

Review

Towards a More-than-Human Approach to Smart and Sustainable Urban Development: Designing for Multispecies Justice

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Abstract: The term ‘sustainability’ has become an overused umbrella term that encompasses a range of climate actions and environmental infrastructure investments; however, there is still an urgent need for transformative reform work. Scholars of urban studies have made compelling cases for a more-than-human conceptualisation of urban and environmental planning and also share a common interest in translating theory into practical approaches and implications that recognise (i) our ecological entanglements with planetary systems and (ii) the urgent need for multispecies justice in the reconceptualisation of genuinely sustainable cities. More-than-human sensibility draws on a range of disciplines and encompasses conventional and non-conventional research methods and design approaches. In this article, we offer a horizon scan type of review of key posthuman and more-than-human literature sources at the intersection of urban studies and environmental humanities. The aim of this review is to (i) contribute to the emerging discourse that is starting to operationalise a more-than-human approach to smart and sustainable urban development, and; (ii) to articulate a nascent framework for more-than-human spatial planning policy and practice.

Keywords: urban planning; more-than-human; post-Anthropocene; environmental humanities; multispecies justice; sustainable cities; smart cities



Citation: Fieuw, W.; Foth, M.; Caldwell, G.A. Towards a More-than-Human Approach to Smart and Sustainable Urban Development: Designing for Multispecies Justice. *Sustainability* **2022**, *14*, 948. <https://doi.org/10.3390/su14020948>

Academic Editor: Nikos A. Salingaros

Received: 6 December 2021

Accepted: 10 January 2022

Published: 14 January 2022

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1. Introduction

Urban development processes are increasingly under the spotlight due to their potential for contributing to lowering the carbon footprints of cities, to achieving greater levels of sustainability, and to restoring sensitive ecologies and biodiversity hotspots. However, urban studies, in a similar way to many other social sciences, suffer from human exceptionalism in the ontological framing of these issues. So far, human concerns such as comfort and convenience usually take priority over ecological imperatives and the urgent need to avoid a planetary ecocide [1,2].

Scholars in environmental humanities as well as in urban design and planning are calling for a more-than-human approach to smart and sustainable urban development in order to grapple with how nonhuman agencies shape geographies and urban places. Other future directions for research include the role of planning in learning from Indigenous knowledge systems and cultures such as ‘Caring for Country’ [3–5]. These issues have been acknowledged as high priorities by the Planning Institute of Australia (PIA), and PIA’s Indigenous Planning Working Group continues to identify new planning approaches [6]. In this article, we respond to industrial, governmental, societal, and environmental needs by addressing an identified gap in knowledge within the urban development domain.

Here, we present a horizon scan [7–10] of recent investigations and studies offering a more-than-human perspective on urban planning. We elaborate upon these concepts in the main literature review section below. By way of an introduction, ‘more-than-human’ is considered to be an umbrella term that encompasses a diverse set of theories and practices

with origins in and interrelationships across diverse fields of study including critical geography, urban studies, ecofeminism, new materialism, science and technology studies (STS), and decolonial studies. Just as the term ‘nature-based solutions’ has become an umbrella term that encompasses a range of environmental infrastructure interventions in response to anthropogenic climate change, the term ‘more-than-human’ is considered to be an approach to account for nonhuman agencies [11,12], recognise humanity’s entanglements with ecosystems and the planet [13], work towards multispecies justice [14], and design for cohabitation [14–16]. Such new ways of conceptualising sustainable development—perhaps the most pressing global agenda in the wake of what Earth scientists call the ‘Holocene (or sixth mass) extinction’—are a pressing and urgent endeavour [17].

The focal lens we apply to this scholarship domain is spatial planning. Spatial planning is a critical component in sustainability strategies, because at the command of the spatial planner is a set of diverse procedural, regulatory, design, and implementation tools that are usually premised on and enacted by government policy frameworks [18–20]. The purpose of spatial planning is to balance human development and economic activities within ecological boundaries [21]. Spatial plans should have foresight based on credible evidence that includes population growth modelling [22], urban development pressures, ecologically vulnerable areas, and other landscape considerations such as regenerative design approaches to deal with the environmental legacy of exhausted quarry and abandoned mine sites [23]. These plans should be backed by normatively ‘good’ design principles contained within design and planning traditions of new urbanism, smart growth, sustainability, and ecological urbanism. Since spatial planning implicates the allocation of scarce resources, it is inherently a political activity by nature [19,20,24–26], and it also has the role of setting agendas for harmonious human–environment interactions. Plans and design guidance inform a range of urban and environmental planning instruments such as strategic environmental assessments, population growth and distribution, housing, ecological corridors, land use planning, and transport planning [22].

The significance of developing a more-than-human approach to smart and sustainable urban development in this article is derived from two domains, that is, more-than-human scholarship and spatial planning. While some human geography and urban theorists, for example, [13,27–29], have engaged with the possibilities of more-than-human cities, so far, there has been no concerted effort to strategically review the literature at this intersection with the aim of informing smart and sustainable urban development and spatial planning practices drawing on the domains of knowledge identified in more-than-human scholarship. By offering this horizon scan literature review, we endeavour to stimulate and extend debate and discourse about an emerging, yet still nascent, more-than-human spatial planning framework [30–32]. This article contributes to creating more nuanced understandings of sustainable and smart cities, which are stated objectives in the Sustainable Development Goals and the New Urban Agenda of the United Nations.

Our motivation in presenting this horizon scan is to start to articulate some of the possible implications of enacting and subscribing to a more-than-human sensibility in the practice of spatial planning. We draw attention to some of the key works emerging in the field as possibly trendsetting and game changing, and we start to organise their proposed ideas towards a nascent framework that can be utilised to design for multispecies justice [13–15,30]. Such a framework cannot be accommodated within the limited scope of this one review. As such, we can only offer a nascent research agenda, and accordingly, our aim is not and cannot be to attempt to present a fully formed framework. This would likely require a monograph-length treatment as well as many contributions from colleagues across different fields. Nonetheless, in this paper, we acknowledge that this movement is now underway, and our hope is that the findings of this review will recruit further supporters and contributors to this urgent task.

A more-than-human framework to smart and sustainable urban development can shape and inspire the practices of planners, geographers, and designers, who are working on a variety of spatial scales. These practitioners might be working in government agencies,

design firms, environmental peak organisations, community organisations, or could be interested members of the community. While there has been a recent spike in interest in design competitions, conference proceedings, and special research teams, we believe there is still a need for this academic scholarship to be made more accessible to practitioners.

Scholars have identified the ontological and epistemological roots of a more-than-human approach in the environmental humanities, social sciences, and design. Such studies tend to be grounded in constructivism and are influenced by theoretical orientations in critical geography and humanities such as decolonial theory, deep ecology, posthumanism, urban studies, and human geography. The guiding objective of this review is to start orientating spatial planning practice towards such more-than-human sensibilities. This strategic horizon scan of the literature identifies the ontological foundation, on which a more-than-human approach to spatial planning practice can be built. We suggest that this ontological foundation can offer fertile ground for timely and urgent research questions to be posed by the urban studies research community at large. These can include questions such as:

- How can a more-than-human perspective transform neighbourhoods into more ecological habitats?
- What are the essential components of a more-than-human approach to spatial planning?
- How does such an approach to spatial planning alter urban development?
- What are the outcomes and impact of a more-than-human spatial planning praxis?

