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Perspective

Towards a De-Polarisation of Climate Guidance for Landscape Design and Policy

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Abstract: For disciplines and professions concerned with the design and management of the physical environment, climate emergency has become an integral part of research and practice because these environmental challenges are inextricably linked to the land and how we use it. Working from an understanding of landscape as the vast infrastructure upon which we depend for everything, landscape is the setting for all matters of environmental sustainability, impacting towns, cities, and countryside, communities and well-being, economics, governance, and politics. This paper explores the extent to which landscape and landscape design are considered in professional guidance pertaining to climate emergencies and environmental sustainability. Noting a tendency for such policy and guidance in the UK to cluster around the opposite poles of generalised targets and highly detailed technological solutions, this paper raises questions about what is missing from the middle of this spectrum. Our findings show that beyond carbon and biodiversity targets and the technological solutions to meet them, policy has been slow to respond to the climate emergency in relation to the landscape level. Furthermore, policy frameworks largely fail to account for the cultural and/or intangible factors affecting carbon and sustainability measures, such as the quality of space and well-being. This research suggests that guidance and policy relating to holistic, integrated understandings of landscapes are key to addressing the climate emergency, which also provides quality places and spaces for our communities and nature alike.

Keywords: climate emergency; design; environment; landscape; policy; sustainability; systemic change

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1. Introduction

Dealing with the impact of professional guidance that addresses environmental challenges concerning the landscape, this paper acknowledges the need to revisit and review policy and governance focusing on the climate crisis [1] at both international and local levels. This paper examines the scale at which current environmental policy and guidance impact landscape strategy and design, from guidance that has no spatial implications, termed the 'rhetorical/conceptual scale' (e.g., a target to reduce carbon emissions), to a detailed/technology scale (e.g., design guidance on the construction of permeable paving to alleviate urban flooding). This paper aims to articulate the existence of a gap in policy and guidance that connects environmental challenges to strategy and design at a 'landscape scale' (i.e., with spatial implications at scales spanning national, regional, and local, but above that of construction detail—see Figure 1). We call on the academic community to urgently address this gap.

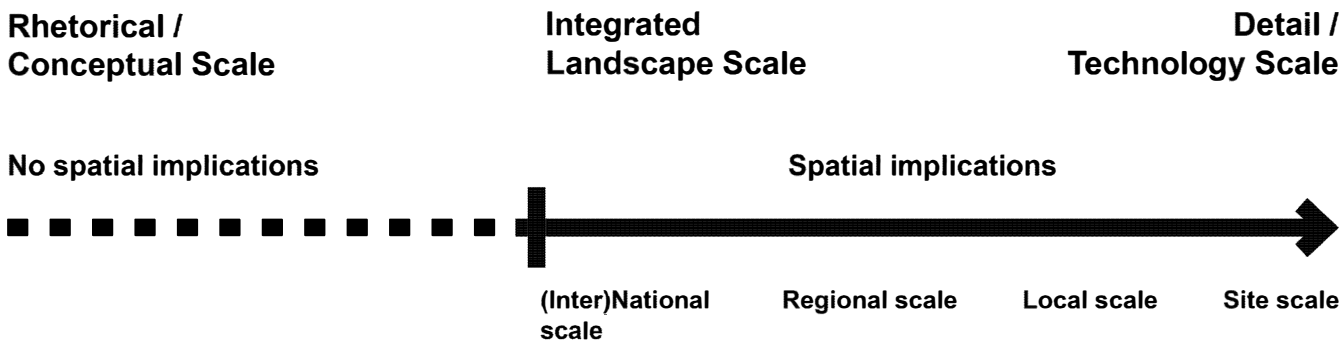

Figure 1. Representation of the scales at which policy and guidance connect environmental challenges to design and strategy.

This study explores selected professional guidance relating to landscape, landscape design, climate, and sustainability, aiming to define the importance of guidance that deals with aspects of landscape over and above physical matters pertaining only to 'the land'. Building on Kathryn Moore's positioning of landscape as 'the relationship between people and their territory; the physical, cultural context of our lives, the vast infrastructure upon which we depend for everything' [2–4], this paper integrates a broader definition of landscape. The authors, and a majority of landscape professionals, understand landscape to be both physical and relational: the result of natural forces and human action and the manifestation of society's relationship with the environment. This relationship can be healthy and nurturing, though it can also be destructive and exploitative.

Ramos et al. state that even though landscape is an important asset for our well-being, communities and quality of life, there is fragmentation in its interaction in policy and science [5]. Zhou et al. [6] identify that current discourse relating to landscape sustainability and sustainable landscapes tends towards matters of landscape ecology, ecosystem services and landscape planning, bypassing the social and cultural factors associated with the landscape. Taking a broader approach, Stremke et al. [7] assert that the landscape has many 'powers' interrelated with human interactions and affects the quality of life. Most importantly, they suggest that landscapes have the power to 'resolve urgent questions many of us face' [7]. Despite this potential, there is a lack of guidance and policy articulating the value of landscapes and their potential to address the environmental challenges faced by our cities and regions. The identity of a place is sometimes used to evaluate the apparently intangible aspects of a landscape as it pertains to the quality of life [5]. However, this is not well integrated into current climate and sustainability guidance, and very few frameworks address such matters.

Despite the paucity of existing guidance, several international institutions recognise the need to reform policy [8], compounded by the added need to embed this within a holistic territorial approach that addresses the climate emergency [1]. As the professional body representing all UK landscape practitioners—from landscape scientists to urban designers—the Landscape Institute (LI) bucks this trend, publishing policy-related outputs either in the form of guidance to professionals or as a response to governmental policy. Documents such as the 'Climate and Biodiversity Action Plan' [9], the 'Carbon and Landscapes Technical Information Note' [10], and the 'Landscape and Carbon Report' [11] published by the LI aim to advocate for the importance of such concepts within relevant policy agendas. It is acknowledged that such outputs are designed for a relatively small professional community and that the real need is for such ideas to be discussed and developed at a political level, resulting in an actionable political framework that responds to environmental challenges from a landscape-led perspective. It is important to highlight that spatial developments and strategic landscape projects need to be driven by a broader

vision that incorporates principles and values related to climate emergency, environmental design, culture, and community. In cases where such concepts are supported by local or national policies, the outcomes are of much better quality.

