peel was keen to present its work in a positive light, building alliances that would help it avert future tensions around its proposals. In many ways, then, the Atlantic Gateway was an archetypal soft space with an accompanying growth oriented spatial imaginary, eschewing hard boundaries, and framing its territory as a loosely delimited area of development opportunity, in the process attempting to defuse political opposition by seeking to co-opt supporters from areas with very differing levels of support or opposition.

Peel also opted to assume ownership of *Adapting the Landscape* from the NWDA, again adopting a flexible geography for its work promoting environmental quality. Although unusual

for a large developer to lead an environmental strategy, for Peel the attraction was as a counterpart to its economic aspirations for the region:

So we are interested in environmental initiatives that are strategic but in some way complement the economic projects that Atlantic Gateway is there to promote (Environmental NGO 6 2013).

To fund these environmental ambitions, Peel envisaged developers paying a one per cent levy, though in practice this seems never to have happened. This innovative initial thinking also extended to allocating levy monies more strategically, recognizing for instance that upstream flood risk management might be more effective than interventions on (or adjacent to) the development sites. These arrangements naturally attracted considerable interest from those looking to fund new environmental projects:

The major proposals in Atlantic Gateway add up to about £15 billion over 20 years... so doing the one percent argument it's £150 million [that] should be going for environmental good causes... we need to be doing the work to see where the really pinch points are: even if that money is generated in Salford it could be spent in Rochdale or elsewhere... it is going to take a huge amount of change in hearts and minds (Government Agency 3, 2013).

In the event, the backers of the Atlantic Gateway quickly began to rethink their approach, still keen to think strategically at a landscape scale but recognizing the political difficulties of redistributing levy funds to other areas. A revised approach emerged (Atlantic Gateway, 2014), drawing on early thinking around regional parks and subsequent proposals by Farrell (2010) for a Parklands masterplan in the Thames Gateway. The Farrell proposals were particularly attractive because of their emphasis on multi-partner funding approaches alongside a strategic investment framework, with a clear underlying rationale that improved green spaces would deliver multiple objectives, including making the region more attractive to prospective residents and investors. One close observer explained the logic and the influences involved:

We now talk about "Atlantic Gateway Parklands," subtitle... "the landscape for prosperity." The reason for that is blindingly obvious. The only language the government can understand is language to do with growth... We say that the thinking has been informed by Thames Gateway and... the Ruhr [IBA Emscher Park in Germany]... these [are] long-range major commitments which have a landscape dimension to them. That's what we are trying to do here (Environmental NGO 6 2013).

Atlantic Gateway was discreetly withdrawn around 2017, Peel arguing that its purpose had been fulfilled and its thinking successfully embedded in the work of the region's LEPs. However, the company retained the Ocean Gateway brand to promote its strategic investments. Work promoting the Atlantic Gateway Parklands initiative appears also to have been quietly abandoned. Instead, the company has tried to adapt to the

changing governance and public funding landscape by switching its attention to promoting a Natural Capital approach to environmental improvement, which we return to below (Ocean Gateway, 2021).

In effect Peel has been able to use its engagement with environmental initiatives in the region to further its commercial interests, particularly around the release of development land. While some interviewees welcomed Peel's willingness to engage and contribute, many viewed its role with ambivalence if not distrust, criticizing its use of soft power and financial might to assert its own priorities at the expense of its institutional partners. An example cited was the sometimes bitter legal battle between Salford City Council and Peel over the extension of peat extraction licenses. Peel's experience in this respect provides an illustration of the limitations of the particular form of institutional pluralism the company championed, as some of its putative partner organizations resisted the necessary ideological compromises, withholding their support and instead pursuing alternative institutional arrangements.

The experience of *Adapting the Landscape* and Atlantic Gateway is interesting as an example of a private sector-led strategy and associated governance framework, in which a major landholder sought to enrol various public and third sector bodies in support of its work. This involved creating new soft spaces and spatial imaginaries, albeit ones that ultimately appealed mostly to a narrow range of government stakeholders, with little awareness of them among the general public. For public bodies, constrained by austerity, these arrangements offered the prospect of private funding to help offset cuts. However, some local authorities, notably Manchester, remained sceptical, concerned about issues of legitimacy and accountability, but also about the redistribution of power and resources implied.