While the limited scope of this review does not allow us to offer a book-length treatment of these questions that can offer a satisfactory scope for answering them, we also suggest that what is important is not so much the scope and scale of any one output but a strong commitment to engaging, on an ongoing basis, with these questions with a more-than-human sensibility. As such, we want to be modest in offering this review as one step on the way, whilst, at the same time, acknowledging the many other steps other colleagues have taken and their contributions. By jointly working towards informing this ontological framework, our objective is to contribute to proliferating more-than-human perspectives on spatial planning across disciplines. The transformational change agenda implicit in this work is to provide evidence of the potential, the merit, and the urgency for reforming smart and sustainable urban development processes in spatial planning praxis to create and design post-anthropocentric urban futures [1,33].

2. A Horizon Scan of More-than-Human Approaches to Smart and Sustainable Urban Development

This review is not a conventional systematic literature review that uses a replicable and rigid search algorithm to perform a meticulous appraisal of all primary sources on a given research question over a longer time period. The specific literature relating to more-than-human approaches to smart and sustainable urban development that we want to capture for this review is far too recent, fast paced, and interdisciplinary to be adequately captured by the rigid and limiting methodology of a systematic literature review. Instead, in this review, we conduct a specific type of literature review called a horizon scan [7–10] in order to identify research work and studies of relevance, with the aim of contributing to emerging debates in the fields of urban planning and development about trends, gaps, opportunities, and implications. For this review, horizon scanning is a useful method, because it allows us to capture a diversity of recent research publications at an early stage of their development, and the resultant list of references offers a rich collection of publications for the reader to draw upon for follow-up reading and to form interdisciplinary connections, which, in itself, is a contribution of this study.

Our search method employs a broad horizon scan of relevant and recent papers. We used databases such as Web of Science, Scopus, ACM Digital Library, and Google Scholar. In addition to the urban studies literature, we also purposefully included papers from

other disciplines such as STS, sociology, cultural studies, human geography, environmental humanities, and policy. This enabled us to establish a transdisciplinary perspective.

We position this horizon scan at the intersection of spatial planning and more-than-human theory. After providing contextual background to cities in the age of the Capitalocene (Section 2.1) and the responding emergence of sustainable smart cities (Section 2.2), the origins of the more-than-human sensibility is reviewed as considered in the social sciences and environmental humanities (Section 2.3). The purpose, here, is to provide definitional clarity and differentiation from other perspectives on human–environment interactions. In the final part of the review (Section 2.4), the convergence of domains of studies is presented in a structured form in order to sketch the beginnings of a nascent and emerging framework for more-than-human spatial planning and design that invites other readers to expand and contribute.

2.1. Cities in the Age of the Capitalocene

The impact of human activity on the environment is fundamentally changing ecological processes, and at the heart of this so-called ‘Capitalocene’ is the urbanisation of humanity [34–37]. Cities occupy between 2–3% of the global land coverage, which is set to triple by 2030 based on the current trajectory of low-density urban sprawl [38]. It is estimated that 1.8–2.4% of croplands will be converted to urban areas by 2030, resulting in widespread wildlife habitat loss, reduced biodiversity, and further food insecurity [39,40]. Cities are also the economic drivers of the world economy, accounting for 80% of the global GDP output with a commensurate environmental cost; cities consume over two-thirds of the world’s energy and account for more than 70% of the global CO₂ emissions [41].

Opportunities for improved living conditions are found in urban environments, and thereby, become strong ‘pull factors’ driving the ‘second wave of urbanisation’ in Asia and Africa at a scale unprecedented since the industrial revolution [42]. The so-called secondary cities of less than 500,000 inhabitants are the fastest growing, and they account for 75% of urban dwellers. The UN [43] has estimated that, by 2050, approximately two-third of the global population (i.e., 6.68 of 9.77 billion people) will live in cities. Ninety per cent of urban land cover is near coastlines, raising concerns about resilience to flooding caused by rising sea levels and other impacts of climate change [44].

Environmental activism in the wake of the threat of Holocene extinction (or the sixth mass extinction) has placed the rights of nature on the global agenda [45–49]. Some countries have already enacted rights of nature, including Ecuador’s 2008 constitutional reforms and Bolivia’s 2010 ‘Rights of Mother Earth’ act. In India, the Ganga and Yamuna Rivers have been recognised with legal personhood [50], and in New Zealand, ecosystems such as the Whanganui River and the Urewera Forest have been granted legal rights [46]. Environmental advocacy and community activism groups such as the Australian Earth Laws Alliance (AELA) are lobbying national governments to follow suit [47]. The rights of nature agenda implicitly invoke the wisdom and cultural heritage of Indigenous populations past, present, and future, which provides cues to rethinking of spatial planning as ecological stewardship [48,51,52] grounded in an ethos of ‘Caring for Country’ [4,5,28,53–55].

Fighting for quality natural environments in cities ought not to be just an agenda of environmentalists. Studies have proven that healthy ecologies make people happier, healthier, more inquisitive, and more productive [56–60]. Local communities tend to experience a greater sense of local custodianship when urban green and blue belts are protected, healthy, and intact. They are also more likely to participate economically and co-produce outcomes such as ecotourism opportunities [59,61]. Conservationists and planners also have a responsibility to retain social access to these environments, since the phenomena of ‘green gentrification’ and elitist enclaves further entrench existing inequalities and access restrictions [59,62–66].

2.2. Sustainable Smart Cities

The imperative to grow cities of the future more sustainably is a global policy agenda, and the dedicated UN Sustainable Development Goal (SDG) 11 seeks to “make cities and human settlements more inclusive, safe, resilient, and sustainable.” The United Nations’ member states enacted the New Urban Agenda (NUA) in 2016, which requires national governments to work with regional and local governments to formulate urban plans in accordance with the International Guidelines on Urban and Territorial Planning [67]. These guidelines seek to standardise city growth processes and establish normatively ‘good’ practices. Urban and environmental planning instruments are, therefore, in the spotlight for their potential to contribute to greater levels of biodiversity conservation, protection of waterways, and reduction in climate change risks within and beyond the urban footprint.

The investment case for sustainable cities and its associated infrastructure and human settlements have also recently been assessed. A new report by the Coalition for Urban Transitions, titled ‘Climate Emergency, Urban Opportunity’ [68] is one of the most comprehensive assessments on the investment case for sustainable cities. The findings of the report, representing the views of 50 leading organisations (such as the C40 Cities Climate Leadership Group and the World Resources Institute), show that 90% of carbon emissions from cities can be cut by using existing technologies. This would require an investment of 2% of the global GDP (or 1.8 trillion USD) per annum. An expected return of 23.9 trillion USD by 2050 could be achieved and support the creation of 87 million jobs by 2030 in sectors such as waste, energy, and transport.

The transition towards sustainable cities is being enabled by the rapid evolution of ‘smart city’ technologies such as the Internet of Things (IoT), ecological infrastructure, and alternative energy [69–72]. There is a temptation to think that technology is a panacea for solving wicked problems, and scholars have critiqued the ontological roots of the smart city movement from critical science and technology studies (STS) and broader humanities, arts and social sciences (HASS) disciplines [1,73–78].

Green building rating tools (GBRT) are influential in shifting the urban development industry towards more sustainable outcomes [79,80], and could potentially incorporate calls for net-positive outcomes [81] and more-than-human design [31].