2. Literature Review

Much has changed since Peter Hall stated that 'planning decisions result from complex interactions among three groups of actors: the community, the bureaucrats and professionals within government; and the politicians at every level of government' [12], p. 47. While the equation still holds true, the context within which it operates has shifted. The climate crisis and environmental instability affect how these actors interact, especially in landscape design and planning, which are affected by the physical, social, cultural, and economic impacts of these global issues.

2.1. Development of Landscape Policy

The European Landscape Convention (ELC) explains that each country ratifying the convention should 'recognise landscapes in law as an essential component of people's surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity [13]. Echoes of Hall's approach continue, as evidenced by the European Environment Agency encouraging the integration of policy, legislation, and politics in spatial strategies in areas such as urban sprawl, biodiversity loss, and soil sealing affecting agricultural land' [14], p. 330. In each instance, the importance of integration is highlighted, whether it be between landscape (natural and cultural), policy (via planning governance), or spatial design (to manage a shifting environmental crisis). We adopt the language of a 'landscape approach' for this integrated outlook, which builds on the foundations established by Moore's [4] reading of the landscape.

Mata Olmo and De Meer [15] assert that an action plan integrating a landscape approach and local administration policies and processes would be beneficial, especially if this involves 'cooperation and coordination between social, public and private agents, with feasible and sustainable economic alternatives, capable of strengthening the landscape's social tissue'. Childress et al. [1] state that a landscape approach can address natural and biological systems 'within the confines of human-generated political or administrative boundaries', which is helpful in addressing localised responsibilities but overlooks alternative landscape scales that do not conform to human-centric boundaries such as river catchments, or climate zones. Although claiming to be a 'landscape approach, ' the model described by [1] calls for 'the demarcation, delineation, and depiction of land parcels over landscapes, 'which contrasts with an integrated landscape-scale approach. Alonso MCA et al. [16], have identified three areas that limit how landscape is understood at a governmental level: The division of disciplines and sectors and a lack of multidisciplinarity; A blindness to 'everyday' landscapes such as the urban landscape, which creates a 'disconnect between policy and practice'; and a 'gap between high-level political commitments and specific on-site decisions or solution' [16].

The relationship between science and policy in a landscape context was examined by Dramstad and Fjellstad [14], who questioned whether policies impact landscape strategies and sustainable development, concluding that a dialogue between science and policy is required to generate sustainable landscapes. Despite their 2011 call, the gap between the climate crisis and landscape policy still remains. Notwithstanding the encouraging landscape-led or landscape-scale rhetoric from politicians and organisations, this is rarely translated into policies dealing with land and development from an integrated understanding of the landscape and climate emergency [15]. Confirming MCA et al'.s [16] observation that policy and guidance relating to climate change tend to polarise between generalised

(often national) targets and detailed (often generic) technological solutions, the UK Government's Climate Change Act 2008 has the large-scale target to 'ensure that the net UK carbon account for the year 2050 is at least [100%] lower than the 1990 baseline' [17]. Focusing on greenhouse gas emissions, strategies to achieve this national target are delegated to government departments, each of which proposes plans to contribute to the national picture according to their remit. The Department for Energy Security and Net Zero's Clean Power 2030 Action Plan, for example, proposes 'cleaning up our power system' as 'central to decarbonising the whole economy' [18] by growing renewable industries, attracting investment, and deploying clean technologies at scale. This national-scale strategy only mentions landscapes in passing, relating to the siting of overhead power lines in nationally designated landscapes, highlighting the need to look at the documentation of organisations further down the chain, with responsibility for implementing government-level strategies.

The landscape is frequently perceived merely as the location where development evolves, without acknowledging its importance from a cultural and social standpoint and how it is shaped by matters of politics and identity. Ramos et al. [5] assert that policy can support landscape identity, creating a happier and more satisfied, bonded community and establishing the idea of the landscape ('their' landscape) with local actors and stakeholders. Rose acknowledges that power, politics, and legislation play a major role in how the landscape is perceived, arguing that 'the politics of landscape traditionally refer to the political content of landscape representation' [19]. The Council of Europe has a similar approach, explaining that a framework based on policy and legislation for the landscape can be beneficial for the way the public and communities understand their surroundings, resulting in a greater impact of policy implementation [13]. From a landscape perspective, resilience and sustainability should always include matters of spatial planning, environment, culture, transport, economics, agriculture, engineering, health, education, and more. Healey uses the term 'strategic' to describe a higher level of administration or a broader scale of policy. She argues that planning 'implies a mode of governance (a form of politics) driven by the articulation of policies through some kind of deliberative process and the judgement of collective action in relation to these policies' [20]. Moreover, strategic spatial planning can be an advocate for municipalities or regional administrations, implying that it has a significant political role to play [21,22].

There is little evidence from the literature of landscapes being integrated into either regional and town planning policies or cultural, social, environmental, economic, and agricultural policies [23]. In addition, little evidence was found to demonstrate that policies relating to climate include the landscape as a distinct factor or integrate climate, landscape, and policy in any meaningful way. Often, policies that deal with landscape planning identify the ways in which the land is expected to change [24], but it is not clear if these changes relate to environmental and climate aspects or are limited to matters of planning, such as population growth and infrastructure provision. Ramos et al. [5] suggest that designers and spatial planners have a responsibility to create sustainable visions and, therefore, contribute to the wider well-being and quality of life of the community.

