PALUDAL PLAYSCAPES

Wetlands as heterotopic ludic spaces

[Received October 29th 2020; accepted February 16th 2021 – DOI: 10.21463/shima.112]

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ABSTRACT: Wetlands are amongst the most biodiverse ecosystems on the planet. Globally our ability to mitigate and adapt to anthropogenic climate change is now closely tied to these paludal waterscapes. This paper uses empirical data to offer insights into how different user groups engage with, and value, wetlands recreationally. Understanding the drivers of human use, and diversity of engagement practices, in wetlands can enable the development of targeted strategies to support long-term, wide-scale wetland adaptations in response to climate change. The data highlighted that English wetlands have been purposively repositioned as 'ludic', wellbeing spaces, wherein wetland users are encouraged to spend time, and money, on these sites in widely different recreational ways: for tourism; family time; commemoration, creativity and, unintentionally, delinquency. Utilising the Foucauldian concept of heterotopias, this paper evidences that these wetland ludic activities enable the flourishing of other selves and support alternative imaginative possibilities of sustainable futures.

KEYWORDS: Wetlands, wellbeing, ludic, heterotopias, sustainable futures.

Introduction

There is a tenderness in seeing the footprints of others, who have walked this Earth millennia ago. Other humans whose lives we will never fully grasp, yet who feel not so dissimilar from us - walking with families, friends and companion animals, in search of food, to reach a destination, or simply for the joy of walking. We witness these other lives captured in petrified relief mid-stride, their imprints fossilised in the intertidal mud flats of coastal wetlands (Figure 1). Timeless yet fragile - certain to be lost again to the waves. Scientific techniques allow us to make considered judgements about these ancestors' weight, height, gender and age. We know about their bodies, their speed across these difficult terrains, how the adults and the children altered their gait and dispersed as a group with their animals across the space. We can track their movements in frozen time and gauge their motivation. But what we cannot know is their embodied relationship with their environment - their emotional lives, what drew them to this particular landscape, itself ever-changing. Change is considered in this estuarine context not just in a tidal, littoral sense, but also as changes experienced within these past travellers' shorter lifetimes. Rising sea levels between 6500 and 6200 BCE incrementally filled the land bridge between what is now the UK mainland mass and continental Europe, sometimes referred to as 'Doggerland' (Blackburn, 2019), and changed the shape of our entire coastline, including the site of these human and other animal imprints. Over time the trackways and routeways they used were lost to inundation but the sedimentation that, in geological terms, quickly built up as the shoreline and river edges were submerged, enabled these mark-makings to be preserved for posterity.



Figure 1 - Severn estuary Neolithic footprints (photo by Martin Bell, 2020).

Martin Bell from the University of Reading, UK, kindly shared with me the photo archive of the 2020 work he has undertaken to map these ancient travellers' journeys. These archival footprints are located on the intertidal wetlands of the River Severn estuary abutting the Bristol Channel on the west coast of England. He has used them to think widely about paleo-environments and how humans used them for resources and for connecting with others. These pathways were not just for survival; they were sociable communication routes, and they stretched across vast areas of the planet. The ancients travelled widely; much as we have done until recent, pre-COVID times. We can think of these intertidal wetlands as spaces of human, and other animal, interaction and bonding as much as a working or worked landscape. Wetlands are amongst the most biodiverse ecosystems on the planet. Globally our ability to mitigate and adapt to anthropogenic climate change is now closely tied to these paludal waterscapes; and as paleoenvironmental archaeology reveals, these wetlands have always been an intrinsic element of what it means to be human as we live, move, and commune on the planet's surface.

We can go further – and even perceive of wetlands as playscape; spaces in which the economy of our everyday, late modern lives is brought into sharp relief. Our current framing of 'play', as something that is not 'work', is a thoroughly modernist construction (Rojek, 2013). Cast back to pre-industrial, pre-capitalist societies and work and play are not

so easy to distinguish. In the same ways that our sleeping patterns are now shaped to suit the needs of contemporary economy, we need think only to the concept of the bipartite 'Georgian sleep' (Ekirch, 2001) to recognise this, so too are our current formulations on the role of play, and ergo playscapes, as an important aspect of our non-working lives. Once we recognise that a space, a landscape does not need to 'do' anything to become ludic, and that living and playing are not dichotomous activities, we are freed from simplistic definitions of what playfulness in nature can mean. We need to delve further, and the notion of heterotopias can assist in this endeavour.

Heterotopian scholarship takes its antecedence from Foucault's 1986 translated work 'Of Other Spaces.' Foucault's essay was exploratory, deploying the term "heterotopology" to explore "the other real sites that can be found within the culture, (which) are simultaneously represented, contested, and inverted" (Foucault, 1986, p. 24). These spaces can be thought of almost as a Gordian knot, where the meaning or use of a singular space is twisted, morphed and reshaped in intricate, complex ways to become overlaid with multiple representations. As Saldanha notes (2008) this desire is to recognise that the same space can be used in widely different ways, for counter-normative activities working outside, or against, the affairs of the state and the (re) production of capitalist relationships. When we think back to our Neolithic wetland imprints, we appreciate that our reading of space, and human use of space, is always tainted by our own paradigmatic way of understanding ourselves and the motivations of others. Considering the possibility of living as playing begins to loosen this bond, so that the ludic can be thought of as both an extension of our everyday selves and that nature is intrinsic to our spaces of ludicity.

As a landscape geographer it is interesting to note that, without much further consideration, the heterotopian spaces used as exemplars are almost exclusively those of built environments. The schoolyard, the brothel, the inn, the laundry are all viewed as heterotopic spaces. The school room is the site of engagement, learning, conformity – the schoolyard however is anarchic, physical, the site of negotiations and usurpation. Likewise, the laundry room is vested with industry, a hierarchical space of the lowest form of worker, a deeply female space in most cases. Yet, here is the site of gossip, of information sharing, places in which plots and coups are schemed and a place for the loosening of corsets, a relaxation of rules, rude jokes and dirty pranks. The Foucauldian 'other space' is one in which our real selves emerge, shucking off the expectations and demands of society. This othering, heterotopian space is the place of playfulness and wanton abandon.

While Foucault did not coin the term 'heterotopia,' he deployed it in a starkly different way from its original use as a medical term to describe dislocated animal tissue malformations. Foucault's work on heterotopias as 'disordered space' is limited mainly to a combination of recorded lectures, talks and interviews as is typical of his oratory and declamatory approach to pedagogy. His most clearly developed written work on heterotopias is found within his 1967 work 'Of other spaces'. Most of the subsequent scholarship on heterotopias is a result of critiques and appraisals of this relatively limited selection of Foucauldian thought (Soja, 1995; Lefevbre, 1991) which gained favour throughout 1990s post-structuralist discourses rejecting totalising narratives of the human condition. Heterotopian thinking then asks us to consider space as an artefact, or construct, of the society that produces it, such that a physical space can have multiple uses and signify different things to those in that space at any given moment. When we add time as a factor or dimension of our experience of space we appreciate the role of

memorialisation, commemoration or re-play as part of a human engagement with space. Any space can enable alternative expressions of utopian possibilities – imagined as another reality, as a reflection in a mirror reproduces an image as both the same and different simultaneously.