2.3. Encountering the More-than-Human City

Despite the global recognition of a need for sustainable cities, the perpetuation of the unsustainable status quo of the built environment necessitates bold and brave new responses to urban and environmental planning [82]. Drawing on empirical urban ecology research (e.g., street cats of Singapore and fruit bat colonies in Sydney), Franklin [27] argued for a more-than-human perspective to urban studies underpinned by theoretical constructs of ‘becoming/worlding cities’ and ‘urban ecology’ that went beyond previous approaches to design and planning such as biophilic design [83–85] and carbon-positive design [86]. Metzger [87] shared an optimism for a new focus in urban studies, but critically asked, “Are there any signals indicating that planning methodology is moving in such a direction? Not many would be my short answer” (p. 1005).

Studies in more-than-human, post-humanist, and post-anthropocentric perspectives have emerged from critical human geography and deep ecology, and have provided compelling examples of how a ‘more-than-human turn’ in social science and design research has been starting to grapple with the agencies of nonhuman actors [11,30,88–91]. When nonhuman agencies are better understood, complex problems such as conflict resolution in the law-space nexus of land management can be better managed, as illustrated, for example, in the research by Brown et al. [92] on wildlife corridors. Yigitcanlar et al. [1] proposed that designing post-anthropocentric cities of the future required a deeper engagement with the possibilities of ecological human settlement. This, in turn, requires increased attention to the temporalities, the wisdom of alternative knowledge systems (e.g., decolonising design and learning from Indigenous knowledge), and more sensitive design pedagogy [3,4,40,93–95].

The need to incorporate urban ecology concerns with the sustainable cities and smart cities movement is imperative to avoid a planetary ecocide [1] and transcend human exceptionalism [93]. Furthermore, cities are the next frontier in biodiversity conservation [96]. In Australia, cities support 30% of the threatened plant and animal species, which is the highest proportion of land use on a unit-area basis [97]. Scholars are calling for novel approaches to the scientific premise of a more-than-human city [27]. Biodiversity sensitive urban design (BDUD) considers intricate ways in which human and nonhuman lives are entangled in urban spaces [82,98]. In landscape theory, provocations for animal-aided design (AAD) seek ways in which conservation can be incorporated into the master plans of new urban development [99]. Incorporating more-than-human design and planning through new practices such as BDUD and ADD could contribute to the rewilding and realisation of more-than-human cities [100], but obstacles remain such as citizen's willingness to coexist with animals and wildlife conflicts [11,101–104].

Urban studies have suffered from human exceptionalism for too long [100,105]. The challenge for urban theorists is to formulate responses to this perceived 'turn' in social sciences emanating from human geography, ecofeminism, and critical STS, highly influenced by the more-than-human geography of Bruno Latour, Sarah Whatmore, and Donna Haraway [100,106–109].

2.4. Towards a More-than-Human Approach to Smart and Sustainable Urban Development

Houston et al. [13] argued that the recasting of urban development processes from the more-than-human perspective could result in innovations such as more responsive and improved climate-adaptive planning tools and narratives for diverse forms of future city growth. The authors concluded by arguing that, "planning theory requires a thicker, relational and more responsive form of post-humanism to imagine and enact just and sustainable cities in a time of global environmental uncertainty and change" (p. 203). This was further corroborated by Roös [110] who argued for the merits of employing a design pattern language approach to embed biophilia in planning practice. This design pattern language, see also [111–113], provides a foundation to better recognise human–nature interactions and inform a new theory for the sustainable development and planning of human settlements and cities, which is also supported by Liaros [40,94,95].

Our horizon scan has identified a need for scholars of urban studies to investigate the possibilities of a spatial planning regime that considers more-than-human perspectives. The approaching planetary ecocide urges us to recast spatial planning across the built environment and environmental professional competencies from a more-than-human perspective. Spatial planning is a vital task in guiding sustainable development outcomes with its associated technologies and design instruments [28,32,114]. Urban planning intends to create a rational and transparent 'development envelope' at the local scale to guide the activities of public and private interests [115,116].

Adams and Tiesdell [117] understood the purpose of local plans and associated development processes under four broad categories:

- Market shaping involves interventions to create a vision, sets development parameters, and integrates disparate investments to avoid the fragmentation of the urban fabric.
- Regulatory instruments are legislative checks and balances to compel, manage, and prevent urban development outcomes.
- Stimulus packages are utilised to kick-start desired outcomes.
- Finally, building capacity requires a shift from regulation and planning towards proactive coordination and leadership of development that contributes to improved placemaking.

Cities require more compelling visions of environmental harmony in which human activities can be seen as contributing to the restoration of sensitive ecologies, the net reduction of carbon emissions, and an overall push towards what Birkeland called net-positive design and development [81]. These city visions are required to be translated into refined strategies and methods at the neighbourhood and/or district level. The

neighbourhood unit is deemed to be an appropriate scale where urban sustainability can be proactively planned for in terms of public services, networked infrastructures, and greater community participation [80,118,119]. A new generation of Neighbourhood Sustainability Assessment (NSA) tools have the potential to better measure the sustainability of urban systems [120], and these assessments of built environment sustainability performance could benefit greatly from a more-than-human perspective on integrative planning and development [31]. By combining these recent thrusts in urban studies, a framework can be developed to articulate a more-than-human spatial planning praxis. Such a framework requires a taxonomy of concepts and emerging practices, similar to the way that the *Feral Atlas* [121], for example, has documented the diversity of shared encounters and entanglements between humans and nonhumans in the form of a digital encyclopaedia grounded in 79 ethnographic field reports “on diverse topics as ‘radioactive blueberries’ and the spread of coffee rust, all accompanied by drawings, music, and films.” [122]. Applying and expanding the framework, translating it into practice, evaluating its impact, and on that basis, refining its methods may start to address the knowledge gap of how to overcome human exceptionalism in urban studies [123].

3. Conclusions

In this horizon scan, we have demonstrated how subscribing to a more-than-human sensibility recognises the intricate ways in which human and nonhuman existences are entangled in urban space. This sensibility is premised on the notions of ‘becoming’/‘worlding’ [13,103,124], which are established concepts within process philosophy. Furthermore, the process of becoming lends itself to novel approaches to design and planning practices that can bring about the transformational reform work needed to bring about genuine urban sustainability [125].

While the scope of this review is sadly not sufficient to present a fully formed framework, Figure 1 shows a nascent sketch of the emerging agenda towards a more-than-human approach to smart and sustainable urban development based on the review conducted above. The core component of this framework that now requires further collaborative work is the spatial planning body of knowledge and practices and the associated toolkit. We suggest that this joint effort could be unpacked and broken down further into three types of inquiries, each of which has already received some attention from both researchers and practitioners as follows: (1) more-than-human engagement [75,93], (2) more-than-human spatial planning practice [28,32], and (3) more-than-human governance and policy [126,127].

This succinct yet cogent horizon scan across the urban studies domain has reviewed emerging scholarships from diverse disciplines including critical feminism, geography, and STS, which question human exceptionalism. Scholars are calling for research agendas to consider novel approaches to the discipline of spatial planning from a more-than-human perspective [32,128].

How should spatial planners and urban designers respond to provocations that cities are to become more-than-human? In addition, how are such provocations different, or similar, to pressing agendas such as calls to rewild cities [100,106,129,130] and invest in nature-based solutions to counteract anthropogenic climate change?