2.2. Climate Emergencies and Landscape Policy

Sanjuan [25] asks, 'Why are landscape visions so important? And how could these be interpreted into policy?' Describing the climate crisis as a 'high-stakes, high-profile and highly politicised issue [26], it is now clearer than ever that it has a landscape, cultural, economic, and political effect, even if the environmental challenges were initially seen in isolation. Alcoforado et al. [27] highlight instances where policy created to address the climate crisis did not manage to 'translate knowledge of the climate into guidelines for landscape design and planning', effectively derailing attempts to translate policy into

practice. Although much has shifted since Giannakourou [28] stated that the engagement of the 'European Union (EU) in spatial planning has no binding force and cannot prescribe concrete legal or institutional requirements' and EU policy and legislation incorporate environmental targets across multiple agendas, the landscape is still not considered in an integrated way in relation to the climate crisis. In contrast, South Korea's National Comprehensive Plan for Climate Change Adaptation was used as the basis for new policies created by the central and local governments [29]. This national plan provided inspiration for climate-related policies regarding architecture, urban planning, landscape architecture, and construction, as well as air and water quality, waste management, and natural resources [29]. Despite this apparent integration, the focus of policies related to landscapes is often confined to energy consumption. To fully understand and incorporate landscape sustainability into policy, we need to embrace all its biological, physical, and cultural characteristics interacting with the region and its communities [26]. As Alcoforado et al. [27] explain, planning procedures need to incorporate climatic guidelines but must also embrace social and economic elements, bearing in mind their importance to the identity, health, and well-being of citizens [27]. As a means of communicating the links between landscape, climate emergency, and policy, Sanjuan [25] discusses the importance of producing maps and atlases to illustrate how each impacts the other. This realm has received little attention and requires further research.

Overall, there is a scarcity of literature that connects climate, sustainability, and landscape to policy and guidance. A decade ago, Bridge et al. [30] described the low-carbon energy transition as a transformation of the landscape. With the focus then being on energy policy, the landscape was seen to play a key role [31,32] but was often perceived merely as the location of these energy technologies. In some cases, spatial planning policies were brought to the forefront, but mostly to allow ways in which the renewable energy transition could be implemented [33]. Such attitudes towards landscapes reinforce them as a 'canvas' upon which sustainable actions take place rather than the 'infrastructure upon which we rely' [4]. To this end, landscape policy and guidance must incorporate an integrated understanding of the natural, social, and cultural elements of a territory. Stremke et al. [7], put the new generation of landscape architects into the spotlight, explaining that the task of professionals is to embrace local value and accommodate the cultural landscapes of the 21st century. This approach is based on a recent study in the UK that revealed that in relation to renewable energy technologies, communities' main concerns were the impact on the landscape character of the area, the scale of a project, and the consequences for wildlife and habitats [34].

Similar issues are faced when dealing with the intangible concepts of a sense of place and spatial quality with design for low/net zero carbon. The interaction between the concepts of spatial quality and low carbon is not fully understood, creating issues with their integration into policy and legislation. Franssen is correct in stating that 'on [a] national level, the environment is [the] point of focus in-laws, which are of influence on spatial quality. However, at a national level, spatial quality is not literally discussed' [35]. De Jonge [36] also emphasises the difficulty in discussing ideas of spatial quality at a governmental level, and highlights a need to incorporate such expertise across governmental departments. Once a beacon of good practice, the Netherlands were more advanced in relation to carbon, environmental, and spatial quality arguments compared to the rest of Europe Franssen [35], but changes in the Dutch regional and national policy structure have weakened the integrated framework of spatial planning and the landscape. Discussing an integrated landscape approach, Moore states that in order 'to have any real chance of providing a sustainable and lasting blueprint for the landscape, this [new] way of working, needs to become wholeheartedly absorbed into all of the decision-making institutions

and organisations responsible for policy, strategic or regional planning at a national or international level' [2], p. 110, and [3].

In addition to the literature reviewed here, three further documents are considered below in more detail as illustrative examples of how climate change and sustainability are interpreted within policies and guidance for landscapes and landscape design.

3. Methodology

The aim of this positional paper is to raise awareness of the shortcomings of relating climate and sustainability policy/guidance to the landscape and landscape design through the evaluation of a small sample of pioneering cases. This sets the scene for further studies to undertake a comprehensive survey of policy/guidance to demonstrate the extent of the issues raised here. Each case study was analysed individually against the key themes identified below to ascertain the extent to which they addressed each theme and the implications thereof. They were then compared to identify similarities and differences, as well as best practices.

Key themes (articulated as assessment questions)
LINKS

- Does the policy/guidance link climate, sustainability, landscape, and landscape design?
    - To what extent/scale?

LANDSCAPE

- Does the policy/guidance have landscape implications
    - To what extent/at what scale?

DESIGN

- Does the policy/guidance have any design implications?
    - To what extent/at what scale?

Noting the tendency for UK climate and sustainability policy and guidance to cluster around the opposite poles of rhetorical targets and detailed technological solutions, this paper raises questions about what, if anything, is missing from the middle of this spectrum. We selected three policy/guidance approaches from the UK to demonstrate how landscape and landscape design are considered in the context of climate and sustainability policy/guidance and examined two European case studies to explore how the void at the centre of this polarised spectrum can be overcome.

Figure 2 illustrates this spectrum graphically. The left pole represents rhetorical, overarching, or general guidelines or policies such as 'reduce carbon emissions by 25%', or 'increase biodiversity'. The opposite end of the spectrum represents detailed, often technological solutions such as 'constructing swales' or 'using permeable paving'. The ccentre of the spectrum represents the translation and integration of overarching aims at a landscape scale, which is often absent—a conceptual void. A well-developed built landscape project must cover all aspects of the spectrum. Each case study is represented by blocks whose size and position on the scale are equivalent to its climate guidance in landscape design and policy. Multiple/split blocks represent guidance that jumps from high-level rhetoric to site scale detail with little or no intervening landscape-scale guidance.