NATURAL CAPITAL, CULTURAL HERITAGE AND ECOSYSTEM SERVICES: GREAT MANCHESTER WETLANDS PARTNERSHIP AND THE CARBON LANDSCAPE

We've got these amazing green spaces, these post-industrial wastelands that have now become a thing of beauty, hugged by some of the most deprived communities in the North West (Environmental NGO 14, 2018).

Central government recognized the need for "more than local" environmental thinking with the creation of a national network of sub-regional scale Local Nature Partnerships (LNPs) in 2011–2012. Public sector expenditure cuts meant that the LNPs were created without any funding of note, leaving them to determine their own geographies and work with others to identify alternative funding sources and bid for resources. The Greater Manchester LNP chose to operate to the existing boundaries of the city-region, and although nominally independent, in operational terms was subsumed within the Greater Manchester Combined Authority (GMCA). A desire for scale economies explains this in part, but the LNP's operational absorption into

the GMCA also reflected the wish to ensure a strong institutional base for work on natural capital.

The advent of the LNP coincided with the increasing prominence of natural capital approaches, attempting to identify the range and value of services provided by all forms of nature (DEFRA, 2020). The valuing natural capital approach enjoyed considerable support from actors working in government bodies and some in local government, particularly in Greater Manchester (eftec Environmental Finance Countryside, 2019; GMCA, 2021). Reflecting recent work on institutional pluralism (Nunes and Parker, 2021), interviewee responses suggested that voluntary groups for the most part appear to have engaged with work valuing natural capital, or at least did not publicly object to it. Instead, most voluntary groups remained open to the natural capital approach, viewing it as a way to secure additional funds and help maintain the cohesion of the LNP.

It was in this context that Great Manchester Wetlands Partnership (GMWP) was established in 2011, creating a new environmental soft space that crosses multiple local authority boundaries. Its area included a multiplicity of brownfield sites left behind by the long-term decline of the manufacturing sector, the closure of the area's coal mines and the continuing contraction of what remained of the peat extraction industry. In the wake of the Lawton report, the intention was to connect the existing array of largely discrete environmental initiatives already established for some of these post-industrial sites, thereby constructing a landscape scale strategy to address the challenges of biodiversity and climate change. A governance framework for the new partnership was created to bring together over 20 stakeholders from the public, private, and voluntary sectors, led by the Wildlife Trust for Lancashire, Manchester and North Merseyside.

Working in the context of austerity, the new partnership sought initial funds by developing a bid to national government for Nature Improvement Area (NIA) status, an initiative launched in 2011 to create up to 12 joined-up ecological networks at the landscape scale (Natural England, 2016). The local bid preparation process involved considerable debate about the most appropriate boundaries for the partnership, informed by a range of scientific reports to ascertain the condition and character of the environment, identify key habitats and determine species' range. The process of mapping these features led to a different conception of the landscape. One interviewee, involved in environmental initiatives over several decades, highlighted the significance of this process:

We weren't all talking to each other as a unified landscape... you were looking at isolated nature reserves and managing them... Then we started doing some analysis of the landscape... and started seeing how it was the only permeable bit of landscape between the big two conurbations of Merseyside and Greater Manchester... When we looked on a more macro scale, sort of zoomed out a little bit, you could actually see that that permeability was really important with the threat of climate change and species migration north and south (Government Agency 14 2018).

The result of these deliberations was a "wetlands" spatial imaginary characterized by a loose geography that enabled parts of several local authority areas to be included. The use of the word "Great" rather than "Greater" is important to note here, as the area extended well beyond the Greater Manchester city-region, covering a 48,000 ha corridor linking Liverpool and Manchester, in effect creating a new environmental soft space.

Although ultimately unsuccessful in attracting full funding, central government considered the bid for NIA status to be sufficiently promising to provide partners with a smaller amount of funding to develop their work. In 2013, the local authorities agreed to designate the Great Manchester Wetlands as a "locally-determined" NIA, so achieving their goal through an alternative route. Efforts continued to build the evidence base for future funding bids, including the development of a natural capital approach, as well as work on species mapping and citizen engagement (Great Manchester Wetland Partnership Technical Group, 2014; Arup Research, 2016).