To address this gap in knowledge identified by this review, further work is urgently needed to develop taxonomies of theoretical constructs and case studies of emerging practices to indicate what such a more-than-human spatial planning framework to guide smart and sustainable urban development and support multispecies justice could entail and how it could be adopted by industry and government. Enacting a more-than-human spatial planning framework would expedite and even leapfrog our transition towards not only more nuanced understandings but actual implementations and deployments of sustainable and smart cities, which are stated objectives in the Sustainable Development Goals and the New Urban Agenda of the United Nations.

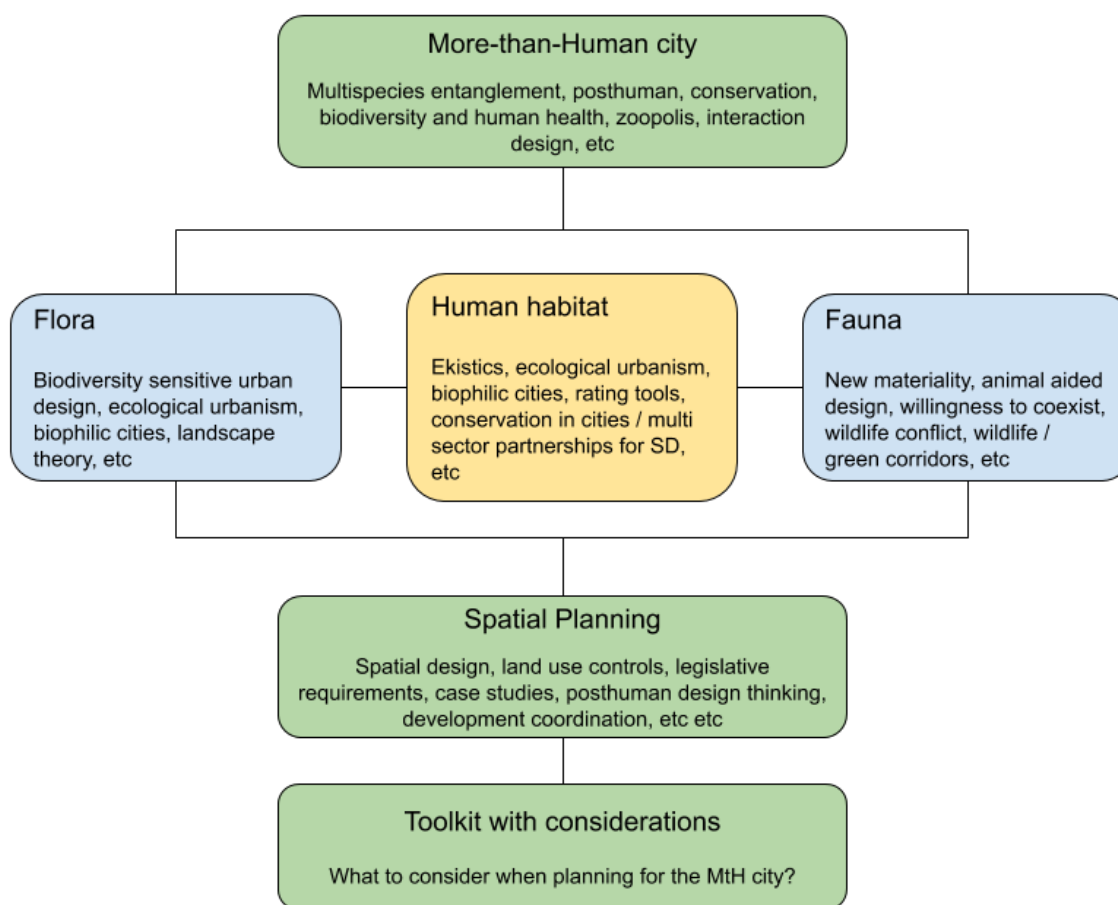


Figure 1. A nascent sketch of the emerging framework towards a more-than-human approach to smart and sustainable urban development.

Author Contributions: Conceptualization, W.F., M.F. and G.A.C.; formal analysis, W.F., M.F. and G.A.C.; funding acquisition, M.F.; investigation, W.F.; methodology, W.F.; project administration, W.F.; resources, M.F.; supervision, M.F. and G.A.C.; writing—original draft, W.F.; writing—review and editing, M.F. and G.A.C. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Acknowledgments: We dedicate this article to our colleague, collaborator, and friend Walter Fieuw who sadly passed away in January 2021. Walter was a brilliant mind and a passionate advocate for genuinely sustainable cities and designing for multispecies justice. We are grateful for Walter’s thought leadership, initiative, and research work. This article represents an edited version of Walter’s writings for his PhD studies at QUT just before his passing.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Yigitcanlar, T.; Foth, M. Kamruzzaman Towards Post-Anthropocentric Cities: Reconceptualizing Smart Cities to Evade Urban Ecocide. *J. Urban Technol.* **2019**, *26*, 147–152. [\[CrossRef\]](#)
2. Light, A.; Powell, A.; Shklovski, I. Design for Existential Crisis in the Anthropocene Age. In Proceedings of the 8th International Conference on Communities and Technologies, Troyes, France, 26–30 June 2017; Association for Computing Machinery: New York, NY, USA, 2017; pp. 270–279.
3. Page, A.; Memmott, P. *Design: Building on Country*; Thames & Hudson: London, UK, 2021; ISBN 9781760761400.