Evidence for the UK examples is taken from published policy/guidance of national and local institutions: a national partnership (Natural England and the RSPB), a national professional institution (The Landscape Institute), and a local authority (Birmingham City Council). These institutions' policies/guidance were selected based on the authors' professional experiences with their impact and applicability to the industry. The documents were summarised and evaluated to ascertain the extent to which organisations with a

vested interest in the landscape publish policy and/or guidance that makes vital links between climate, sustainability, and landscape.

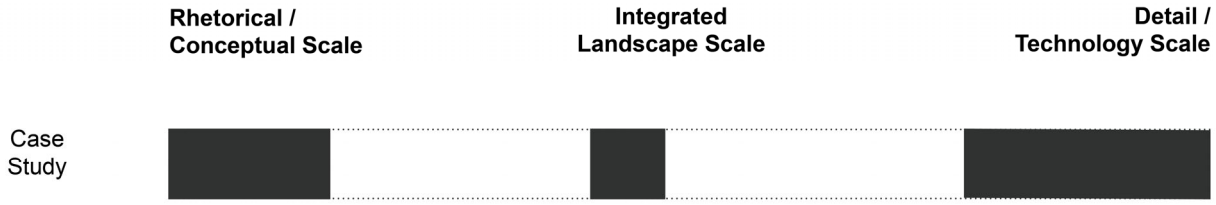

Figure 2. Representation of the extent to which case studies climate emergency and environmental sustainability at scale, from conceptl to detail.

Natural England is an executive non-departmental public body (established in 2006 by an Act of Parliament) sponsored by the Department for Environment, Food & Rural Affairs in England. It is the government's adviser on the natural environment in England, helping to protect and restore the natural world. The purpose of this body is to support sustainable development by helping to conserve, enhance, and manage the natural environment for the benefit of present and future generations. The priorities of Natural England align with the national strategy of the UK Government's 25-Year Environment Plan and aim to contribute to the challenge of climate change, society's well-being, community engagement, and nature's recovery. In this paper, we examine the Climate Change Adaptation Manual (NE751) published in 2020 in association with the RSPB (a UK environmental charity), focusing on Part 4 Green Infrastructure and Climate Change.

The Landscape Institute (UK) is the professional body of landscape architects representing the profession in the UK and advocating for landscapes and the wider environment. It also plays a role in responding to new government policies and legislation from this position. This professional body has established committees and processes to draft and assess connected aspects of environmental challenges, landscapes, and associated policies and guidance. In response, the LI publishes a range of action plans, policy guides, case studies, and reports. For this paper, we selected the Landscape for 2030 Case Study Report [37], which links climate evidence, policy, and landscape professions.

Birmingham City Council oversees the most populous local council area in the UK, with over one million inhabitants across 69 wards. The Council's City of Nature Plan is a programme that connects local, regional, and national policies and strategies aimed at creating a 'city of nature' with equal access to all communities, where sustainability plays a key role in open space management. The programme focuses on tackling environmental justice and accessibility to open space and introduces the UN SDGs as key metrics of the action plan to align this vision with specific indicators, including health, biodiversity, climate change, and social engagement. The programme concludes that its core aims and ethos should be accounted for at every stage of decision-making across each and every Council directorate, not only those traditionally associated with parks and open spaces [38].

To provide a context for comparison, two examples of best practices with proven landscape frameworks were selected from mainland Europe. The European Landscape Observatory (Catalonia) and Room for the River (Netherlands) were examined to track their progression and impact over time, as well as their influence on the political agenda. The Catalonia project focuses on landscape and social engagement, and the Netherlands project tackles climate change and landscape.

4. Results

4.1. Natural England and the RSPB—Climate Change Adaptation Manual (CCAM)

The Climate Change Adaptation Manual (Natural England, 2020) addresses the need to adopt a sustainable and cross-sectoral approach to adapting to a changing climate. Focusing on adaptation to the natural environment, the document nevertheless acknowledges the integration of natural and cultural aspects of the landscape and identifies that resilience should be addressed at varying spatial scales. While the report encourages 'landscape scale' approaches, the term is used rhetorically to describe largely undefined links between natural resources within an ecological network and management framework. With a focus on individual sites (nature reserves or Sites of Special Scientific Interest, for example) and natural assets, this report falls towards the 'detailed' end of the UK's clustering of guidance approaches. The remit of Natural England, including its Landscape Scale Change Assessment Methodology [39], is such that the range of assets it considers as part of the landscape is limited to 'natural features': habitat, species, geology, soils, historic remains, and ecosystem services [39]. This is a different way of understanding landscape compared to the integrated understanding set out at the beginning of this paper, and while no less valid, it reveals segregation and compartmentalisation of the landscape into component parts at a national level.

Turning to the specific guidance relating to green infrastructure and climate change, we expect to see implications for urban landscapes and their design. Accordingly, the report offers guidance on the delivery of green infrastructure to provide habitats for wildlife and improve the quality of life for communities while adapting to climate change. At face value, this appears to be an example of an integrated landscape approach; however, the focus is on managing and adapting to the effects of climate change on specific factors (temperature, water, soils, biodiversity, etc.) through very detailed interventions (swales, permeable pavements, soakaways, tree planting, etc.). While these intervention techniques have design implications, they are at the small-scale, site-specific 'detail' end of the spectrum, and the guidance does not consider design or spatial strategy at a landscape scale. The CCAM's advice on design is vague, stating that "good design is crucial" (Natural England, 2020 [39]), without explaining what good design looks like beyond the need for 'open space' and 'ecosystem services' (ibid). This is not to dismiss the benefits of open space or the enhancement of ecosystems; however, there is a noticeable lack of guidance on spatial strategy beyond the identification of a need to plan at different scales, illustrated within a flow diagram [39]. This guidance is represented by a series of segmented blocks: two separate blocks at the far ends of the spectrum representing polarised guidance and a series of small, separate blocks in the centre to represent compartmentalised landscape-scale thinking (Figure 3).