A lacuna within this heterotopian argumentation is, then, a consideration of spaces away from society's omnipresent gaze. What of places away from the built environment; what heterotopian occurrences can we find in less-managed settings? We need to consider human-landscape inter-subjectivity; the making and re-making of self in different landscape settings. Throughout heterotopian scholarship it is always the urban form which is the setting for human interactivity and always presides. We can turn to that most ludic of meta-disciplines, the Arts and Humanities, to consider counter-normative expressions of self.

Although the Romantics and Memorialists have captured this intimate nature/human replay in numerous ways and literary forms (Shelley, 2000; Byron, 2000; Janssen, 1974; Lee, 1971) and 'sense of self' in landscape is of key importance to human geographers (Massey, 2004; Bender, 2002) and eco-critics (Lopez, 1999; Solnit, 2006; Jones, 2005), certain landscape forms remain privileged – mountains, deep forest, coast, valleys, oceans. There remains an attachment to awesome or sentimental landscapes: the sublime mountains and the sheltering valleys; the vast oceans and the minutiae of the lichen on summer island rocks. Those natural spaces which are harder to read, more banal, less effusive are often overlooked. Returning to wetlands and their place in contemporary representations we find an absence – or worse, a tendency toward cliché. When we pay particular attention to these hybrid land-waterscapes establishing examples of empowering or celebratory construction of self in these environments becomes challenging.

In her 2015 exploration of novelist Alexander Durrell's depiction of waterscapes in his extensive body of work, Kreuter attends to this oversight particularly through the lens of distorted time. She considers waterscapes as heterotopian "other spaces" where "reflective doubling" (2015, p. 75) takes place as sky, water and land shimmer and refract mages mirror-like, morphing and reshaping according to changing light and weather patterns. As humans using and moving through these environments, we become disorientated as the space alters around us. Distant sounds travel across mud flats and wet sands; dunes incrementally walk along the shoreline; reed beds hush and bow to ripples of wind; winter sunsets welcome the murmuration flights of thousands of sheltering birds in whirling intricate sky patterns; the modern and the ancient become congested and connected. Deep time and the contemporary become refracted and distorted in these sites. When we think of the petrified ancestral footprints alongside the fleeting marks of their modern shoreline visitors we can see how time collapses. These spaces of shifting sand and reed bed, with humans accessing this space for leisure, for mental rejuvenation, for work, for sustenance, for a purpose and for a wandering, alert us to their multiple identities as abstract paludal playscapes in a time of climate change. This is particularly pertinent when we consider wetlands themselves; shape-shifting, continuously changing hybrid landwaterscapes responding to weather, to humidity, to the seasonal and stochastic wildlife and fauna that use these ecosystems for protection, for sustenance, for biodiversity. We can think of wetlands as places for courtship and mating for a variety of animal forms, including humans; we can also see them as ludic spaces - where ritual, display and the out-of-the-ordinary find purchase. Wetlands are places for deviance.

"Deviant" spaces are heterogeneous and abundant. Foucault used the rest home, the brothel and the playground (Johnson, 2006) as examples of spaces of alternative thinking, practice and imagination, places in which to enact other possible selves. Deviancy is not a pejorative term here; rather ludic self-expression is the determining inference. We can extend this to include deviancy as an embedded element of the domestic, quasi-civic and public spaces where people talk, think, play and imagine together differently. Agency becomes diffused; heterotopianism does not just reside within the self-aware deviant, but also within those whose hopes, dreams, actions and ways of being run counter to that of the dominant hegemonic paradigm. There are slippages, and shape shifting as actions and responses can be interpreted and understood in multiple ways over different time cycles. The importance of the Kinder Scout mass trespass in the English county of Derbyshire in 1932 (Donnelly, 1996) in shifting public opinion from viewing accessing private land as a thuggish act into a communisting of landscape cannot be understated. The importance of these British upland moors as heterotopic spaces within which our contemporary access to 'nature' and cultural re-evaluation of landscape forms part of our own individual selfidentity and world-making.

Kevin Hetherington's 2002 work The Badlands of Modernity forwarded the idea that alongside the dominant social ordering of space in nascent modern communities were other civic or quasi-civic spaces within which counter-hegemonic ideas, actions and performances were enacted. The factory floor, the literary salon, the courthouse and the laundry yard are all 'othering' spaces in which (at least in the global North) modernity forms, and which in the late modern age would include our digital selves and communities. Hetherington's work considers the built environment as generative; but less managed spaces have always been places of discretion, plotting and disruption. This draws our attention to the importance of these marginal spaces, and alternative impulses or responses, in responding to, or disrupting, normative social and cultural practices in mainstream society. Widening our consideration of counter-hegemonic, or heterotopic, space to include wetlands such as Kinder Scout, enables us to connect to social equity issues. COVID 19 has enabled many new ways of thinking and being together; and the importance of less managed space as restorative and energising has never been clearer in terms of supporting human health and wellbeing (Morris, 2020; Venter et al., 2020; Guzman et al., 2021).

Drawing on Foucault, Peter Johnson argues that "whereas utopias are unreal, heterotopias are 'actually localizable" (2013, p. 791) in ways that can fragment the linear trajectories of "development" in order to focus on interstitial moments and performative actions which reclaim power and agency in the spaces in-between (Foucault, 1986). Johnson goes further to examine how the agile and disturbing potential of heterotopian sites challenges the dominant reading of them, unveiling a liberatory potential. He contends that heterotopias can be "defined as sites which are embedded in aspects and stages of our lives and which somehow mirror and at the same time distort, unsettle or invert other spaces" (2013: 791). We can look to wetlands to bring these diverse reflections together.

Wetlands as paludal heterotopias

Wetlands' shape shifting, immersive characteristics make them intrinsically heterotopic. It can be argued that English wetlands have, particularly in response to austerity politics, been purposively repositioned as 'ludic' spaces – recreational places within which to spend

time alone or with loved ones, spaces in which to enhance one's own wellbeing, terrains in which to assert one's agency. Whether walking and cycling in wetlands, viewing murmurations of autumn starlings, undertaking bat surveys, pond dipping, running in and on the fells, foraging for mushrooms, connecting in different ways with the web of life (Moore, 2015), all attest to the varieties of multi-species ludic play found in wetlands (Gearey et al, 2020).