A briefing note issued in 2021 set out GMWP's vision and main objectives. Its overarching vision is that "By 2025 Great Manchester Wetlands will be a thriving, resilient and inspirational landscape that delivers real benefits to local communities and the local economy" (Lancashire Manchester North Merseyside Wildlife Trust Carbon Landscape Partners, 2021). To fulfil this, its formal objectives include: boosting species mobility via wildlife corridors, especially for critical species; improving rare habitats through protective landscape designations; developing ecosystem services, particularly carbon storage in lowland raised bogs; constructing multi-actor partnerships to help nature recovery at a landscape scale; and contributing to community wellbeing and skills development by improving access to nature and landscape engagement.

The emphasis on community wellbeing is noteworthy, since it indicates an awareness of the potential for unlocking health-related funding, where providing access to nature can be demonstrated to have public health benefits. This represents part of a growing national interest in nature-based social prescribing by doctors, aiming to improve mental health and wellbeing by connecting patients to nature and to others in their community (Leavell et al., 2019).

Discussion around a subsequent funding bid to the National Lottery Heritage Fund centred on cultural heritage and community engagement, leading to the idea of the Carbon Landscape (Astbury and Tippett, 2019; Sen et al., 2020). This represented a new way of thinking about the area's natural assets and linking them to a range of local communities, again embodied in a new spatial imaginary. The Carbon Landscape imaginary was initially developed by a small group of partners, then tested among a wider set of stakeholders and through public engagement. In essence, the initiative builds on the notion that "carbon" provides a narrative thread linking the area's past and future development. This metaphor reaches back deep into geological time to the formation of coal and peat deposits, through the period of intensive extractive industrial development, to contemporary strategies for addressing climate change, such as harnessing the area's wetlands, woodlands and peat soils for carbon capture and storage. As one interviewee put

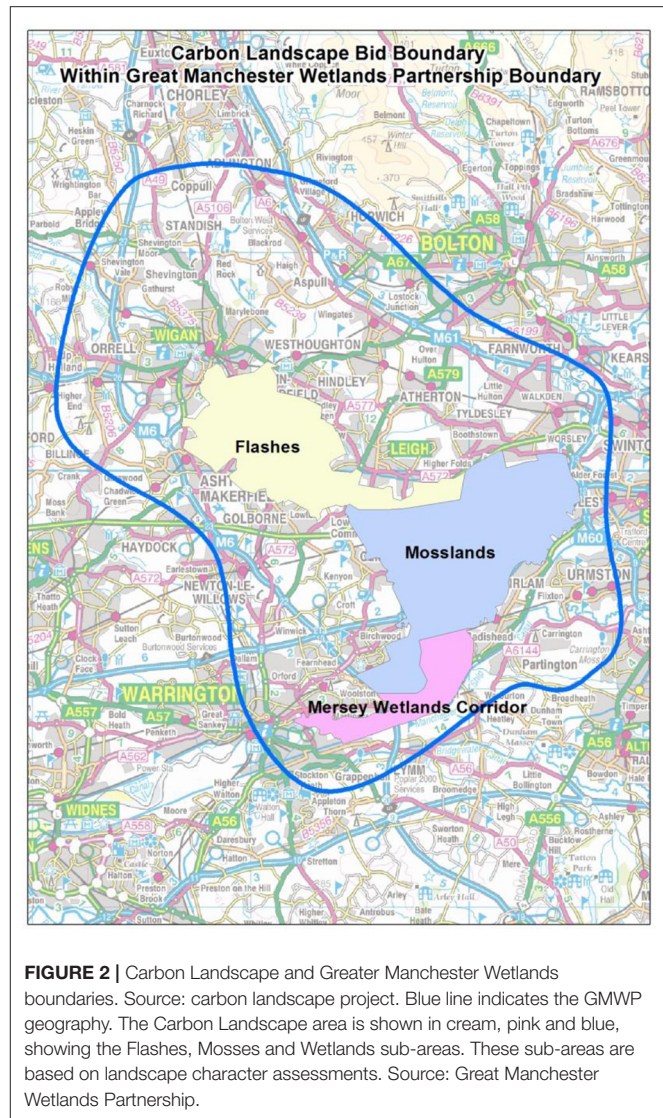
it, identifying the carbon theme was “this little bit of a lightbulb moment” (Environmental NGO 16). Another interviewee noted the catalytic role of the carbon narrative, constituting “a powerful unifying theme... [to] broaden our horizons and our audience... [and] enabled us to join individual sites together” (Government Agency 6, 2018). As well as helping to engage communities, the carbon narrative also enabled a link to existing policy priorities, notably the Greater Manchester Combined Authority agenda around the development of a Low Carbon Hub.