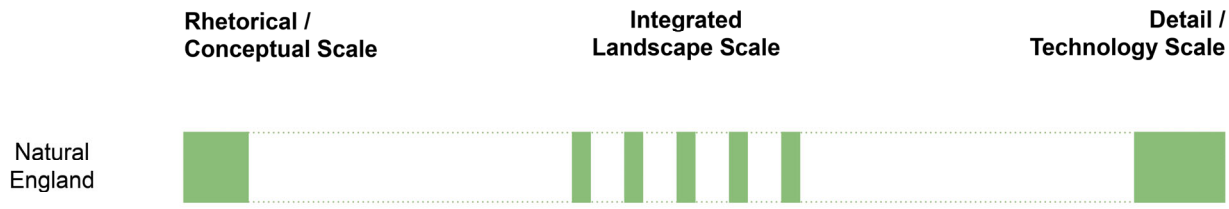

Figure 3. Natural England and RSPB, CCAM spectrum evaluation.

4.2. Landscape Institute—Landscape for 2030 Case Study Report (2021)

This report is, in part, a response to the UK Government Climate Change Committee's 2017 call for "professional bodies . . . to increase their level of engagement with members regarding climate change and to improve the training, guidance and professional accreditation they offer" [37]. As an example of how the Government's high-level (generalised)

targets are actioned through delegated processes, this report provides examples of how practitioners have, through design and technology, addressed specific risks of flooding and drought, temperature rises, threats to natural capital, biodiversity, and food supply. The implications for the landscape are clearly articulated, which is to be expected given the remit of the LI; nevertheless the report's focus is on describing the technologies employed to address the various problems identified. Given the brevity of the report, matters of design, aesthetics, and spatial strategy are not widely discussed, presenting an area for further research and expansion of the case studies included therein.

It is encouraging that the report acknowledges that the landscape's real strength is its ability to take an integrated, holistic approach', suggesting that there is a way to understand 'the complex interactions between natural processes and human life—between natural, economic and social capital' [37]. On first reading, this appears to be a way of bridging the gap between general and specific; however, the report's response is to immediately shift down to the detail-level of material specification, tree planting, and the placement of renewable energy sources, for example. However, hidden in the text is a short phrase that these authors consider to have the potential to transform the way that landscape and landscape design are contextualised within policy and guidance and to span the conceptual void between general and detail: 'Perhaps most importantly, landscape professionals can create a vision for an environmentally sound future' [37].

Moore [3] and Nikologianni et al. [40] identified the need for a strong vision and leadership in order to drive change at scale without losing impetus when translating big ideas into detailed responses. The case of Birmingham's City of Nature (below), with its reference to the vision for a West Midlands National Park [41] and the examples of the Landscape Observatory and Room for the River are cases in point. This guidance is represented by a split block: the smaller block relates to government guidance, and the larger block demonstrates how this industry works at a range of scales with varying degrees of detail (Figure 4).

Figure 4. Landscape Institute, Landscape for 2030 spectrum evaluation.

4.3. Birmingham City Council—City of Nature

As part of the national Future Parks Accelerator programme running across eight UK cities, Birmingham's City of Nature instigated an 'exciting conversation on how the city treats its natural environment and how it thinks about the future of its parks and green spaces' [42] in response to the 2016–2017 Parliamentary Inquiry [43] on Future of Public Parks. The city of Birmingham was built on the 2013–2018 Liveable Cities programme, which concluded with a commitment to systemic change, aiming to examine how a sustainable city could be created and maintained. Initially focused on five key themes: a green city/a healthy city/a fair city/a valued city, and/an involved city, the Council's research revealed unequal access to quality green spaces as the greatest priority in Birmingham's overall response to the climate emergency (a fair city). The resulting environmental justice map [44] combines Indices of Multiple Deprivation with environmental measures, including access to green space, flood risk, and urban heat island effect, to guide the Council's resources towards specific places to achieve environmental justice: 'The fair treatment and meaningful involvement of all people regardless of race, colour, national origin, or income,

with respect to the development, implementation and enforcement of environmental laws, regulations, and policies' [44].

The 2022 City of Nature Plan (CoNP) was written in the context of COP26 and outlines responses to a range of national and regional policies and guidelines with details of how the Plan will be implemented to reflect those broad policies. Of relevance to this paper, the CoNP acknowledges the 'importance of connecting people and nature' [45] as outlined in the 2019 Glover Review of Landscapes, citing the underlying principles of the West Midlands National Park as guiding their response to the landscape. Under the heading of 'A Green City' and in response to the UK Government's 25-Year Environment Plan for 'enhancing landscapes; . . . climate resilience . . . and supporting access to nature for health and well-being' [45], the CoNP identifies nine outcomes that directly position climate and landscape into the realm of policy with implications for how spaces and places are designed, with a budget to establish small-scale landscape enhancement activities:

- A complete change in how we build our public realm is required, providing improved connectivity and supporting the restoration and viability of urban areas.
- Green corridors that are easier to find and use help citizens use them for active travel, thereby improving air quality.
- An enhanced network of green spaces and green infrastructure that are safe, clean, sustainably managed, and meet the Birmingham Fair Parks Standard.
- The restoration of green spaces, nature, and the environment.
- Greener development brings natural landscapes or features into every place and neighbourhood.
- Opportunities to help citizens make better use of green spaces outside their homes for growing food or communal gardens.
- The Nature Recovery Network stretches across the city and links with all our West Midlands neighbours, forming part of the West Midlands National Park.
- An increase in tree canopy coverage across the city will be mae to 25% through the Birmingham Urban Forest Master Plan.
- A change to the city's governance structures that oversee the city's natural environment over the full 25-year term.

