

*Entitlement, indeterminacy and professional discretion in urban planning: problematising a child's right to clean air for play in London*

Article

Published Version

Creative Commons: Attribution 4.0 (CC-BY)

Open Access

Taylor, B. and Nunes, R. ORCID: <https://orcid.org/0000-0003-0829-4130> (2022) Entitlement, indeterminacy and professional discretion in urban planning: problematising a child's right to clean air for play in London. *Sustainability*, 14 (10). e6189. ISSN 2071-1050 doi: <https://doi.org/10.3390/su14106189> Available at <https://centaur.reading.ac.uk/105254/>

It is advisable to refer to the publisher's version if you intend to cite from the work. See [Guidance on citing](#).

To link to this article DOI: <http://dx.doi.org/10.3390/su14106189>

Publisher: MPDI

All outputs in CentAUR are protected by Intellectual Property Rights law, including copyright law. Copyright and IPR is retained by the creators or other copyright holders. Terms and conditions for use of this material are defined in the [End User Agreement](#).

[www.reading.ac.uk/centaur](http://www.reading.ac.uk/centaur)


**CentAUR**

Central Archive at the University of Reading

Reading's research outputs online

## Article

# Entitlement, Indeterminacy and Professional Discretion in Urban Planning: Problematising a Child's Right to Clean Air for Play in London

Brigid Taylor \* and Richard Nunes 

Real Estate and Planning, Henley Business School, University of Reading, Whiteknights, Reading RG6 6UD, UK; r.j.nunes@reading.ac.uk

\* Correspondence: brigidloleary@gmail.com

**Abstract:** The interaction between air quality and play space receives less focus in planning than it has in public health and environmental sciences research. In this paper, seven local planning authorities of inner London (UK) were sampled from the 10 boroughs with the worst air quality in parks. Greenwich, with significantly better air quality, was included for comparison. The selected authorities were validated against deprivation data, ensuring variance in socio-economic terms. Across this sample, 21 major residential planning applications were assessed, alongside a document analysis of planning policy documents for each authority. Lastly, five semi-structured interviews with different practitioners collectively provided multi-disciplinary perspectives on the planning processes across the sample. Despite the national government having conferred children a right to leisure space and a healthy environment via international conventions, the English planning system, as an institutional rights framework, is not consistently prioritising the delivery of children's play space nor delivering play space where the air quality has been robustly assessed. In other words, such rights have been subjugated to other priorities in limited urban space in London. Therefore, a discretionary planning system does not preclude individual human rights from becoming disadvantaged under democratically controlled decision-making processes.

**Keywords:** air quality; play space; planning; rights; children



**Citation:** Taylor, B.; Nunes, R. Entitlement, Indeterminacy and Professional Discretion in Urban Planning: Problematising a Child's Right to Clean Air for Play in London. *Sustainability* **2022**, *14*, 6189. <https://doi.org/10.3390/su14106189>

Academic Editor: Miguel Amado

Received: 24 March 2022

Accepted: 15 May 2022

Published: 19 May 2022

**Publisher's Note:** MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



**Copyright:** © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

## 1. Introduction

Air quality is “the biggest environmental threat to health in the UK” [1] (p. 7). It has been recently embedded in much of the strategic-level policy in London [2–5] via the Healthy Streets policy [3] and sustainable transport initiatives—a testament to strategic planning influences on human health and the environment [6]. The Environment Strategy [3] notes that it is not just about the environment but health and social justice too. The new London Plan requires preliminary air quality assessments to inform the design of site proposals and to protect the vulnerable [7] (Chapter 9, Policy SI 1). The methods of assessment are dictated by industry guidance—Technical Guidance 16 (TG1) [8–11].

The issue of environmental pollution, in relation to its effects on children, appears to be underexplored within the ‘Child Friendly Cities’ literature cf. [12–14]. The interaction between air quality and play space has received less attention among planning scholars within this body of work than it has in the fields of public health and environmental science. Additionally, this literature focuses less upon the physical environment (and how it influences children's health) than participatory processes and independent mobility for children. This paper addresses both gaps.

Children are particularly vulnerable to the effects of air pollution, especially when at play. In fact, air quality is one aspect of the environment which can contribute to spatial health inequality [15,16]. In England, higher concentrations of particulate matter (PM) exist in the most deprived 20% of neighbourhoods cf. [17,18]. National policy recognises this

problem [1] and that of deprived communities living closer to major roads [8]. Marmot et al. consider it the ‘new major equity issue’ in our cities, with deprived areas experiencing the worst air quality, and their lack of access to open space negatively affects health outcomes [19] (p. 93).