As climate change impacts dramatically alter our relationships with our watery neighbourhoods and play zones we need to learn how to renegotiate how we value and live alongside these land-waterscapes. Our culture and heritage are enmeshed with these hybrid paludal spaces, particularly when we consider climate change adaptation in our urban areas. For instance, when we consider the Venetian lagoon we appreciate how intrinsic the canals are as part of the urban fabric and as intra-generational symbolic artefacts of the city and its connective archipelago. Yet in its dynamic tidal exchange the lagoon also challenges Venice's integrity both infrastructurally and economically. The heritage and identity of the city, so closely connected to its hydrology, could be its undoing. This is true of so many other cities also built upon wetlands: Barcelona, Jakarta, Lagos, London, New Orleans, New York, St Petersburg. These marshy, paludal, environments are the places where the built and natural environment are delicately balanced. As climate change impacts threaten to overwhelm the technologies used to keep the burgeoning water at bay in these cities, they are increasingly prone to failure. Ever more intensive labour interventions are required to prop up the mirage of certainty and assurance: the Venetian and London tidal barriers are a testament to this. Through maintaining a semblance of continued normality these hubs continue to attract tourists and the speculative investment interests of international capital which enable them to support wide and diverse economies. London's architectural heritage is predicated on preventing its underground rivers and culverted streams and the nascent flow of a supercharged Thames from overwhelming this congested, densely urbanised valley. This is also true for Venice. The canals which are the backbone of its tourist economy alongside its architecture, art works and palazzos, collectively must generate enough income to maintain the barrage which protects it. At a current cost of 6 billion euros to construct, and currently, at 94% capacity (Giuffrida, 2020) there is the cost of the investment package to cover along with maintenance costs and other ancillary finances such as bursaries and subsidies for the fisheries and shipping industries impacted by changing access to the lagoon (Molinaroli and Guerzoni, 2018). With COVID impacting on international travel, including the reduced numbers of tourist visits, the Italian state must decide at what price the nation must continue to support this treasured city whose income generating strengths ripple out across the Veneto region and beyond. Playscapes then becomes a serious economic business used to fund further capital-intensive engineering solutions, kept just out of sight through networks of underground pipes, ducts and pumps; or celebrated as statement pieces - with the tidal barriers more akin to modernist architectural pieces than functional infrastructure.

As we live in increasingly urbanised environments, where our major cities still dominate the spatial centres of finance and economy, this tension between living, working and leisure space becomes increasingly febrile. Our waterside workscapes and playscapes are continually in this 'reflective doubling' of real/unreal space. Alongside the tangible world-making of financial exchange sits the fantasy world, that of relaxation and playtime – where we are removed from pressing financial and deadline requests. The calamity sitting close by. climate change, is kept out of sight. A wetland is always in a state of return, and

tidal barriers, drainage channels, windpumps and levees are only as reliable as the human agency, and will, to maintain them. Rather than see wetlands as unsettling, uncanny, uncertain and "quaking zones" (Giblett, 2009) which represent nature's desire toward eutrophic return, we may benefit by embracing their playful ludic quality as we transition toward a very different climate aware renegotiation with our waterscapes.

To understand how people use and value wetlands as recreational spaces, I and a group of colleagues undertook a three-year project WetlandLIFE funded by a consortium of UK research institutions under the Valuing Nature suite of empirical research initiatives (www.wetlandlife.org). This research programme, its cycle completed in 2020, sought to understand the changing use and value of wetlands against the backdrop of climate change. WetlandLIFE's rationale was to explore human relationships with nature, using wetlands as emblematic of less managed space, and used mosquitoes as a way to visualise both threats brought about through climate change (such as novel infectious tropical diseases) and to gain a baseline for English mosquito species in light of biodiversity decline. Understanding how we use, value and respect all aspects of wetlands was intrinsic to the research. The social science aspect of the work focused on understanding sense of self and sense of play generated on, and through, interactions with the wetlands. Exploring wetlands as ludic spaces, places for play, rejuvenation, creativity and restoration, was an essential aspect of the work. The data comprised semi-structured interviews with thirtythree specialist wetland user groups undertaken in-situ between February and October 2018 across five English wetlands in Somerset, Bedfordshire and North Lincolnshire including a coastal managed realignment site. The contemporary empirical research data offers insights into how different user groups engage with, and value, wetlands recreationally. Understanding the drivers of human use, and diversity of engagement practices in wetlands can enable the development of targeted strategies to support longterm, wide-scale wetland adaptations in response to climate change. The next section details the ways in which the ludic comes to the fore in English wetlands, and how these expressions are both normative and emancipatory acts. We can see how Kreuiter's "reflective doubling" (2015, p. 72) is apt for these spaces and enables us to consider the heterotopian potential of these paludal playscapes.

English wetlands as paludal playscapes

The social science fieldwork from the WetlandLIFE project focused on understanding the senses of place that humans gain within these land/waterscapes and interrogated the dominant cultural representations that shape how we view and use these spaces. A dual process was initiated: a Contemporary Voice Method (CVM) within which thirty clusters of individuals and family groups who lived and worked alongside the wetlands were interviewed on camera to enable the making of a community showreel for discussion; and one to one interviews with specialist user groups (SIGs) such as naturalists, artists, spiritual practitioners, botanists, birders, historians, walkers and wildlife photographers, amongst many others who accessed the wetlands sites for their recreation. The data discussed within this article details only the SIG data which comprised semi-structured interviews with thirty-three specialist wetland user groups undertaken in-situ between February and October 2018 across five wetlands:

• Priory Country Park (PCP) and Millennium Country Park (MCP) in Bedfordshire – the former an urban river floodplain including a brownfield site from the defunct power station, the latter sited within rehabilitated landfill sites;

- Shapwick Heath (SH) and Westhay Moor (WM) in Somerset both rehabilitated peat excavations;
- Alkborough Flats (AF) in North Lincolnshire a coastal realignment area of flooded former farmland which now acts as a tidal riverine overflow.

A more detailed overview of the WetlandLIFE project can be found within the work 'English wetlands: spaces of nature, culture, imagination' (Gearey et al, 2020)



Figure 1 - Case study sites *Red*: Alkborough Flats, Lincolnshire; *Blue*: Priory Country Park and Millennium Country Park, Bedfordshire; *Green*: Shapwick Heath and Westhay Moor, Somerset.

The Bedfordshire wetland sites

Many SIGs see Priory Country Park (PCP) (Figure 2) as more of an urban park than a 'wetland.' This shapes whether SIG users choose to access the space – many naturalists opt for other wetland spaces in the county for their recording activities. This appears to be partly species driven, and also a desire for quieter spaces relatively close by (ie a 20-minute drive out of Bedford/Marston Moretaine). Some voiced anxiety about safety concerns in urban green-blue spaces; others were deterred by the littering and other behaviours which involve large groups of people or dogs off-leads. However, volunteers and those running health related businesses onsite (walking clubs, sailing, children's activities) have close, often inter-generational connections with the space, and talk of its importance for all aspects of their wellbeing and those of their clients. This cohort are not wildlife orientated, so quietude is not so important to their practice.