4. Yunkaporta, T. *Sand Talk: How Indigenous Thinking Can Save the World*; Text Publishing: Melbourne, Australia, 2019; ISBN 9781925773996.
5. Latulippe, N.; Klenk, N. Making Room and Moving over: Knowledge Co-Production, Indigenous Knowledge Sovereignty and the Politics of Global Environmental Change Decision-Making. *Curr. Opin. Environ. Sustain.* **2020**, *42*, 7–14. [\[CrossRef\]](#)
6. Planning Institute of Australia. Improving Planners' Understanding of Aboriginal and Torres Strait Islander Australians and Recommendations for Reforming Planning Education Curricula for PIA Accreditation: A Discussion Paper. Indigenous Planning Working Group, Planning Institute of Australia: Kingston, ACT, Australia, 2010.
7. Hines, P.; Yu, L.H.; Guy, R.H.; Brand, A.; Papaluca-Amati, M. Scanning the Horizon: A Systematic Literature Review of Methodologies. *BMJ Open* **2019**, *9*, e026764. [\[CrossRef\]](#) [\[PubMed\]](#)
8. Foth, M.; Caldwell, G.A.; Fredericks, J. A COVID-19 Horizon Scan Looking for Post-Pandemic Implications for Design. In Proceedings of the Cumulus Roma 2021—Design Culture(s), Rome, Italy, 8–11 June 2021; Cumulus, International Association of Universities and Colleges of Art, Design and Media: Espoo, Finland, 2021. Available online: <https://eprints.qut.edu.au/209728/> (accessed on 5 December 2021).
9. Schultz, W.L. The Cultural Contradictions of Managing Change: Using Horizon Scanning in an Evidence-based Policy Context. *Foresight* **2006**, *8*, 3–12. [\[CrossRef\]](#)
10. Könölä, T.; Salo, A.; Cagnin, C.; Carabias, V.; Vilkkumaa, E. Facing the Future: Scanning, Synthesizing and Sense-Making in Horizon Scanning. *Sci. Public Policy* **2012**, *39*, 222–231. [\[CrossRef\]](#)
11. Tomitsch, M.; Fredericks, J.; Vo, D.; Frawley, J.; Foth, M. Non-Human Personas: Including Nature in the Participatory Design of Smart Cities. *Interact. Des. Archit.* **2021**, *50*, 102–130. Available online: <https://eprints.qut.edu.au/227146/> (accessed on 5 December 2021).
12. DiSalvo, C.; Lukens, J. Nonanthropocentrism and the nonhuman in design: Possibilities for designing new forms of engagement with and through technology. In *From Social Butterfly to Engaged Citizen*; Foth, M., Forlano, L., Satchell, C., Gibbs, M., Eds.; The MIT Press: Cambridge, MA, USA, 2011; pp. 421–436. ISBN 9780262298445. [\[CrossRef\]](#)
13. Houston, D.; Hillier, J.; MacCallum, D.; Steele, W.; Byrne, J. Make Kin, Not Cities! Multispecies Entanglements and “becoming-World” in Planning Theory. *Plan. Theory* **2018**, *17*, 190–212. [\[CrossRef\]](#)
14. Celermajer, D.; Schlosberg, D.; Rickards, L.; Stewart-Harawira, M.; Thaler, M.; Tschakert, P.; Verlie, B.; Winter, C. Multispecies Justice: Theories, Challenges, and a Research Agenda for Environmental Politics. *Environ. Politics* **2021**, *30*, 119–140. [\[CrossRef\]](#)
15. Liu, S.-Y. Designing for Multispecies Collaboration and Cohabitation. In *Conference Companion Publication of the 2019 on Computer Supported Cooperative Work and Social Computing—CSCW '19*, Austin, TX, USA, 9–13 November 2019; ACM: New York, NY, USA, 2019; pp. 72–75.
16. Foth, M. The next Urban Paradigm: Cohabitation in the Smart City. *IT-Inf. Technol.* **2017**, *59*, 259–262. [\[CrossRef\]](#)
17. Ripple, W.J.; Wolf, C.; Newsome, T.M.; Galetti, M.; Alamgir, M.; Crist, E.; Mahmoud, M.I.; Laurance, W.F. World Scientists' Warning to Humanity: A Second Notice. *Bioscience* **2017**, *67*, 1026–1028. [\[CrossRef\]](#)
18. Yigitcanlar, T. Smart City Beyond Efficiency: Technology–Policy–Community at Play for Sustainable Urban Futures. *Hous. Policy Debate* **2021**, *31*, 88–92. [\[CrossRef\]](#)
19. Monno, V.; Khakee, A. Tokenism or Political Activism? Some Reflections on Participatory Planning. *Int. Plan. Stud.* **2012**, *17*, 85–101. [\[CrossRef\]](#)
20. Kamols, N.; Foth, M.; Guaralda, M. Beyond Engagement Theatre: Challenging Institutional Constraints of Participatory Planning Practice. *Aust. Plan.* **2021**, *57*, 23–35. [\[CrossRef\]](#)
21. Raworth, K. *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist*; Chelsea Green Publishing: Chelsea, VT, USA, 2017; ISBN 9781603586740.
22. Guaralda, M.; Hearn, G.; Foth, M.; Yigitcanlar, T.; Mayere, S.; Law, L. Towards Australian Regional Turnaround: Insights into Sustainably Accommodating Post-Pandemic Urban Growth in Regional Towns and Cities. *Sustain. Sci. Pract. Policy* **2020**, *12*, 10492. [\[CrossRef\]](#)
23. Roös, P.B. (Ed.) *Heal the Scar: Regenerative Futures of Damaged Landscapes*; Deakin University: Melbourne, Australia, 2020; ISBN 9780730001607.
24. Burton, P. Is Urban Planning in Australia Hindered by Poor Metropolitan Governance? *Urban Sci.* **2017**, *1*, 34. [\[CrossRef\]](#)
25. Foth, M.; Tomitsch, M.; Satchell, C.; Haeusler, M.H. From Users to Citizens: Some Thoughts on Designing for Polity and Civics. In Proceedings of the Annual Meeting of the Australian Special Interest Group for Computer Human Interaction, Brisbane, Australia, 28 November–1 December 2017; ACM: New York, NY, USA, 2015; pp. 623–633. [\[CrossRef\]](#)
26. Murray, C.K.; Frijters, P. *Game of Mates: How Favours Bleed the Nation*; Publicious: Gold Coast, QLD, Australia, 2017; ISBN 9780648061106.
27. Franklin, A. The More-than-Human City. *Sociol. Rev.* **2017**, *65*, 202–217. [\[CrossRef\]](#)
28. Metzger, J. A more-than-human approach to environmental planning. In *The Routledge Companion to Environmental Planning*; Taylor and Francis: Abingdon, UK, 2019; pp. 190–199. ISBN 9781351717403.
29. Metzger, J. Cultivating Torment: The Cosmopolitics of More-than-Human Urban Planning. *Cityscape* **2016**, *20*, 581–601. [\[CrossRef\]](#)
30. Shingne, M.C. The More-than-Human Right to the City: A Multispecies Reevaluation. *J. Urban Aff.* **2020**, 1–19. [\[CrossRef\]](#)
31. Loh, S.; Foth, M.; Caldwell, G.A.; Garcia-Hansen, V.; Thomson, M. A More-than-Human Perspective on Understanding the Performance of the Built Environment. *Archit. Sci. Rev.* **2020**, *63*, 372–383. [\[CrossRef\]](#)