Whilst policy aimed at reducing sources of pollution has generated improvements in recent years, pollutant concentrations still exceed legal limits and WHO guidelines in several locations near busy roads in London [5] (p. 11). Moreover, the interaction between air quality and play space has received less focus in planning than it has in public health and environmental sciences [20–23]. Play England (a charity advocating for the implementation of the ‘right to play’, afforded by Article 31 of the UN Convention on the Rights of the Child) issued an advice note [24] highlighting the need for play spaces to be “well located” and “sustainable” but does not elaborate on environmental quality considerations. The London regional planning authority’s guidance on safety in play space makes brief reference to protection “from risks such as exposure to the sun, hot weather, poor air quality or noise (from busy main roads for instance)” but otherwise focuses on other safety issues—such as routes to play space, inclusivity of access and overlooking [25] (p. 39). Supplementary planning guidance on play also highlights that good play areas need to be accessible—yet play areas close to roads are obviously also closer to pollution sources.

Again, this is consistent with a general lack of focus on the design of child-centric urban spaces within the ‘Child Friendly Cities’ literature, which considers the environmental quality of those spaces. Children, as a marginalised group with limited engagement in the planning system, have a right to the city [26] which is underexplored [27]. Can planning as an institutional rights framework deliver on children’s right to clean-air play space given its democratic nature and the competing demands upon urban space? Following Molander et al.’s study [28], consideration has been given to acts of institutionalised discretionary reasoning in situations of indeterminant policy guidance where children’s entitlement to clean-air play spaces is concerned.

### 1.1. ‘Child-Friendly Cities’ and the “Right” to Clean Air Play

The interdisciplinary field of research on ‘Child Friendly Cities’ considers what children living in cities need for their health and wellbeing—including access to play space. Child-friendly cities are those in which children’s rights are recognised and their voices heard in decision making [29]. Child-friendly cities actively fulfil children’s rights to influence decisions, possess citizenship, walk safely, access play space and green space and to live in an unpolluted environment [30,31]. This international action includes the UN Convention on the Rights of the Child (UNCRC), UN Conference on Human Settlement (Habitat II), Unicef’s ‘Child Friendly Cities’ initiative and the Sustainable Development Goals (SDGs) [32]. The UK national government also has conferred a children’s right to leisure space and a healthy environment via ratification of the UNCRC and adoption of the SDGs. The UNCRC was ratified by the UK in 1991, and it contains the right to participate in decision making (Article 12); to gather in public space (Article 15); and to play, rest and access leisure and cultural life (Article 31). It provides a right to protection from discrimination based upon age in public sector decision making [33,34]. SDG 3 (Health and Wellbeing ‘for all ages’) and SDG 11 (Sustainable Urban Cities) contain targets to substantially reduce deaths from air pollution and ensure access to green space for children by 2030.

Upon examining the origins of the ‘Child Friendly Cities’ movement [35–37], there appears to have been much focus upon independent movement in the public realm [4,38,39], which seeks to reduce children’s marginalisation and to enable them to move freely around the city. A child’s requirement for space—for physical activity and play—is widely recognised in both the academic literature and among institutions with public policy oversight. The regional planning body for London [25] provides an institutional right of 10 m<sup>2</sup> of play space per child, now incorporated into local policy [7] (Chapter 5, Policy S4)—see also RTPI [40]. The Children’s Commissioner [41] advocates for children in general, with limited apparent focus upon planning for the built environment, and, instead, focuses

heavily upon education and health. Sport England are a statutory consultee in planning, yet they focus upon formal playing fields and sport provision rather than access to open space [42] (p. 11). A charity, Play England, advocates for better implementation of the UNCRC rights into planning, but they are not a statutory consultee in the planning system, rather, producing their own guidance and lobbying on national policy such as the National Planning Policy Framework. The UK Chief Medical Officer recommends at least 60 min of moderate–vigorous daily exercise for children [43,44].

Recent research showed that air pollution in play spaces displays a spatial inequality [17], with 24% of play spaces in London exceeding EU limits for NO<sub>2</sub>. For 250,000 children, their closest play space exceeds NO<sub>2</sub> limits, and this burden is borne more heavily by those in more deprived areas [17] (p. 7). This link between access to open space and health inequality became more apparent during the global pandemic, reinforcing the importance of neighbourhood effects on health and raising the question of how best to translate this research meaningfully into policy decision making [45–47]. That is, while this connection is rooted in an early recognition of the human need to “accumulate energies and to spend them, even to waste them in play” [48] (p. 147), more recently, physical play has been further recognised for its contribution to the cognitive, physical, social and emotional health and wellbeing of children [49–54] and, more specifically, how these benefits are conferred to children as a “right”, such as a right to a [child-friendly] city.