Many interviewees in PCP suggested that a lack of engagement by the general public/s with some of the site designated as a Local Nature Reserve (Fenlake Meadows) was due to a pre/mis-conception that the whole space is a public park. This impacts on the ways that non- specialist users utilise or don't utilise the space. It was argued that dissonance was created by the play area and picnic benches giving the impression that it was a park with a

lake – even though this is at odds with the environment found in the meadows and Finger Lakes, which are less intensively managed. SIGs claimed that the natural habitat management schema makes areas of PCP appear to the general public/s as scruffy, unkempt and as if the site is not properly maintained – and this encourages activities such as littering, green and foul waste dumping, and fly tipping. This typifies the difficult management environment at PCP, where a need to maintain habitat and biodiversity can appear to be at odds with the requirement for a more orderly appearance to encourage suitable public behaviour on site.

The expansion of PCP into the Bedford River Valley Park was viewed as positive, creating a linked series of accessible waterside recreational areas along the river, connecting with other high visibility wetland spaces such as the Danish Camp. Yet many participants suggested that most PCP users were not aware even of the extent of PCP along the Great River Ouse as many users remained within the 'honeypot' of the car park, marina and café/toilets. This was not seen as a failure of PCP's site managers or Bedford Borough Council, but more to do with a general disconnection with natural space and a failure of curiosity to access the overgrown spaces of the site. This was also attributed in both MCP and PCP to a lack of confidence by the general public with respect to 'being in nature' with no directed activities.

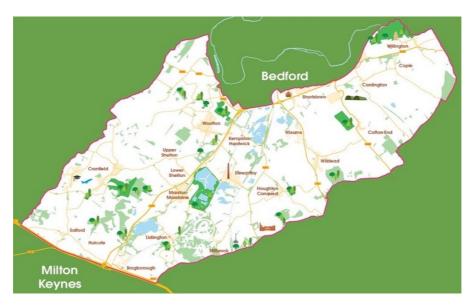


Figure 2 - Priory Country Park and Millennium Country Park wetlands in Bedfordshire.

MCP is viewed by SIGs as an artificially constructed space but is welcomed for its rationale to reclaim land within the hinterland between Bedford and Milton Keynes. SIGs suggest that their contribution as specialist recreationists is a work-in-progress toward transforming this space into a Community Forest Trust. This transformational activity has created strong bonds between volunteers and the rangers. The narrative of MCP reflects that of nearby Milton Keynes's history, as a Post War New Town, as a collective endeavour in place making and identity building. New housing development alongside has encouraged families to integrate MCP into their recreational routines, but adolescent littering and fouling of MCP remains a persistent challenge for the rangers and volunteers,

especially in the bird hides. These 'othering' uses of the site have been attributed to a lack of socially provided youth activities/centres in a burgeoning residential space. This highlights that the local social and economic context impacts greatly on wetland management.

PCP has a great diversity of wildlife than MCP - including three species of bats and otters, kingfishers, muntjac, and red necked grebe, amongst many other common wetland animals and invertebrates. MCP is newer as a wetland space and, as a result, has not yet become as biodiverse. On both sites, volunteers feel connected to the site and take ownership over its wellbeing in terms of monitoring use by visitors, wildlife health and promoting the site. There is intergenerational connectivity on both sites. At PCP many volunteers came with parents and school friends when they were young and as older adults are still living in Bedford and using the site. These same volunteers both have brought their own children and grandchildren and help with youth activities such as sailing and paddle boarding at the marina. For many of the volunteers at MCP, their wildlife and environment interests predate the designation of the space, as they had utilised the farmland and scrubland that now includes MCP, for birding and playing as youngsters. Some volunteers voiced concerns that the Oxford-Cambridge growth corridor (Valler, Jonas and Robinson, 2020) might negatively impact on the community project to create the Forest of Marston Vale (see the organisation's website for details). It has also been suggested that MCP was a form of off-setting - that Bedford-Milton Keynes would become one conurbation with the MCP as its bounded green-blue space.

Sociability, physical health and mental replenishment are all attributed as benefits of working and using both sites. There is a common refrain concerning transformational life events – episodes of physical and mental ill health, retirement, redundancy, the death of a loved one - and the different ways in which activities on these Bedfordshire wetlands have supported participants in their recovery. Whilst wetlands per se may not be the driver, the inference is that because these are urban/peri-urban spaces, their accessibility and perceived wildness are key factors in SIG users' recovery as part of a suite of other lessmanaged spaces to visit across the county. Respondents who are volunteers for PCP/MCP spoke of the self-regard enabled through skills developed on-site, including learning to use chainsaws, driving flat-bed trucks, tree planting, and using riverside clearance machinery; all of which needed specialist training that can subsequently be transferred to other sites and activities. All of these reflections attested to the importance for volunteers of developing specialist knowledge on-site, in support of flourishing self-identity and of becoming needed and valued. These works were in tandem with learning about different wildlife species on sites and the types of habitats that these different species need within these wetlands, and the ways this calls for precise forms of specialist wildlife management.

PCP and MCP can, in some ways, be thought of as memorial and celebratory spaces. At PCP benches with memorial plaques are dotted throughout the site. Diyas (lamps used within a number of religious festivals associated with the Indian sub-continent) are found in the Finger Lakes at Diwali, a reminder of the ethnic diversity of Bedford. The café and playpark are used for birthdays and gatherings. At MCP the Forest Centre hosts weddings, charity cycle races and is used for community events. The events hosted on the sites, including bug hunting and pond dipping, are memorialised through selfies and snapchat streams. In these ways the sites are enmeshed in people's life stories, especially as they are orientated around family recreational events. This links too with the Somerset site, but not with Alkborough which does not appear to host or experience these type of events. Some respondents also talked of the importance of tree planting ceremonies and plaques; stone

tablets with inscriptions at visitor centres; description boards highlighting flora and fauna identified by local naturalist groups; and bird hides named and dedicated to key donors. These were seen as part of everyday site use and visibility and of place-making, connecting SIGs with former volunteers and those who love/d these wetlands.