32. Metzger, J.; Lindblad, J. *Dilemmas of Sustainable Urban Development: A View from Practice*; Metzger, J., Lindblad, J., Eds.; Taylor & Francis Group: Abingdon, UK, 2020; ISBN 9780429294457.
33. Wakkary, R. *Things We Could Design for More than Human Centred Worlds*; MIT Press: Cambridge, MA, USA, 2021.
34. Swilling, M. *The Age of Sustainability: Just Transitions in a Complex World*; Routledge: London, UK, 2019; ISBN 9780429603723.
35. Moore, J.W. The Capitalocene, Part I: On the Nature and Origins of Our Ecological Crisis. *J. Peasant Stud.* **2017**, *44*, 594–630. [CrossRef]
36. Bedford, L.; Mann, M.; Walters, R.; Foth, M. A Post-Capitalocentric Critique of Digital Technology and Environmental Harm: New Directions at the Intersection of Digital and Green Criminology. *Int. J. Crime Justice Soc. Democr.* **2021**, in press. Available online: <https://eprints.qut.edu.au/213773/> (accessed on 5 December 2021).
37. Foth, M.; Mann, M.; Bedford, L.; Fieuw, W.; Walters, R. A capitalocentric review of technology for sustainable development: The case for more-than-human design. In *Global Information Society Watch 2020: Technology, the Environment and a Sustainable World—Responses from the Global SOUTH*; Global Information Society Watch (GISWatch), Finlay, A., Eds.; Association for Progressive Communications (APC): Melville, South Africa, 2021; pp. 78–82. Available online: <https://eprints.qut.edu.au/203186/> (accessed on 5 December 2021) ISBN 9789295113404.
38. Seto, K.C.; Fragkias, M.; Güneralp, B.; Reilly, M.K. A Meta-Analysis of Global Urban Land Expansion. *PLoS ONE* **2011**, *6*, e23777. [CrossRef] [PubMed]
39. d’Amour, C.B.; Reitsma, F.; Baiocchi, G.; Barthel, S.; Güneralp, B.; Erb, K.-H.; Haberl, H.; Creutzig, F.; Seto, K.C. Future Urban Land Expansion and Implications for Global Croplands. *Proc. Natl. Acad. Sci. USA* **2017**, *114*, 8939–8944. [CrossRef] [PubMed]
40. Liaros, S. Circular Food Futures: What Will They Look Like? *Circ. Econ. Sustain.* **2021**, *1*, 1193–1206. [CrossRef]
41. Schindler, S.; Mitlin, D.; Marvin, S. National Urban Policy Making and Its Potential for Sustainable Urbanism. *Curr. Opin. Environ. Sustain.* **2018**, *34*, 48–53. [CrossRef]
42. UN Habitat. *Planning Sustainable Cities: Global Report on Human Settlements 2009*. Available online: <https://unhabitat.org/planning-sustainable-cities-global-report-on-human-settlements-2009> (accessed on 5 December 2021).
43. UN. *World Urbanization Prospects: The 2018 Revision*; United Nations, Department of Economic and Social Affairs, Population Division: New York, NY, USA, 2019.
44. Revi, A.; Satterthwaite, D.E.; Aragón-Durand, F.; Kiunsi, R.B.R.; Pelling, M.; Roberts, D.C.; Solecki, W.; Balbus, J.M.; Cardona, O.-D. Urban areas. In *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the IPCC*; IPCC: Geneva, Switzerland, 2014; pp. 535–612.
45. Boyd, D.R. *The Rights of Nature: A Legal Revolution That Could Save the World*; ECW Press: Toronto, ON, Canada, 2017; ISBN 9781770412392.
46. La Follette, C.; Maser, C. *Sustainability and the Rights of Nature in Practice*; CRC Press: Boca Raton, FL, USA, 2019; ISBN 9780429000393.
47. Graham, M.; Maloney, M. Caring for Country and Rights of Nature in Australia: A Conversation between Earth Jurisprudence and Aboriginal Law and Ethics. In *Sustainability and the Rights of Nature in Practice*; La Follette, C., Maser, C., Eds.; Routledge: London, UK, 2019.
48. Harden-Davies, H.; Humphries, F.; Maloney, M.; Wright, G.; Gjerde, K.; Vierros, M. Rights of Nature: Perspectives for Global Ocean Stewardship. *Mar. Policy* **2020**, *122*, 104059. [CrossRef]
49. Rühls, N.; Jones, A. The Implementation of Earth Jurisprudence through Substantive Constitutional Rights of Nature. *Sustain. Sci. Pract. Policy* **2016**, *8*, 174. [CrossRef]
50. O’Donnell, E.; Talbot-Jones, J. *Three Rivers Are Now Legally People—But That’s Just the Start of Looking after Them*; The Conversation: Melbourne, Australia, 2017.
51. Buijs, A.; Fischer, A.; Muhar, A. From Urban Gardening to Planetary Stewardship: Human–nature Relationships and Their Implications for Environmental Management. *J. Environ. Plan. Manag.* **2018**, *61*, 747–755. [CrossRef]
52. Enqvist, J.P.; West, S.; Masterson, V.A.; Haider, L.J.; Svedin, U.; Tengö, M. Stewardship as a Boundary Object for Sustainability Research: Linking Care, Knowledge and Agency. *Landsc. Urban Plan.* **2018**, *179*, 17–37. [CrossRef]
53. Head, L. *Hope and Grief in the Anthropocene: Re-Conceptualising Human-Nature Relations*; Taylor and Francis Inc.: Abingdon, UK, 2016; ISBN 9781317576433.
54. Larsen, S.C.; Johnson, J.T. The Agency of Place: Toward a More-Than-Human Geographical Self. *GeoHumanities* **2016**, *2*, 149–166. [CrossRef]
55. Vásquez-Fernández, A.M.; Ahenakew, C. Resurgence of Relationality: Reflections on Decolonizing and Indigenizing “Sustainable Development”. *Curr. Opin. Environ. Sustain.* **2020**, *43*, 65–70. [CrossRef]
56. WHO. *Urban Green Spaces and Health: A Review of Evidence*; Egorov, A.I., Mudu, P., Braubach, M., Martuzzi, M., Eds.; WHO Regional Office for Europe: Geneva, Switzerland, 2016.
57. Elmqvist, T.; Setälä, H.; Handel, S.N.; van der Ploeg, S.; Aronson, J.; Blignaut, J.N.; Gómez-Baggethun, E.; Nowak, D.J.; Kronenberg, J.; de Groot, R. Benefits of Restoring Ecosystem Services in Urban Areas. *Curr. Opin. Environ. Sustain.* **2015**, *14*, 101–108. [CrossRef]
58. Maller, C. *Healthy Urban Environments: More-Than-Human Theories*; Routledge: London, UK, 2018; ISBN 9781317217237.
59. Wolch, J.R.; Byrne, J.; Newell, J.P. Urban Green Space, Public Health, and Environmental Justice: The Challenge of Making Cities “Just Green Enough”. *Landsc. Urban Plan.* **2014**, *125*, 234–244. [CrossRef]