Children, as a group with limited engagement in the planning system, have a right to the city [26] which has been underexplored in the literature to date [27]. The authors’ research provides empirical evidence for children’s alienation from the production of urban space in London. It considers whether systems for public participation in planning are sufficient to ensure that urban children’s use needs are being met or whether those needs are subjugated. Do private property rights and the importance of exchange value of land take priority over children’s use needs? Are children able to influence processes of production of urban space to ensure their needs are met? In considering these questions, two particular use needs for urban children are considered—the need for space to play and the need for a healthy environment which is free from harmful air pollution.

Sheridan et al. [17] recommended further work evaluating spatial planning policy to develop robust evidence linking health inequality and access to green space [47]. Further action within planning practice focused on the use of green infrastructure to absorb pollution, including the incorporation of play space within this infrastructure relative to traffic sources [1,3,55]. However, this renewed focus failed to acknowledge a real threat to children and their right to play space with clean air. Children are more vulnerable to the effects of air pollution [20,22,56–60]. They inhale air closer to the ground—thus, are closer to traffic exhaust; spend more time outdoors; and take pollution deeper into their lungs due to higher ventilation rates (particularly when at play). Additionally, their lungs are immature and less able to repair damage [56].

### 1.2. Entitlement, Indeterminacy and Professional Discretion

Molander et al. [28] stressed that “when someone is entrusted with discretion, good arguments are what are expected from her, even if discretionary reasoning is practiced in situations of indeterminacy” (p. 219). However, what is *indeterminate* about children’s right to clean-air play? The fact that children’s right to clean-air play is subject to professional planning discretion would suggest that: “when a right’s entitlement clause is weakly specified, exactly what the right holder is entitled to and what public institutions have a duty to provide must be determined by discretion” (p. 216).

A child’s right to clean-air play space can be defined as a ‘discretionary right’—despite containing legal components; as a result, this right can be executed inconsistently or ignored through processes of ‘discretionary reasoning’. Molander et al. [28] claimed that their understanding of discretion “adds an epistemic dimension (discretion as a mode of reasoning) to the common structural understanding of professional discretion (an area of judgment and decision)” (p. 214). This distinction is critical to an understanding

of the extent to which the challenge of delivering clean-air play space in practice is a “rights” issue.

Addressing a child’s right to clean-air play, which has legal and moral components, is spread across different areas of judgement that are complemented by varying modes of reasoning. For example, while the legal dimension of children’s right to clean-air play space is linked to air quality legislation, the institutional accountability or duty to the appropriate siting or layout of a park or play area is not legally constrained where air quality is considered. However, the inter-dependency of these two components—of an institutional duty to regulatory frameworks and to an ethic of care outside such legal norms—requires scrutiny. The human right—albeit a discretionary right—to clean-air play space is enshrined in air quality legislation.

This brings us to a consideration of planning as an institutional rights framework, which constitutes an arrangement of both legal and moral entitlements (Lefebvre’s [48] openness to change). A right “is a legal or moral entitlement to do or to constrain others in some way” [61] (p. 145). Planners confer and protect rights via the production of spatial policy and decisions granting planning permission [61] (p. 147). In this paper, urban planning is taken to be an institutional framework of practice that confers rights upon groups affected by planning decisions. Planning rights are a form of institutional right that stipulate procedural norms (such as a participation, due process and the application of reason in decision making) or political-normative principles which, in turn, provide “concrete planning rights as positive institutional rights” [62] (p. 194). One example of substantive planning rights is that those affected by planning decisions enjoy human rights protection by virtue of the ratification of international human rights conventions [62] (pp. 199–200).

By extension, ratification of international conventions on the rights of children (UN-CRC, discussed above) creates planning rights for children who are affected by planning decisions. In fact, planning rights are created in so far as planners are tasked with protecting the public interest [62] (p. 205), which can involve the protection of health and wellbeing. However, planning as an institutional rights framework does not preclude individual human rights, based on legal or moral normative imperatives, from becoming disadvantaged under democratically controlled decision-making processes [62,63]. Children’s needs can be subjugated to other priorities in limited urban space. Therefore children, as a group who may struggle to assert their rights in the planning system, may struggle to exercise rights afforded to them by international conventions (i.e., UNCRRC). The following study reviews planning approaches to the siting and layout of play space while considering air quality.