The Lincolnshire wetland site

As the most recently constructed wetland in our survey, and the one with the smallest surrounding population, Alkborough Flats (Figure 3) has a scattered SIG profile, with many visiting the site from a wide geographical area across Lincolnshire and South Yorkshire. As a result, a focus group was not undertaken in these wetlands, unlike the Somerset and Bedfordshire case study sites. The SIGs that were interviewed were a mix between those that used the Flats on a weekly/daily basis and those that visited in relation to visiting specific species or for another stated activity. These wetlands are viewed by SIGs as 'in progress' due to their targeted creation as part of the Humber's estuarine tidal defence scheme, rather than specifically curated as a local nature reserve (LNR) or designated Site of Special Scientific Interest (SSSI). These wetlands are recognised as managed spaces but welcomed for creating a recreational facility in an area which has benefitted from the creation of flat footpaths and accessible parking. As a result, SIGs comment that older dog-walkers are the predominant users of this site, alongside a cohort of dedicated birders and wildlife photographers. There are other wetlands with visitor centres nearby, and SIGs see these as attracting a wider diversity of general visitor.



Figure 3 – Alkborough Flats, Lincolnshire (photo: Mary Gearey, 2019).

SIGs use the site all year round, and throughout the day, particularly to observe avian murmurations, and suggest that it is the relative remoteness and low amenities of the space that makes it attractive, as many visitors choose to visit other local wetlands with visitor centre/toilet facilities. It was a different experience viewing the murmurations here than at Somerset, as the lack of visitors meant that the sounds that the birds created made it a much more sensory experience. On the occasions when the site was visited by the research team there were few families visiting and there is no play park or other interpretative space other than the bird hides. It was also felt by SIGs that the nearby Drax power station's cooling towers served to deter visitors, as this made the site feel too industrialised. The site has also played a key part in military and American history. The vast stretches of inter-tidal mud plains were used for artillery practice during World War 2, with British airforce planes

flying from RAF Elsham Wolds to undertake bombing drills. It was in the woods of Countess Close, behind the wetlands, that the Gainsborough pilgrims would hold their clandestine meetings. These religious separatists would eventually join with the Mayflower Pilgrims to establish a Puritan colony in North America (Gragg, 2014). To date, these elements have not been incorporated into the narrative of the space which some SIGs felt would pull other types of visitors in, alongside the current birders, walkers and photographers.

AF do not appear to have issues with vandalism on site. This was the only wetlands in which the bird hides have not been damaged. Littering, fouling or fly tipping is also not problematic. The main recreational uses are walking, birding and wildlife photography. Participant observation reveals this as a space with an older cohort of users who are mainly not Black, Asian or of minority ethnicity. As the Economic and Social Sciences fieldwork on the WetlandLIFE project has affirmed, and as supported by a review by Public Health England (2020), green-blue space in England is disproportionately underutilised by ethnic minorities. There is also little available public transport to the site. The WetlandLIFE project artists established a 'wetlands on wheels' creative hub, housed in a caravan (Figure 4) that was pitched on Alkborough Flats over a week in mid-winter 2020 as part of World Wetlands Day activities. Members of the public were encouraged to visit the space - to look through microscopes to view mosquito wings; to add comments in the visitor's book; and to enjoy a warming cup of tea if the weather proved inclement. Through these social interactions the artists identified that few visitors come from the largest, nearest conurbation of Scunthorpe, and this would appear to be verified by the SIG profile that were interviewed. This suggests that lack of transport is one reason for this population not accessing the sites; but that a lack of engagement, or visibility of the site is another. This sits outside the remit of the research but it may be beneficial for North Lincolnshire Council (NLC) to explore this further to improve outreach and encourage use by this urban population.



Figure 4 – The WetlandLIFE project 'Wetlands on wheels' caravan, a mobile arts hub devised and managed by Kerry Morrison and Helmut Lemke (second from right) (photo by Kerry Morrison, 2020).

The AF management committee seem to have low visibility on site; they do not run events on the wetlands, though Lincolnshire Wildlife Trust (LWT) do organise occasional walks to the site originating at other local wetlands. As a result, there is less promotional draw to encourage visitation, especially when there are other wetlands close by with elevated profiles and amenities. Many SIGs reiterated how the solitude and quietude of the sites was its biggest attraction. For these SIGs the bird hides are the spaces either to withdraw to and be alone or to be sociable, depending on individual desires. The difference seemed to be in the timing of the bird hide visits, in that there would be an unspoken etiquette for daytime (more sociable) and early morning/early evening visits (less sociable) visits. These seemed to reenergise and act as restorative visits for the SIGs – replenishing mental and physical wellbeing.

There were no volunteers interviewed on this site and it is unclear whether volunteers are used to manage/facilitate the space. The research did not uncover evidence of practices of skills development/enhancement, only examples where self-directed activities led to skills development with regards to bird identification or improving photography skills. Some SIGs felt more could be done to celebrate the other heritages of the site, such as 17th Century Gainsborough Pilgrims and the military history of the Second World War (lookout posts are still on the site). However, some visitors are drawn to the turf maze known as Julian's Bower, and also to the earthwork known as Countess Close, with visits documented on Facebook, Instagram and Twitter. Promoting these spaces might be a way of widening the scope of visitors to the site.

Many SIGS noted that a popular footpath, the Nev Cole Way, was no longer in use due to a nearby road development which cut through the 60-mile footpath. It seems that attempts to petition North Lincolnshire Council (NLC) to explore instigating a footbridge have not led to any positive outcomes, though this has not been independently verified by the research team. Given that walking groups from across North Lincolnshire and South Yorkshire appear to visit AF, contributing to the local economy by eating out and staying overnight, AF could benefit by addressing the issues of blocked footpaths, and particularly the Nev Cole Way.

The Somerset Levels wetland sites

Although they were formed as a result of human agency in the Neolithic era, the Somerset Levels wetlands are viewed as quintessentially 'natural' sites by the SIGs. All interviewees spoke of their wildness and embeddedness within the Somerset Levels' landscape; with Glastonbury Tor the pivotal orientating landmark. Shadwick Heath (SH) (Figure 5) attracts visitors due to a local landmark known as the Sweet Track which has been partly reconstructed. This is viewed by SIGs as a very positive attribute for getting the public/s onto these wetlands. Many noted that at the weekend and school holidays SH is busy with families cycling safely along the banks of rhynes (drainage channels) as no cars are allowed within the reserve. Although this deterred many SIGs from using SH and WM at these times, when the hides and car parks are busy, they were encouraged that the sites were being used and enjoyed by non-specialist recreationists. SIGs noted that there was always an abundance of wildlife on both sites, with more horses, ponies and cattle on WM. These ungulates are seen as a potential deterrent by some as overfeeding has led to them becoming tame and, as a result, they move in large groups towards walkers, often causing alarm. This has now been flagged on WH's website.