60. Corburn, J. *Toward the Healthy City: People, Places, and the Politics of Urban Planning (Urban and Industrial Environments)*; MIT Press: Cambridge, MA, USA, 2009; ISBN 9780262013314.
61. Roseland, M.; Spiliotopoulou, M. Converging Urban Agendas: Toward Healthy and Sustainable Communities. *Soc. Sci.* **2016**, *5*, 28. [CrossRef]
62. Gould, K.A.; Lewis, T.L. *Green Gentrification: Urban Sustainability and the Struggle for Environmental Justice*; Routledge: London, UK, 2016; ISBN 9781315687322.
63. Hodson, M.; Marvin, S. Urbanism in the Anthropocene: Ecological Urbanism or Premium Ecological Enclaves? *Cityscape* **2010**, *14*, 298–313. [CrossRef]
64. Campbell-Arva, V.; Lindquist, M. From the Ground up: Using Structured Community Engagement to Identify Objectives for Urban Green Infrastructure Planning. *Urban For. Urban Green.* **2021**, *59*, 127013. [CrossRef]
65. Anguelovski, I.; Connolly, J.J.T.; Garcia-Lamarca, M.; Cole, H.; Pearsall, H. New Scholarly Pathways on Green Gentrification: What Does the Urban “Green Turn” Mean and Where Is It Going? *Prog. Hum. Geogr.* **2019**, *43*, 1064–1086. [CrossRef]
66. Immergluck, D.; Balan, T. Sustainable for Whom? Green Urban Development, Environmental Gentrification, and the Atlanta Beltline. *Urban Geogr.* **2018**, *39*, 546–562. [CrossRef]
67. UN Habitat. International Guidelines on Urban and Territorial Planning. 2015. Available online: <https://unhabitat.org/international-guidelines-on-urban-and-territorial-planning> (accessed on 5 December 2021).
68. Colenbrander, S.; Lazer, L.; Haddaoui, C.; Godfrey, N.; Lobo, A.; Clarkson, H.; Huxley, R.; Parnell, S.; Smith, B.; Smith, S.; et al. *Climate Emergency, Urban Opportunity*; Coalition for Urban Transitions: Washington, DC, USA, 2019; Volume 160.
69. Bouzguenda, I.; Alalouch, C.; Fava, N. Towards Smart Sustainable Cities: A Review of the Role Digital Citizen Participation Could Play in Advancing Social Sustainability. *Sustain. Cities Soc.* **2019**, *50*, 101627. [CrossRef]
70. Heitlinger, S.; Bryan-Kinns, N.; Comber, R. *The Right to the Sustainable Smart City*; Association for Computing Machinery: New York, NY, USA, 2019; ISBN 9781450359702.
71. Yigitcanlar, T.K.; Foth, M.; Sabatini-Marques, J.; da Costa, E.; Ioppolo, G. Can Cities Become Smart without Being Sustainable? A Systematic Review of the Literature. *Sustain. Cities Soc.* **2019**, *45*, 348–365. [CrossRef]
72. Paulos, E.; Foth, M.; Satchell, C.; Kim, Y.; Dourish, P.; Choi, J.H.-J. *Ubiquitous Sustainability: Citizen Science and Activism*; Association for Computing Machinery Press: New York, NY, USA, 2008; Available online: <https://eprints.qut.edu.au/14130/> (accessed on 5 December 2021).
73. Kitchin, R. Making Sense of Smart Cities: Addressing Present Shortcomings. *Camb. J. Reg. Econ. Soc.* **2014**, *8*, 131–136. [CrossRef]
74. Foth, M. Participatory Urban Informatics: Towards Citizen-Ability. *Smart Sustain. Built Environ.* **2018**, *7*, 4–19. [CrossRef]
75. Caldwell, G.A.; Fredericks, J.; Hespanhol, L.; Chamorro-Koc, M.; Barajas, M.J.S.V.; André, M.J.C. Chapter 13—Putting the people back into the “smart”: Developing a middle-out framework for engaging citizens. In *Shaping Smart for Better Cities*; Aurigi, A., Odendaal, N., Eds.; Academic Press: Cambridge, MA, USA, 2021; pp. 239–266. ISBN 9780128186367.
76. Foth, M.; Hudson-Smith, A.; Gifford, D. Smart cities, social capital, and citizens at play: A critique and a way forward. In *Research Handbook on Digital Transformations (Research Handbooks in Business and Management)*; Zhegu, M., Olleros, F.X., Eds.; Edward Elgar Publishing: Cheltenham, UK, 2016; pp. 203–221. [CrossRef]
77. Roggema, R. (Ed.) *Designing Sustainable Cities*; Springer: Berlin/Heidelberg, Germany, 2020; ISBN 9783030546854.
78. Schraven, D.; Joss, S.; de Jong, M. Past, Present, Future: Engagement with Sustainable Urban Development through 35 City Labels in the Scientific Literature 1990–2019. *J. Clean. Prod.* **2021**, *292*, 125924. [CrossRef]
79. Blok, A. Worlding Cities through Their Climate Projects? Eco-Housing Assemblages, Cosmopolitics and Comparisons. *Cityscape* **2014**, *18*, 269–286.
80. Holden, M.; Li, C.; Molina, A. The Emergence and Spread of Ecurban Neighbourhoods around the World. *Sustain. Sci. Pract. Policy* **2015**, *7*, 11418–11437. [CrossRef]
81. Birkeland, J. *Net-Positive Design and Sustainable Urban Development*; Routledge: London, UK, 2020; ISBN 9780429290213.
82. Parris, K.M.; Amati, M.; Bekessy, S.A.; Dagenais, D.; Fryd, O.; Hahs, A.K.; Hes, D.; Imberger, S.J.; Livesley, S.J.; Marshall, A.J.; et al. The Seven Lamps of Planning for Biodiversity in the City. *Cities* **2018**, *83*, 44–53. [CrossRef]
83. Downton, P.; Jones, D.; Zeunert, J.; Roös, P. Biophilic Design Applications: Putting Theory and Patterns into Built Environment Practice. In *DesTech 2016: Proceedings of the International Conference on Design and Technology, Geelong, Australia, 5–8 December 2016*; Knowledge E: Dubai, United Arab Emirates, 2017; pp. 59–65. [CrossRef]
84. Gil, P.; Rossi, C.; Coral, W. Biophilic Evolutionary Buildings That Restore the Experience of Animality in the City. In *Proceedings of the Biomimetic and Biohybrid Systems, Barcelona, Spain, 28–31 July 2015*; Springer International Publishing: Berlin/Heidelberg, Germany, 2015; pp. 465–472.
85. Douglas, I.; Anderson, P.M.L.; Goode, D.; Maddox, D.; Houck, M.C.; Nagendra, H.; Tan, P.Y. *The Routledge Handbook of Urban Ecology*; Routledge: London, UK, 2020; ISBN 9781138581357.
86. Foth, M.; Kamols, N.; Turner, T.; Hearn, G.; Kovachevich, A. Brisbane 2032: The promise of the first carbon-positive Olympics for regenerative cities. In *Regenerative Design for Cities and Landscapes*; Roggema, R., Ed.; Springer: Berlin/Heidelberg, Germany, 2022; Available online: <https://eprints.qut.edu.au/226785/> (accessed on 5 December 2021).
87. Metzger, J. Spatial Planning And/as Caring for More-Than-Human Place. *Environ. Plan. A* **2014**, *46*, 1001–1011. [CrossRef]
88. Robertson, S.A. Rethinking Relational Ideas of Place in More-than-Human Cities. *Geogr. Compass* **2018**, *12*, e12367. [CrossRef]
89. Forlano, L. Posthumanism and Design. *J. Des. Econ. Innov.* **2017**, *3*, 16–29. [CrossRef]