To meet the funding body’s requirements, the Carbon Landscape had to extend over roughly 10,000 hectares, some 20% of the GMWP area. This required a new boundary and a new way of thinking about the landscape, developing an identity based on shared cultural heritage around the coal mining industry as well as the area’s functional ecological coherence. The process of finalizing the boundary proved challenging, however, with contestation about which site-based projects and partners to include. Further mapping, ecological analysis and stakeholder engagement eventually led to the adoption of three landscape character areas, Mosslands, Flashes and a Wetlands corridor, providing an area that cohered in terms of ecology and economy, but which also acknowledged complex patterns of socio-cultural identity (see **Figure 2**).

The successful bid for the Carbon Landscape project secured £3.2 m, including matched funding over 5 years (2017–2022) for an area covering 10,700 hectares and involving three local authorities and 14 delivery organizations. It has three broad aims: restoration, reconnection and community engagement. Interview data suggests that the emphasis on cultural heritage interpretation and citizen engagement left some stakeholders feeling that environmental work was under-resourced. Nonetheless, to varying extents, all of them supported the Carbon Landscape idea because of its overall benefits. The production of a stylised map of the Carbon Landscape provided an important visualization of how the actors agreed to create a new spatial imaginary, which it was hoped would illustrate for the public the coherence of the area, its constituent elements and the diverse habitats it covered (**Figure 3**). This map can now be found on signage boards across the area, helping to promote this new spatial imaginary to the public.

The focus on cultural heritage as part of the Carbon Landscape built upon the existing work of the Lancashire Coal Museum on the edge of Chat Moss. This is run as a community resource by a local charitable body and is a major visitor attraction. The museum boasts the last headgear and winding house in Lancashire, a claim that indirectly hints at the loss of many of the material remnants of the region’s coal mining past as sites were abandoned, repurposed or remediated. As a result, efforts to develop cultural heritage have focused on volunteering opportunities for work to improve understanding of the area’s past and the role of nature in developing new uses.

By 2020–2021, partners began to work on what would follow the Carbon Landscape funding after it ended in 2022. Helping to focus this thinking was a call for the creation of a Nature Recovery Network, announced as part of the government’s 25-year environment strategy (DEFRA, 2018). The Nature Recovery Network initiative aims to designate more land for schemes



addressing biodiversity loss, alongside other objectives such as recreation, carbon capture and water management. The approach was explicitly framed as finding landscape scale solutions in line with the Lawton report.

Five national pilot projects were announced for local Nature Recovery Networks in 2020–2021, one of them in Greater Manchester. The experience of this initial tranche of projects emphasized the importance of a data-driven approach and engagement work with local communities (DEFRA, 2021). This echoes the way in which GMWP and the Carbon Landscape have set about their work. As the end of the Carbon Landscape’s funding approached, discussions about its legacy and future work were informed by further ecological mapping by a range of partners. In addition, following the surge in local people accessing their local nature reserves during the lockdowns used to contain the COVID-19 pandemic, the physical and mental health benefits of the project increasingly came to the fore as