Of perhaps greatest significance is the development of a governance model to support the successful development of all proposed strategies by the CoNP. The model comprises a Board, a Steering Group and an Operations Group, which together form the Alliance, established to act appropriately to improve the integration of services and achieve 'wider recognition of the value of preserving and improving the city's natural environment' [43]. The significance comes from the close links established between the programme's governance structure and the council's leaders through this Alliance, a collaboration across council departments and directorates in conjunction with third-sector partners. This new and innovative governance model required mutual agreement across the wider City Council and programme partners and ensured that matters pertaining to nature in the city were considered across directorates, identifying 'the need to integrate the role and function of the natural environment [. . .] into central decision-making'. This guidance is represented by an equally split block: that on the left is larger than those above, demonstrating that responds to a greater breadth of policy (economic, health, climate, etc.), and the block to the left of the intermediate scale represents a city scale (Figure 5).

Figure 5. Birmingham City Council, City of Nature spectrum evaluation.

4.4. The Landscape Observatory—Catalonia, Spain

Since 2005, the Landscape Observatory (LO) has developed several landscape charters and plans in Catalonia and is recognised as an advisory body on landscape issues for the Government of Catalonia and Catalan society. Initially established to implement the European Landscape Convention (ELC) and landscape agenda in Catalonia, it has been successful in bringing attention to the land and creating a landscape-oriented culture. Structurally, the LO is organised as a consortium, which is included in the Act for Protection, Management, and Planning of the Landscape in Catalonia [46]. The LO has formalised the identification of the regional landscape, recognising its value from a professional and political perspective, as well as its connection to the community. One of its flagship projects is the creation of Landscape Catalogues, tools that cover all of Catalonia and define the landscape character, values, and objectives of each component territory. A key element for their success and impact is that 'the catalogues started with an integrated vision of the landscape that takes the natural and cultural components jointly, never separately' [47]. Several of the LO's projects deal with the value of the landscape, its place and significance in local policy, and its impact on the community, including the 'La Cerdanya' project. This is a map expressing the character and quality of the area, together with future possibilities for the landscape. Demonstrating the spatial quality of the region through high-quality maps impacted how the landscape was seen by professionals and decision-makers who could then articulate strategies and values for the future of this landscape. Following the impact and success of the Cerdanya project (initiated in 2015), the Andorran landscape and its National Landscape Strategy were initiated in 2019 and first published in 2022. A collaboration between the LO and the Andorran Government resulted in the development of a National Landscape Strategy for 2035 [48], producing a map based on the strategy, quality objectives, actions, and aspects of the Andorran landscape.

Combining spatial and policy projects has allowed the LO to play a leading role in the understanding and exploration of a landscape vision by decision-makers, professionals, and the public. The LO has changed perceptions of the landscape in the region and is recognised as a best-practice example internationally, with the Observatory's strategies and spatial landscape ideas (catalogues, maps, etc.) having a direct impact on policy and governance beyond the scope of the region alone. The work conducted by the LO has a strong conceptual basis and is recommended at a detailed level. However, this project also deals with climate change policy at a landscape scale, albeit not wholly joined up across all scales. (Figure 6).

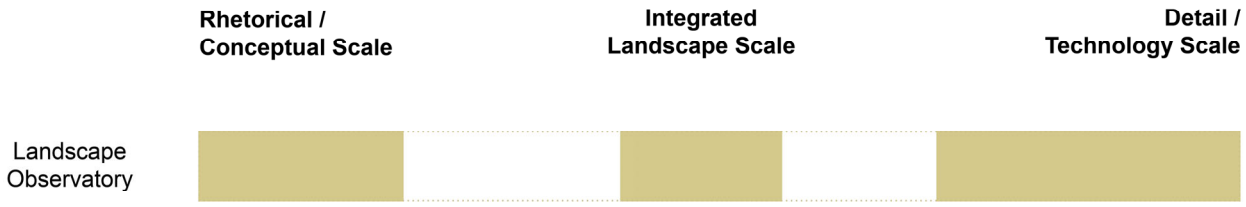

Figure 6. The Landscape Observatory spectrum analysis.

4.5. Room for the River—Netherlands

'Room for the River' is a national landscape-led scale programme in the Netherlands that deals with landscape, spatial planning, climate change, hydrological efficiency, the rise of water levels, and quality of space. The programme created methodologies to address water safety and climate emergencies (rising sea levels) while providing the nation with an enhanced landscape. As a demonstration of climate-driven regional landscape design, it enabled renewed space for the river to flood safely in 34 locations across the Netherlands. This national programme addresses the climate crisis through spatial strategies by integrating a strong conceptual vision with the creation of policies and legislation to support its aims. Room for the River has a collaborative agenda, allowing local authorities, national governments, professionals, and the public to work together on the same issue, backed up by a new project management structure integrated into policy and decision-making. This integrated vision achieved a complete shift in the existing water management policy, which was brought about by presenting stakeholders with a clear vision of the nation's landscape quality, character, and environmental characteristics [49]. The Room for the River Programme is one of the most well-developed, national-scale, landscape-led programmes to date. As shown in Figure 7, all three pillars are developed to an advanced level, running from one to another. The conceptual scale has been developed for the whole programme, setting specific goals that have been delivered both at a regional and local scale. The Technological scale of the programme is quite advanced, with the concept being infused into the delivery. Both sides of the spectrum are connected with the Integrated Landscape Scale, making room for the River project significant from both policy and environmental perspectives.