90. Foth, M.; Caldwell, G. More-than-human media architecture. In Proceedings of the 4th Media Architecture Biennale Conference; Zhigang, C., Ed.; Association for Computing Machinery: New York, NY, USA, 2018; pp. 66–75. [\[CrossRef\]](#)
91. Luusua, A.; Ylipulli, J.; Rönkkö, E. Nonanthropocentric Design and Smart Cities in the Anthropocene. *IT-Inf. Technol.* **2017**, *59*, 299. [\[CrossRef\]](#)
92. Brown, K.M.; Flemsæter, F.; Rønningen, K. More-than-Human Geographies of Property: Moving towards Spatial Justice with Response-Ability. *Geoforum* **2019**, *99*, 54–62. [\[CrossRef\]](#)
93. Clarke, R.; Heitlinger, S.; Light, A.; Forlano, L.; Foth, M.; DiSalvo, C. More-than-Human Participation: Design for Sustainable Smart City Futures. *Interactions* **2019**, *26*, 60–63. [\[CrossRef\]](#)
94. Liaros, S. Implementing a New Human Settlement Theory: Strategic Planning for a Network of Regenerative Villages. *Smart Sustain. Built Environ.* **2019**, *9*, 258–271. [\[CrossRef\]](#)
95. Liaros, S. A Network of Circular Economy Villages: Design Guidelines for 21st Century Garden Cities. *Built Environ. Proj. Asset Manag.* **2021**. [\[CrossRef\]](#)
96. Soanes, K.; Lentini, P.E. When Cities Are the Last Chance for Saving Species. *Front. Ecol. Environ.* **2019**, *17*, 225–231. [\[CrossRef\]](#)
97. Ives, C.D.; Lentini, P.E.; Threlfall, C.G.; Ikin, K.; Shanahan, D.F.; Garrard, G.E.; Bekessy, S.A.; Fuller, R.A.; Mumaw, L.; Rayner, L.; et al. Cities Are Hotspots for Threatened Species: The Importance of Cities for Threatened Species. *Glob. Ecol. Biogeogr.* **2016**, *25*, 117–126. [\[CrossRef\]](#)
98. Garrard, G.E.; Williams, N.S.G.; Mata, L.; Thomas, J.; Bekessy, S.A. Biodiversity Sensitive Urban Design. *Conserv. Lett.* **2018**, *11*, e12411. [\[CrossRef\]](#)
99. Weisser, W.W.; Hauck, T.E. Animal-Aided Design: Using a Species' Life-Cycle to Improve Open Space Planning and Conservation in Cities and Elsewhere. *bioRxiv* **2017**, 150359. [\[CrossRef\]](#)
100. Steele, W.; Wiesel, I.; Maller, C. More-than-Human Cities: Where the Wild Things Are. *Geoforum* **2019**, *106*, 411–415. [\[CrossRef\]](#)
101. Rupprecht, C.D.D. Ready for More-than-Human? Measuring Urban Residents' Willingness to Coexist with Animals. *Fenn.-Int. J. Geogr.* **2017**, *195*, 142–160. [\[CrossRef\]](#)
102. Power, E.R. Border-Processes and Homemaking: Encounters with Possums in Suburban Australian Homes. *Cult. Geogr.* **2009**, *16*, 29–54. [\[CrossRef\]](#)
103. Westerlaken, M.; Gualeni, S. Becoming with: Towards the Inclusion of Animals as Participants in Design Processes. In Proceedings of the Third International Conference on Animal-Computer Interaction, Milton Keynes, UK, 15–17 November 2016; Association for Computing Machinery: New York, NY, USA, 2016; pp. 1–10.
104. Frawley, J.K.; Dyson, L.E. Animal Personas: Acknowledging Non-Human Stakeholders in Designing for Sustainable Food Systems. In Proceedings of the 26th Australian Computer-Human Interaction Conference on Designing Futures: The Future of Design, Sydney, Australia, 2–5 December 2014; Association for Computing Machinery: New York, NY, USA, 2014; pp. 21–30.
105. Nieto-Romero, M.; Valente, S.; Figueiredo, E.; Parra, C. Historical Commons as Sites of Transformation. A Critical Research Agenda to Study Human and More-than-Human Communities. *Geoforum* **2019**, *107*, 113–123. [\[CrossRef\]](#)
106. Hinchliffe, S.; Kearnes, M.B.; Degen, M.; Whatmore, S. Urban Wild Things: A Cosmopolitical Experiment. *Environ. Plan. D* **2005**, *23*, 643–658. [\[CrossRef\]](#)
107. Haraway, D.J. *Staying with the Trouble: Making Kin in the Chthulucene*; Duke University Press: Durham, NC, USA, 2016.
108. Haraway, D. Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin. *Environ. Humanit.* **2015**, *6*, 159–165. [\[CrossRef\]](#)
109. Latour, B. *Reassembling the Social: An Introduction to Actor-Network-Theory*; Clarendon Lectures in Management Studies; Oxford University Press: Oxford, UK, 2005; ISBN 9780199256044.
110. Roös, P.B. *Regenerative-Adaptive Design for Sustainable Development: A Pattern Language Approach*; Springer: Berlin/Heidelberg, Germany, 2020; ISBN 9783030532338.
111. Lyle, P.; Foth, M.; Choi, J. Design patterns for urban gardening. In *Citizen's Right to the Digital City: Urban Interfaces, Activism, and Placemaking*; Foth, M., Ojala, T., Brynskov, M., Eds.; Springer: Singapore, 2015; pp. 79–98. ISBN 9789812879172. [\[CrossRef\]](#)
112. Lyle, P.; Choi, J.; Foth, M. Designing to the Pattern: A Storytelling Prototype for Food Growers. *Multimodal Technol. Interact.* **2018**, *2*, 73. [\[CrossRef\]](#)
113. Schuler, D. *Liberating Voices: A Pattern Language for Communication Revolution*; MIT Press: Cambridge, MA, USA, 2008; ISBN 9780262195799.
114. Yigitcanlar, T.; Teriman, S. Rethinking Sustainable Urban Development: Towards an Integrated Planning and Development Process. *Int. J. Environ. Sci. Technol.* **2015**, *12*, 341–352. [\[CrossRef\]](#)
115. Hoch, C. *Pragmatic Spatial Planning: Practical Theory for Professionals*; Routledge: London, UK, 2019; ISBN 9780429021275.
116. Hopkins, L.D. *Urban Development: The Logic of Making Plans*; Island Press: Washington, DC, USA, 2001; ISBN 9781559638531.
117. Adams, D.; Tiesdell, S. *Shaping Places: Urban Planning, Design and Development*; Routledge: London, UK, 2012; ISBN 9781136254642.
118. Banfield, J. *Neighbourhood Planning: Place, Space and Politics*; Routledge: London, UK, 2019; ISBN 9780429534775.
119. Graham, S.; Marvin, S. *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition*; Psychology Press: Hove, UK, 2001; ISBN 9780415189651.
120. Jackson, S. A Summary of Urban Assessment Tools for Application in Australia. *Environ. Design Guide* **2016**, *84*, 1–18.
121. Tsing, A.L.; Deger, J.; Saxena, A.K.; Zhou, F. *Feral Atlas: The More-than-Human Anthropocene*; Stanford University Press: Palo Alto, CA, USA, 2020; ISBN 9781503615045.

122. Bonnett, A. Feral Atlas: The More-than-Human Anthropocene. *Soc. Cult. Geogr.* **2021**, *22*, 1326–1327. [[CrossRef](#)]
123. Forlano, L. Decentering the Human in the Design of Collaborative Cities. *Des. Issues* **2016**, *32*, 42–54. [[CrossRef](#)]
124. Abram, D. *Becoming Animal: An Earthly Cosmology*; Vintage Books: New York, NY, USA, 2011; ISBN 9780375713699.
125. Roggema, R.; Vermeend, T.; Van den Dobbelsteen, A. Incremental Change, Transition or Transformation? Optimising Change Pathways for Climate Adaptation in Spatial Planning. *Sustain. Sci. Pract. Policy* **2012**, *4*, 2525–2549. [[CrossRef](#)]
126. Sheikh, H.; Gonsalves, K.; Foth, M. Plant(e)ecture: Towards a Multispecies Media Architecture Framework for amplifying Plant Agencies. In *Media Architecture Biennale 20*; Association for Computing Machinery: New York, NY, USA, 2021; pp. 87–99. ISBN 9781450390484. [[CrossRef](#)]
127. Sheikh, H.; Foth, M.; Mitchell, P. (Re)imagining the ibis: Multispecies future(s), smart urban governance, and the digital environmental humanities. In *Routledge Digital Environmental Humanities Handbook*; Routledge: London, UK, 2022; Available online: <https://eprints.qut.edu.au/226108/> (accessed on 5 December 2021).
128. Wiesel, I.; Steele, W.; Houston, D. Cities of Care: Introduction to a Special Issue. *Cities* **2020**, *105*, 102844. [[CrossRef](#)]
129. Mills, J.G.; Bissett, A.; Gellie, N.J.C.; Lowe, A.J.; Selway, C.A.; Thomas, T.; Weinstein, P.; Weyrich, L.S.; Breed, M.F. Revegetation of Urban Green Space Rewilds Soil Microbiotas with Implications for Human Health and Urban Design. *Restor. Ecol.* **2020**, *31*, 3997. [[CrossRef](#)]
130. Deary, H.; Warren, C.R. Trajectories of Rewilding: A Taxonomy of Wildland Management. *J. Environ. Plan. Manag.* **2019**, *62*, 466–491. [[CrossRef](#)]