The autumn and winter starling murmurations in this area are a significant tourist and SIG attraction; with a murmuration hotline run by the Somerset Wildlife Trust (SWT). They noted that tourists do not respect birding etiquette when viewing murmurations, impacting on their enjoyment of these events (talking and clapping as the birds swarm means you cannot hear the wings beating and inflight bird calls). This includes inconsiderate car parking, blocking local roads. SIGs perceive these public/s do not engage with the wider wetlands but are only interested in the spectacle of the murmuration, and that this does not forge a closer connectivity to wildlife. Poor public transport was viewed as a deterrent for families to access these sites; and that, as with Bedfordshire, there is a lack of knowing what to do when in nature because of a growing lack of connectivity with natural spaces and attendant wildlife. They suggest that more work with young people or schools is needed to enable this closer connectivity; and that environmental studies needs to become a part of key stage 1 and 2 school curricula.



Figure 5 - Shapwick Heath, Somerset Levels (photo - Adriana Ford, 2019).

Birding, bat monitoring, walking, art activities such as painting, photography and writing, an interest in anthropology as well as elements of the esoteric (due to the association of the area with the Arthurian 'vale of Avalon') all attract SIGs and non-experts to these sites. Even on wet and cold days the car park of the visitor centre is populated, as is the WM car park and the parking bay near SH. Yet some SIGs felt that SH and WM were still not inclusive spaces; rather they still attracted a cohort of white, retired couples and walkers during the week and mainly white, middle-class families at the weekend. It was felt that more outreach could be undertaken by SWT and Natural England (NE) to encourage other groups to use these spaces for recreation. One interviewee suggested that if more recreational groups knew about the designated footpaths, or if discussions could take place regarding using the rhynes for non-motorised water activities, this would encourage a wider mix of people to access these wetlands.

The respondents noted that family orientated activities were supported by the reserve managers and this was viewed positively. SIGs working with young people expressed dismay that activities on wetlands were discouraged because of three factors:

- Curricula: environmental studies not on primary or secondary school curricula; 'packed' KS₃ and KS₄ curricula left no timetable space for off-site educational visits:
- 2. Impact of logistics: nowhere to park coaches; no on-site toilet facilities away from the visitor centre; problems of student-staff ratio; insurance issues;
- Lack of resources/capacity: insufficient budgets, staff availability and staff expertise to lead educational visits.

This accords with the Bedfordshire findings that outreach is perceived to be a key factor connecting people with nature at a young age. This was seen as key to supporting interand intragenerational use of outdoor spaces, and particularly for wetlands, as 'harder to interpret' spaces, to make nature accessible and understandable to a wider cohort of possible users.

The interviews highlighted that these reserves are contested landscapes. Some SIGs who do not use the wetlands view them as solely managed for wildlife - not in harmony with nearby local communities. This was manifested through water levels being viewed as being kept too high on the sites, leading to flooding issues further downstream after heavy rainfall events, or in Springtime when the water levels are prone to natural fluctuation. Two SIGs suggested that the local environmental organisation did not engage fully with Internal Drainage Board issues concerning water management, and that there was a 'fortress conservation' approach to managing the wetlands to the detriment of community relations and concerns. It was felt that the creation of the reserves from former peat excavation workings in the 1960s (SH) and 1970s (WM) had not been undertaken through an inclusive process. It was suggested that some land was gained through compulsory purchase orders. The research team could not verify this, and it remains outside of the scope of enquiry. As a result, there still appears to be a rift between the environmental organisations and long-standing inhabitants of surrounding villages regarding the creation of the wetlands around thirty years ago. This suggests that contextual worldviews and historical 'hangovers' regarding social justice processes can act to hinder local engagement with emergent, or repurposed, landscapes. If we compare SH/WM with PCP and MCP in Bedford, then we see differences in the implementation and management of the sites and their public communication and how this impacts on SIG/non-SIG engagements with wetland spaces.

Edgelands, play and the *terrain vague*: developing a new language for wetlands

The data reveal the diverse ways in which wetland recreationalists use and value these spaces. Interactions with these less managed environments are rooted in the creation of a sense of place for these users. Activities range from the banal – the silent sojourns in bird hides or behind the lens of a camera – through to the emancipatory – wild camping, partying, alfresco sexual liaisons. The interviews help us understand that the ludic means vastly different criteria to a range of contemporary visitors. If wetland practitioners are to embrace this diversity, as a way to encourage different forms of custodianship in wetland spaces as we transition towards adapting to climate change, then this "reflective doubling"

(Kreuiter, 2015, p. 72) of what we presume is happening in these spaces, against what is actually happening, needs to be reconciled.

Rehabilitating the image of wetlands has been a crucial aspect of attempts to protect, restore and promote these landscapes. From malaria ridden swamps, and foreboding marshes and moors through to the "edgelands" (Mabey, 1974, Roberts and Farley, 2011) between the urban or the bucolic rural, in European literature at least, wetlands have been firmly placed in the realm of the 'uncanny'. Not just unwelcoming but something more – unproductive, unwanted, unnecessary. Wetlands over time have been purposively positioned in socio-cultural discourse as barren spaces unfit for humans, animals or agriculture. They have, until mid-last century, been viewed as unsustainable non-spaces, only fit for the mass engineering endeavours of drainage and dredging to repurpose them as productive landscapes.

Clearly times and attitudes are changing towards landscape and its form and function and, as reflected in our project work, these landscapes are now increasingly valued for their importance in a whole range of ways. Most impactful is the representation of wetlands as ludic spaces – places of play. This is evidenced through the multifacetted ways in which these environments are communicated as spaces of rest, relaxation and rejuvenation.

There is still further to go, particularly if sustainable futures do entail closing the gap between the still self-evident human-nature rupture. Post-humanism can be argued to be a process rather than a statement. This has been reflected in contemporary cultural representations, as nature writing and popular science has enabled a new and growing audience to see the fundamental importance of letting some spaces just 'be', in all their natural glory. Jorgensen and Tylecote (2007) discuss the ways in which cycles of use and abandonment mark all landscape over time; and that in many ways wetlands, as edgelands, found in river corridors and abandoned gravel pits, are examples of 'interstitial wasteland' (ibid: 452) – spaces in which to enable counter cultural practises. They explain these as acts which have no intrinsic 'value' – den building, blackberry picking, fire making, short cuts for waymaking. They praise them as important spaces in which to recalibrate human-nature relations and to slow down the pace and drama of modern life.