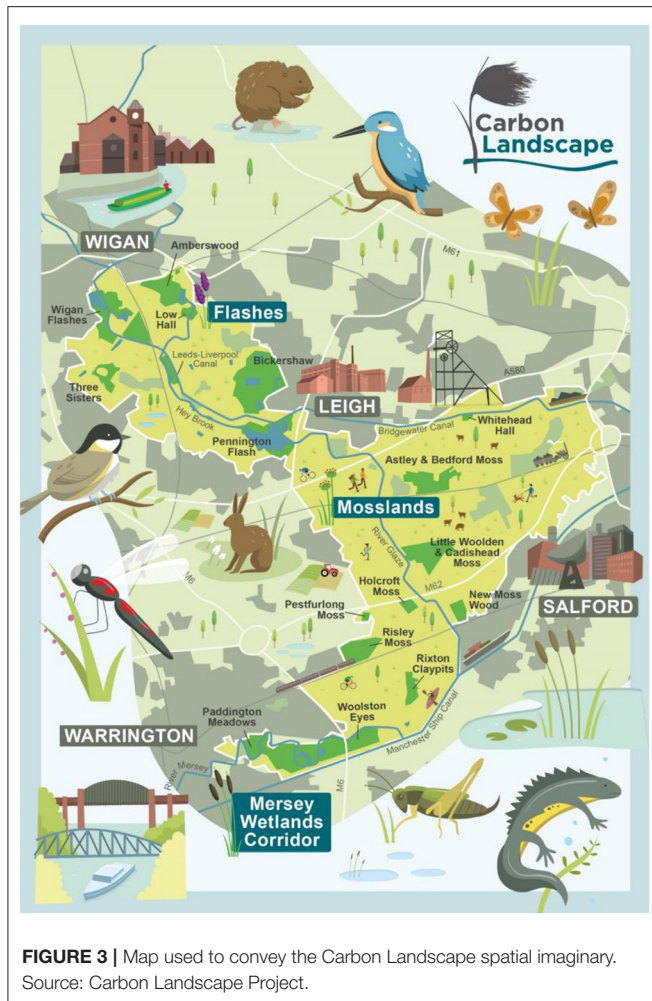


FIGURE 3 | Map used to convey the Carbon Landscape spatial imaginary. Source: Carbon Landscape Project.

a rationale for its work and a way of accessing new funding sources to help secure its future. A series of workshops with existing and potential future partners from the health, arts and educational sectors has begun to explore opportunities for future projects. This has included discussions around reconfiguring and extending the initiative's geographical coverage in light of the possible need for migration of species due to climate change, and because some of the waterways and tributaries extend beyond the existing boundary.

Government work supporting local Nature Recovery Networks at one level appears to be setting the context for an even fuzzier soft space boundary. Alternatively, the experience of the pilot projects suggests a need to work within local government administrative boundaries, not least to facilitate consistency with local planning policies (Traill-Thompson, 2021). This tension between relational and territorial approaches to nature recovery remains to be resolved, as ways are sought for reconciling the flexibilities afforded by soft spaces and the certainties provided by being grounded in territorial jurisdictions.

Complementing Nature Recovery Networks and the government's environment strategy was a new policy requiring

developers to demonstrate their proposals would result in net biodiversity gain. In this evolving national policy context, new sources of funding for ecological restoration based on net biodiversity gain are already being trialled in the GMWP area. Net gain funding potentially allows restoration to extend beyond mitigation efforts on the development sites that threaten habitats, enabling intervention to be directed toward areas of greatest ecological value. There is a clear resemblance here to the funding mechanism proposed for the Atlantic Gateway discussed earlier, and Peel Holdings remains supportive as a way of backing its commercial aspirations for releasing more land for residential and other development.

The GMWP and Carbon Landscape case studies reveal the role played by multiple forms of expert and community-based knowledge in contributing to hybrid rationalities that are embodied in spatial imaginaries. The case studies demonstrate in particular the importance of hybridized rationalities linking the area's cultural heritage to the natural environment and its underlying geological features. Landscape scale spatial imaginaries have helped in this respect to promote integrative approaches that extend beyond policy silos and address environmental, social and economic aspirations, while also necessarily crossing over multiple administrative and governmental boundaries.

CONCLUSION

A remarkable aspect of landscape scale strategies for the Mersey Belt is how many of them there have been, and how many different environmental spatial imaginaries and accompanying geographies have materialized over the past fifty years. In many ways this reflects the way the British state has evolved, as funding for local government has declined, and as policy decision-making has drawn more narrowly on reductive economic thinking. Equally, landscape scale strategies have had to accommodate fluctuating support for regional governance, while also negotiating new systems of competitive bidding that require local actors to cooperate and decode an ever changing and complex set of criteria dictated by funding bodies.