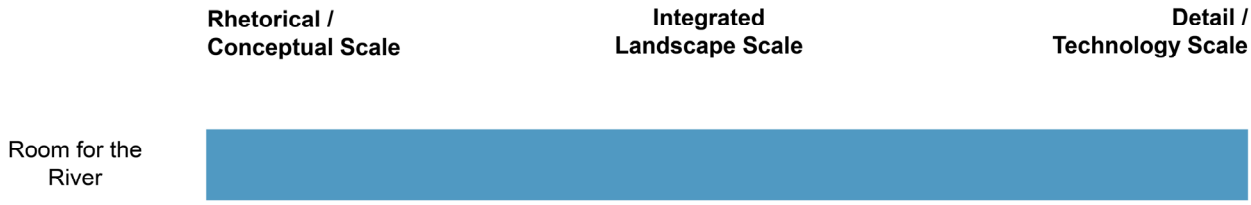

Figure 7. Room for the River spectrum evaluation.

The European case studies outlined above demonstrate that with a clear, integrated vision, the impact and effects of climate change and environmental sustainability can be embedded in landscape policy and guidance. Generalised targets, while crucial, tend to be interpreted as generic technological solutions with little or no spatial or cultural consideration.

5. Discussion

In the two European programmes presented above, clear and compelling visions for specific landscapes have been rendered visually with maps and spatial diagrams. These rhetorical-visual-spatial devices drive policy and strategy at a high-level political scale and can be interpreted by landscape designers and planners at the specificity of a local site scale. For the Landscape Observatory and Room for the River case studies, the political dimension has facilitated the concept or implementation of the landscape project and has had a significant impact on decision-making and political actions in relation to the landscape design. For large-scale climate and sustainability issues, policies and guidance play a crucial role in securing the delivery of such concepts. In cases where the support of decision-makers and politicians was prominent, landscape-led approaches thrived, having a significant impact on the wider area and community. For the Landscape Observatory and Room for the River projects, landscape qualities, values, and objectives have been made culturally

visible within current and upcoming policies to the point that they are now interwoven into the legislitave fabric of the regions. Legislation established in the Netherlands and Catalonia allows for the open discussion of environmental, biodiversity, and landscape values, embedding a broader and more holistic approach to landscape design and planning at the regional level. Catalonian Law 8/2005 of 8th June (Decree 343/2006) 'establishes that, once the landscape catalogues, classification, and characterisation have been approved [. . .] they will be incorporated in a regulatory way as landscape directives [. . .] in the territorial masterplans that the Ministry of the Territory and Sustainability considers appropriate, after public consultation' [47]. Laws relating to landscapes should act as guidance to ensure the delivery of a landscape vision and its key qualities. In the Netherlands, Room for the River has significantly shifted national policy—'the old policy was based on discharging surplus water to the sea as quickly as possible, the new policy became to first retain water, then store the water, and finally discharge the excess water. The new water policy was later linked to nature development and implementation of the EU Water Framework Directive'— the European Climate Adaptation Platform [50]. Although the focus is on water management, the wider scheme integrates measures to address sustainability and the climate emergency from the generalised high-level policy down to the site scale through the use of spatial strategies for the landscape. The observations made by these case studies point to the impact of policy/guidance in a regional landscape strategy, which has helped to ensure integration within the vision and narrative of the project, as well as supporting its delivery in more sustainable ways. The Landscape Catalogues produced by the Catalonia Landscape Observatory provide rigorous detail about the unique qualities of the Catalan landscape and have had a substantial response from the Catalan Government [51], leading to broader projects dealing with regional and national landscape strategies with the support of neighbouring French, Catalan, and Andorran governments. Mulugetta and Urban [52] state that 'there is no alternative for countries but to incorporate low carbon measures in their development policies. The reality of climate change demands it, and there are also clear benefits in pursuing such policies'.

In both European case studies, the projects were driven by a vision for a better landscape future, which was expressed through high-level political rhetoric and commitment, articulated spatially using quality maps and diagrams, and interpreted through design by landscape professionals into site-appropriate technical solutions using the medium and material of specific landscapes. As illustrated in Figure 8, these clearly articulated visual-spatial landscape strategies span the void between generalised high-level political commitments and the detail of technical solutions, completely in the Room for the River project and partially in the Landscape Observatory [3]. The three UK guidance documents illustrate the effects of the polarised situation. The Natural England and RSPB document effectively articulates the issues that need to be addressed to deal with the effects of climate change and associated environmental degradation and offers practical, tested solutions for adaptation and mitigation at a detailed level. However, there is no spatial strategy for this approach, and given the remit of the oorganisation, the landscape is reduced to its natural and physical components with little consideration of the social and cultural aspects. The Landscape Institute's document outlined above covers a broadly similar approach, with high-level aims that are rendered as site-level technical solutions. It is encouraging that the LI recognises that landscape professionals have a role in creating 'a vision for an environmentally sound future', and we welcome the opportunity for further study and development of such a vision, which must, by our reckoning, span the rhetorical-spatial-visual middle ground of words and images, maps, and diagrams, as described by Kathyn Moore [3]. Birmingham City of Nature Plan comes closest of the three documents studied in articulating an integrated vision for a sustainable future for a specific place. A clear

vision backed up with innovative cross-sector governance; however, it still lack the visual and spatial devices modelled by the European case studies.