Simon Robinson (2018) in his multi-modal work Archipelagos of Interstitial Ground: A Filmic Investigation of the Thames Gateway's Edgelands which is part text and part ethnographic filmmaking, argues for a way of, if not embracing, at least contemplating the worth of, urban blue-green landscapes which are unnerving; which do not easily welcome humans. Robinson's ethnographic immersion into these spaces provide ways of settling into an unsettling landscape of hard concrete edges and wide waterway and floodplain. His films show foxes and crows grooming themselves under street -ights; urban anglers fishing on scrubby riverbanks. Sustainable futures will involve engaging with edgeland wetlands as well as those more user-friendly and sculpted by visitor centres and information boards. Scholars working in the field of urban design, architecture and environmental psychology have a term for such interstitial spaces in which functionality is ill-defined, in which ownership or forms of use are muddled - terrain vaque (Gandy, 2013; de Solá-Morales Rubió, and Levesque, 1995). Theorists such as Mariani and Barron (2013) and Millington (2015) suggest that these spaces, such as the muddy spaces under road flyovers, canalised culverts and abandoned railway lines are places in which degraded landscapes can be collaborated with, rather than colonised (Stevens and Adhya, 2013). Humans and landscape share agency as we consider future pathways towards emergent forms of living together. How we do this in practice will be shaped by our imaginations, informed by our willingness to step outside of the current capitalist paradigm which still sees nature as operationalised for human benefits.

Concluding thoughts

Wetland adaptations must engage with user diversity. Intrinsic to an imaginary of paludal heterotopias is the notion of inclusive play; wetland practitioners must find ways to accommodate the tensions between normative and emancipatory self-expressions on these sites. As explored throughout this paper we must attend to heterotopic considerations concerning landscapes and human agency. Wetlands have been used by humans in many different ways over time. Some have always been wetlands, some inadvertently created in the Holocene through the transition from nomadic to settled farming; many have been reclaimed from coastal plains or constructed to replace other landscape forms or use. Certainly, within England, which has been the geographical focus of the WetlandLIFE project, expanding urban spaces to create constructed wetlands from former brownfield sites or old industrial estates, or to replace unsustainable rural practices such as peat digging or aggregate removal, has generated curated 'wildernesses' in places of economic decay. Whilst this has enabled the development of wetland sites that attract visitors for the green-blue aesthetic qualities of these spaces, what has been often designed out are references to these former anthropocentric technical practices. In many places it's as if the economic heritage of the site troubles its current form as wetland; and, if deemed uncomfortable, is erased completely. Caitlin Desilvey's work (2007, 2017) has touched on this sensitive issue of legacy and how we wish to represent the present and recent past to our future generations, to enable us to reflect more closely on the changing meaning of play over time in these paludal spaces.

Thinking through the connectivity of human use and value of wetlands at a global scale reminds us of the different but connected ways diverse cultures access and cherish these spaces. When we consider Venice's lagoon, for instance, focus is often given to the spaces used as the spectacle of the Veneto: the playscapes of tourism and the Lido. Yet the northern lagoon also provides insights into small industry (Canu et al. 2011), sustainable tourism through UNESCO patronage (Cacaci and Carciotti, 2020) and peripheral or traditional social activities (Rova, Pranovi and Müller, 2015) often disregarded within periurban wetlands. We can consider then the importance of these less managed spaces as places in which counter-normative and heritage activities continue unimpeded, as the gaze is drawn toward more flamboyant hegemonic economic practices of leisure and consumption.

This is a fundamental consideration when we engage with sustainable futures practices and reflect upon what the legacy of our current 'Sustainable Development' approaches might be. Recognising the importance of past economic and industrial practices, both negatively and positively, needs to sit somewhat uncomfortably with our modern aspiration to live in accommodation with Earth's systems. Providing visual cues of what went on in these wetland spaces before their reconfiguration is critical in order to remind us of what the global North is responsible for, what humanity has gained and lost, and what more we could lose without more entrenched responses in support of sustainability. Thinking back to the imprints left by others millennia ago, what will our contemporary imprints leave on the planet? What will future others read in the way we mark our wetlands? Losing our sense of play also denotes losing our sense of self. Maybe it is art, again, that will have the greatest influence on enabling us to gain some perspective on

these lives that we have created for ourselves, and our dependence on our landscapes to provide us with enrichment: COVID times have shown this so clearly (Venter et al, 2020).

Within the WetlandLIFE project art has played a pivotal part not just in communicating our ideas and findings, but also in helping the academics and practitioners within the team to reflect on our own relationships with wetlands. Curation of wetlands then does not rest just with those responsible for the design, implementation and ongoing management of these spaces, but also with the academic community and the ways in which our own approaches subtly curate perspectives of 'good' and 'bad' practice on these sites. A wider and more heterogeneous engagement with wetlands is needed as we learn to adapt to a changing climate. Communicating the importance of wetlands as mitigation and adaptation spaces is essential for their continued functionality through appropriate resourcing and through more judicious caretaking. This heterotopian valuation of wetlands is not concerned with suggesting prescriptive approaches to their stewardship, but to welcome the curiosity and celebration of human-nature relationship that delinquent, ludic expressions have brought to these sites. Opening out interpretations of what wetlands 'are' through enabling visitors to be curious within these spaces, and by bringing back in the recent past through physical representations of foregone activities, could be one such method. Using examples from WetlandLIFE's work, that might mean recreating one of the Bedford power station's cooling towers remade with in-situ wetlands materials such as willow or reed on its former location; lining a drainage bank in the Somerset Levels with antique hods in reference to former peat extraction; or creating a sculpture out of used artillery materials to recall the aircraft training sites in World War Two at the Alkborough Flats wetlands. Embracing heritage openly within these wetland spaces could, finally, provide them with the voice denied to them for so long.

REFERENCES

Bell, M. (2020). Making one's way in the world: the footprints and trackways of prehistoric people. Oxbow Books.

Bender, B. (2002). Time and landscape. Current Anthropology 43(4), 103-112.

Blackburn, J. (2019). Time song: searching for Doggerland. Random House.

Byron, G.B. & McGann, J. (2000). *Lord Byron: the major works*. Oxford University Press.

Cacaci, E. & Carciotti, S. (2020). Venice landscape: between the world heritage site and cruise tourism. *SMC* n4.

 $http://www.sustainable mediterrane an construction.eu/SMC/Special_Issue_n_4/o85_Venice\%2olandscape_between\%2othe\%2oworld\%2oheritage\%2osite\%2oand\%2ocruise\%2otourism.pdf$

Canu, D.M., Campostrini, P., Riva, S.D. et al. (2011). Addressing sustainability of clam farming in the Venice Lagoon. *Ecology and Society 16*(3), A26.

Community Forest Trust. (2012). *About the Community Forest Trust*. https://www.communityforest-trust.org/englands-community-forests

De Solá-Morales Rubió, I. & Levesque, L. (1995). Urbanité intersticielle. *Inter: art actuel 61*, 27-28.

DeSilvey, C. (2007). Art and archive: memory-work on a Montana homestead. *Journal of Historical Geography* 33(4), 878-900.

DeSilvey, C. (2017). *Curated decay: Heritage beyond saving*. University of Minnesota Press

Donnelly, P. (1986). The paradox of parks: politics of recreational land use before and after the mass trespasses. *Leisure Studies* 5(2), 211-231.