The case studies introduced here reveal that the environmental policy realm exhibits something of the territorial promiscuity that Cochrane (2020) identified as a characteristic of planning and local regeneration strategies. Likewise, the case study experiences show that environmental policy, as with spatial planning, is subject to the same pressures that result in soft space institutional geographies (Allmendinger and Haughton, 2009; Haughton et al., 2010). At the same time, an enduring spatial understanding has grounded these shifting boundaries, based on mapping and exploring the underlying geology, hydrology, preponderance of characteristic species and heritage features, and a deepening of this understanding through ongoing engagement with community members, stakeholders and partners (Tippett and How, 2020).

The article reveals the crucial role of the emergent and multiple forms of policy rationality that are invoked as part of institutional and policy reform, in the process helping justify the

creation of new environmental governance spaces. In addressing de-industrialization and the legacy stemming from the decline of extractive industries in the Mersey Belt, we highlight the continuing process of institutional bricolage (Cleaver, 2012), as each new initiative weaves together different types of rationality for investing in environmental policy, informed by changing government priorities superimposed on an array of existing structures and policies that has evolved over several decades. This has meant creating and dismantling new geo-environmental soft spaces and related spatial imaginaries, sustained by the continuing imperative for partners to work together in the search for funding. The Mersey Belt experience over the period since the early-mid-1970s reveals how the requirements of different funding streams have necessitated the construction of new ensembles of actors, new geographies, new governance structures and new spatial imaginaries. At the same time, we show how these emergent configurations have also been driven by new rationalities, such as the desire to develop territories that facilitate better connectivity within and across ecological networks.

The findings discussed in the article also reveal how the mobility of key actors across sectors and governance organizations has helped foster shared understanding and, echoing work on institutional pluralism (Nunes and Parker, 2021), a blurring of sectorally distinctive forms of rationality, while providing a continuity in thinking amid what at first appears to be the flux of perpetual policy and institutional reform. One continuing strand has been the receptiveness of these actors to new ideas, partly reflecting their willingness to adopt new rationalities but also revealing a sense of pragmatic acceptance of the need to attract funding during times of scarcity in public resources. The result has been a complex patchwork of initiatives of varying duration, different levels of funding and different strategic priorities, but each contributing to a loosely shared long-term vision of ecological and social restoration in a well-grounded knowledge of the locale.

For all of the difficulties associated with this fragmented and sometimes chaotic approach to environmental governance, work of considerable value has emerged. Despite the problems encountered in attracting funding and reconciling the interests of different stakeholders, this has left an enduring legacy: creating, improving and connecting important sites of scientific and biological interest; eradicating some of the eyesores of the post-industrial landscape; remediating land; experimenting with nature-based solutions; enhancing greater recreational opportunities; promoting citizen science; providing volunteering and associated employment skills; and developing a more positive shared public awareness and understanding of the post-industrial landscape of the area.

Finally, the case study analysis provides lessons about strategic continuity. The experience of both the Mersey Basin Campaign and the Carbon Landscape demonstrates the need for at least a basic level of sustained logistical and communications support for a partnership approach. Long-term partnerships

that shift and adapt over time, using different sources of funding, potentially represent a meta-structure within which individual policies develop. To enable this, however, requires some level of stable financial support. Creating such a structure at landscape-level is politically challenging, given the lengthy maturation timescale and lack of immediacy in terms of tangible results. Delivering holistic approaches to nature restoration may require a two-tiered funding approach that acknowledges the need for long-term strategic thinking, while also supporting locally-based initiatives that can galvanize local communities. Within this kind of two-tiered approach, it is possible to envisage a more durable overarching governance framework and geo-environmental spatial imaginary that allows local experiments to develop environmental territories or shape their accompanying imaginaries, while also providing a vehicle to respond to changing policy imperatives and capitalize upon funding opportunities.

DATA AVAILABILITY STATEMENT

The datasets presented in this article can be accessed only via formal institutional requests from verified researchers. Requests to access the datasets should be directed to graham.haughton@manchester.ac.uk.

ETHICS STATEMENT

The research on which this article reports was reviewed and approved by the University of Manchester Ethics Committee. The participants provided written informed consent for their involvement in the research.

AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

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