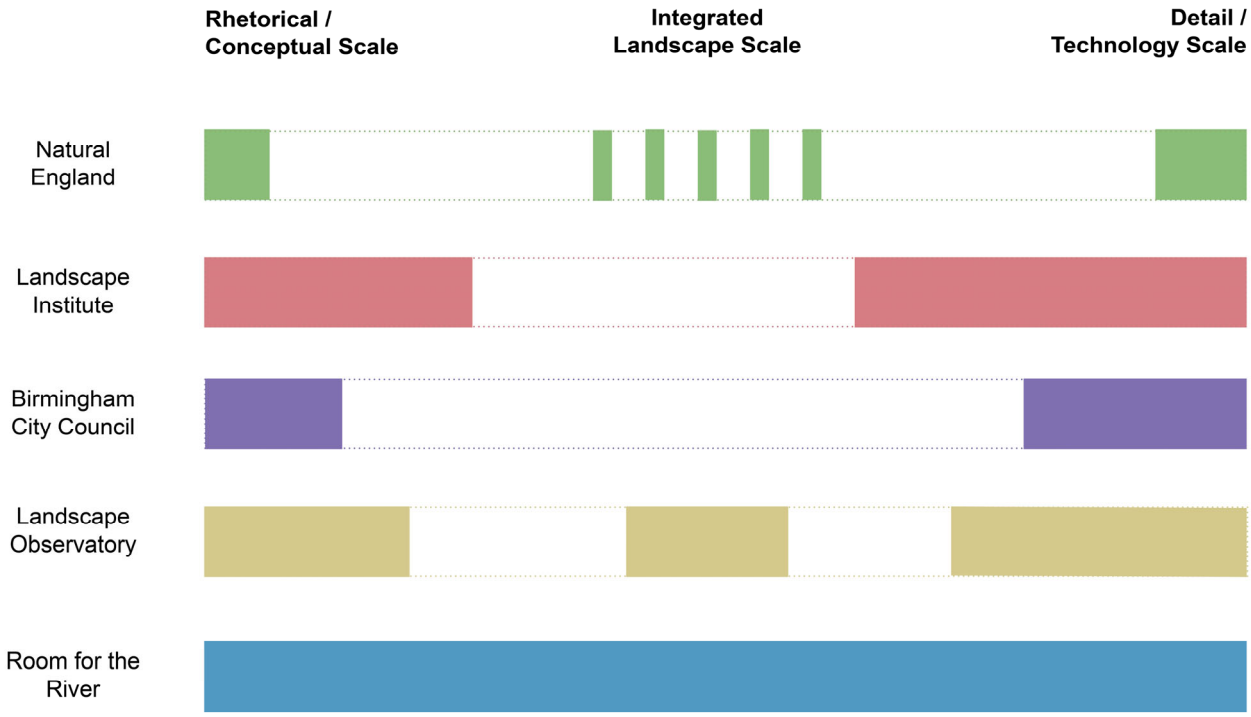

Figure 8. Comparative case study spectrum evaluation.

In all three UK documents, the landscape is dealt with in a piecemeal way. Monitoring, intervention, and design are at a site-by-site level, which is a result of demarcation and delineation. This spatial fragmentation implies that landscape-scale spatial strategies are rare because land is fragmented by ownership and responsibility. There is little political impetus for a spatial strategy because high-level targets are passed down the food chain for smaller agencies, institutions, and individuals to work within the smaller and smaller boundaries of individual sites. This is why we tend to see policy and guidance for climate and sustainability in landscape and landscape design clustering around site-specific technological solutions illustrated by case studies rather than vision-led landscape-scale approaches such as the Landscape Observatory. There are exceptions, with landscape visions such as the Colne Valley Regional Park [53], River Rea Landscape Vision [54], and the West Midlands National Park being commissioned and published, which are by various means influencing policy and guidance relating to climate and sustainability for landscape, with implications for design. This study emphasises the importance of a holistic approach that has the support of decision-makers and is backed by appropriate policy. We have shown that landscape-led schemes, especially when integrating all the necessary steps (such as conceptualisation, climate elements, policy, technological solutions, and community engagement), have the most impact on linking environmental guidance with landscape design at scale.

6. Conclusions

There is a separation and polarisation between high-level statements, targets, and commitments to address climate and sustainability and detail-oriented site-specific technological solutions to such targets. Guidance pertaining to landscape professionals tends to cluster around the 'detailed' end of this spectrum, perpetuating the false notion that, due to the UK's fragmented land ownership, there is no need for a landscape-scale spatial strategy

and vision. This is compounded by the separation of the landscape into distinct and easily monitored 'assets' rather than being considered as the relationship between communities and their territory, the vast physical and cultural infrastructure upon which we depend for everything. Where professional guidance exists, there is a need to consider if and how to translate this into enforceable policy as part of a wider programme of 'creating a vision for an environmentally sound future' [4].

Strong visions for a sustainable future already exist in the hundreds. What we need are those that are truly 'down to earth', appropriately situated in the landscape, and expressed through political commitment. They should be articulated spatially using quality maps and diagrams and interpreted through design by landscape professionals into site-appropriate technical solutions using the medium and material of specific landscapes.

The role and importance of landscape beyond its physicality (expressed through carbon and biodiversity targets, for example) are not represented in current legislation or guidance, either at strategic or more detailed levels, such as designing new spaces, preserving existing places, or the importance of community resilience. We join the call for a landscape strategy that encompasses its entirety, from the 'everyday' urban landscape to those marked as special, and acknowledges its material, cultural, economic, and ecological facets. Policy, systemic change, and embedding environmental and climate visions in strategic spatial plans will have tremendous benefits if applied to the design and planning processes.

Achieving a de-polarisation of climate and sustainability guidance applicable to landscape design requires the integration of vision, leadership, and governance, backed up by policy to make it happen, and guidance to demonstrate how, through design, transformation can happen.

Future Recommendations

In this article, we evaluated a number of documents to help articulate an emerging line of enquiry. Further studies should incorporate a comprehensive survey of policy and guidance documentation to illustrate the observed polarisation more clearly. New case studies that occupy the gap between 'generalisation' and 'detail' should be investigated, with a particular focus on the rhetorical-spatial-visual devices of maps, diagrams, and images as the means by which visions are located and communicated.

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