- Ekirch, A.R. (2001). Sleep we have lost: Pre-industrial slumber in the British Isles. *The American Historical Review* 106(2), 343-386.
- Forest of Marston Vale Trust. (2005). Our story. https://www.marstonvale.org/
- Foucault, M. and Miskowiec, J. (1986). 'Of other spaces', diacritics 16(1), 22-27.
- Gandy, M. (2013). 'Marginalia: aesthetics, ecology, and urban wastelands. *Annals of the Association of American Geographers* 103(6), 1301-1316.
- Gearey, M., Church, A. & Ravenscroft, N. (2020). *English wetlands: Spaces of nature, culture, imagination*. Springer Nature.
- Giblett, R. (2009). Landscapes of culture and nature. Springer.
- Gragg, R. (2014). The Pilgrim chronicles: An eyewitness history of the pilgrims and the founding of the Plymouth colony. Regnery History.
- Giuffrida A. (2020, October 20). Venice's controversial barriers prevent flooding for a second time. *The Guardian*.
 - https://www.theguardian.com/world/2020/oct/15/venice-controversial-barriers-prevent-flooding-for-second-time accessed 20th October 2020
- Guzman, V., Garrido-Cumbrera, M., Braçe, O., et al. (2021). Health and wellbeing under Covid-19: The GreenCovid Survey. *Irish Geography* 53(2), 157-162.
- Hetherington, K. (1997). The Badlands of modernity: heterotopia and social ordering. Routledge.
- Jansson, T. (1974). The Summer book. Pantheon.
- Johnson, P. (2013). The geographies of heterotopia. *Geography Compass* 7, 790-803.
- Jones, O. (2005). An ecology of emotion, memory, self and landscape. In J. Davidson, L. Bondi and M. Smith (Eds.) *Emotional Geographies* (pp. 205-218). Ashgate,
- Jorgensen, A. & Tylecote, M. (2007). Ambivalent landscapes—wilderness in the urban interstices. *Landscape Research* 32(4), 443-462.
- Kreuiter A. (2015). Waterscapes as other spaces in Lawrence Durrell's The Alexandria Quartet. *Journal of Literary Studies* 31(4), 71-89.
- Lee, L. (1971). *As I walked out one midsummer morning*. Penguin Books.
- Lefevbre, H. (1991). Critique of everyday life (translated by J. Moore). London: Verso.
- Loftus, A., March, H. & Purcell, T.F. (2019). The political economy of water infrastructure: An introduction to financialization. *Wiley Interdisciplinary Reviews: Water* 6(1): 1-12.
- Lopez, B. (1999). Arctic dreams: Imagination and desire in a northern landscape. Random House
- Mabey, R. (1973). The unofficial countryside. Collins.
- Mariani, M. & Barron P. (2013). *Terrain vague: interstices at the edge of the pale*. Routledge.
- Massey, D. (2004). Geographies of responsibility. *Geografiska Annaler: Series B, Human Geography 86*(1), 5-18.
- Millington, N. (2015). From urban scar to 'park in the sky': terrain vague, urban design, and the remaking of New York City's High Line Park. *Environment and Planning A 47* (11), 2324-2338.
- Molinaroli, S. & Guerzoni, D.S. (2018). How Venice and Miami are adapting to sea-level rise. *OCTO* paper. https://osf.io/preprints/marxiv/ba9sh/
- Moore, J.W. (2015). Capitalism in the web of life: ecology and the accumulation of capital. Verso Books.
- Morris, S. (2020, September 5). Stay connected to nature after lockdown National Trust urges. *The Guardian*. https://www. theguardian.com/uk-news/2020/sep/05/stay-connected-to-nature-after-lockdown-national-trust-urges
- Public Health England. (2020). *Improving access to greenspace: a new review for* 2020. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904439/Improving_access_to_greenspace_2020_review.pdf
- RAMSAR. (2020). World Wetlands Day. https://www.worldwetlandsday.org/

- Ridolfi, E. (2014). Exploring the urban hydrosocial cycle in tourist environment. *Investigaciones Geográficas 61*, 17–38.
- Roberts, M.S. and Farley, P. (2011). *Edgelands*. London: Random House.
- Robinson, S. (2018). Archipelagos of interstitial ground: a filmic investigation of the Thames Gateway's Edgelands.
- https://ualresearchonline.arts.ac.uk/id/eprint/13461/1/Simon%20Robinson%20PhD%20The sis%20Final%20Corrections%20January%202018.pdf
- Rojek, C. (2013). *Capitalism and leisure theory*. Routledge.
- Rova, S., Pranovi, F. and Müller, F. (2015). Provision of ecosystem services in the lagoon of Venice (Italy): an initial spatial assessment. *Ecohydrology & Hydrobiology* 15(1), 13-25.
- Saldanha, A. (2008). Heterotopia and structuralism. *Environment and Planning A* 40(9), 2080-2096.
- Shelley, P.B. (2000) *The complete poetry of Percy Bysshe Shelley*. (D.H. Reiman & N. Fraistat [Eds.]). The Johns Hopkins University Press.
- Soja, E. (1995). Heterotopologies: a remembrance of other spaces in the Citadel-LA. In S. Watson and K. Gibson, (Eds.) *Postmodern cities and spaces* (pp. 13-34). Blackwell.
- Solnit, R. (2006) A field guide to getting lost, London: Canongate Books.
- Stevens, J. and Adhya A. (2013). The interstitial challenge. In P. Barron and M. Mariani (Eds.) *In Terrain Vague: Interstices at the edge of the pale* (pp. 201-216). Routledge.
- Valler, D., Jonas, A.E. and Robinson, L. (2020). Evaluating regional spatial imaginaries: the Oxford–Cambridge Arc. *Territory, Politics, Governance*. https://www.tandfonline.com/doi/full/10.1080/21622671.2020.1851751
- Valuing Nature. (2018). Programme Research Goal. https://valuing-nature.net/sites/default/files/documents/PROJECT/World%20Wetlands%20Day%2 oActivities_website.pdf
- Venter, Z., Barton, D., Gundersen, V., et al. (2020). Urban nature in a time of crisis: recreational use of green space increases during the COVID-19 outbreak in Oslo, Norway. *Environmental Research Letters* 104075.
- Waller, J. (2019, August 13). Bomb disposal team called after "suspicious item" found in North Lincolnshire village. *Grimsby Telegraph*. https://www.grimsbytelegraph.co.uk/news/local-news/bomb-disposal-team-called-after-3204735
- West Lindsey District Council. (2018). Discover Gainsborough; discover our pilgrim roots. https://www.discovergainsborough.com/pilgrim-roots/
- WetlandLIFE. (2017). Taking the bite out of wetlands. wetlandlife.org