## 2. Methods

### 2.1. Selection of Study Area

Seven Local Planning Authorities (LPAs) in inner London were selected for analysis—Hammersmith and Fulham, Kensington and Chelsea, Westminster, Islington, Hackney, Tower Hamlets and Greenwich. The study focused upon inner London where PM<sub>10</sub> or NO<sub>2</sub> limits are known to be exceeded [5]. The seven LPAs were selected from the 10 boroughs with the worst air quality in parks [17]. The small geographic area of the ‘City of London’ was excluded due to its primarily business (as opposed to residential) land use. The selected LPAs were triangulated against deprivation data [64] to ensure the sample was varied in socio-economic terms. One inner borough with comparatively better air quality (Greenwich) was included to enable comparison with LPAs with worse air quality.

### 2.2. Data Collection and Analysis

Under neoliberal forms of urban governance, community infrastructure, such as play space, is increasingly delivered via private development proposals. The following analysis, therefore, focused on policy and practice for the delivery of new, major residential developments, including a document analysis of policies and planning applications and semi-structured interviews. A coding framework was developed iteratively [65] (p. 142),



adopting a two-stage coding process that progressed from a set of coarse codes to a finer coding regime as themes began to emerge (Table 1). An analysis of semi-structured interviews employed additional codes due to the subsequent emergence of additional themes (Table 2).

**Table 1.** Coded themes from document analysis of policies and planning applications.

Code	Theme
AQ	Air Quality
AQ-P	Air Quality—Policy
AQ-O	Air Quality—Objectives
AQ-C	Air Quality—Children
C	Child/ren
C-V	Child/ren—Vulnerability to air pollution
C-A	Child/ren—Importance of physical activity
E	Engagement/Co-production
PS	Play Space
PS-L	Play Space—Location (on/off site or financial contribution in lieu of provision)
PS-EQ	Play Space—Environmental Quality
CD: S	Competing Demands on Space
CD:S-A	Competing Demands on Space—Adults
CD:S-GI	Competing Demands on Space—Green Infrastructure
CD:S-H	Competing Demands on Space—Housing
CD:S-C	Competing Demands on Space—Children of Various Ages
CI/SI	Community Infrastructure/Social Infrastructure
OS	Open Space
RA	Residential Amenity
H	Health
HIA	Health Impact Assessment
HI	Health Inequality/Deprivation

Local planning policy in the selected boroughs was compared in three ways. Firstly, policy for delivery of large, new residential developments was reviewed to determine requirements in terms of incorporating play space—for example, was on-site delivery required or was reliance on off-site public areas considered sufficient? Secondly, policy mechanisms for the assessment of air quality within that space was assessed by reviewing the precise wording of planning policy regarding assessment of air quality for proposed developments—was there any emphasis on outdoor play space as opposed to internal air quality or adult-focused balconies and amenity spaces? Thirdly, policy requirements regarding public engagement on development proposals were reviewed—was there any specific requirement to engage with children as opposed to the public? The policy analysis focused upon the most recent, emerging policy documents (as opposed to adopted policy, which is older) and included Local Plans, supplementary planning documents, Statements of Community Involvement (SCI) and Integrated Impact Assessments (IIAs).

This document analysis was complemented by the review of major residential planning applications, assessing practice in the delivery of play space and in the assessment of air quality in play spaces. Initially, planning committee meeting agendas were reviewed to compile a list of major residential applications in each borough in the preceding years. From this list, three major residential development applications in each of the seven boroughs were selected for detailed review. For each application, a detailed analysis was carried out on the following application documents (where available): planning statement, statement of community involvement, design and access statement, landscape plans, environmental impact assessment, air quality assessment, health impact assessment, committee reports and decision notices, equality impact assessments and any internal correspondence on file

from environmental health officers or Children’s Services departments. No quantitative data were gathered for statistical purposes in the process.

**Table 2.** Coded themes from interviews.

Code	Theme
R: PPS	Reasons—Provisions of Play Space
R: PPS-EV/UV	Reasons—Provision of Play Space—Exchange Value/Use Value
R: PPS-CD:S	Reasons—Provision of Play Space—Competing Demands on Space
R: PPS-E	Reasons—Provision of Play Space—Engagement
R: LPS	Reasons—Location of Play Space
R: LPS-T	Reasons—Location of Play Space—Timing of Engagement of Consultants
R: LPS-P&G	Reasons—Location of Play Space—Policy and Guidance
R: LPS-AQAM	Reasons—Location of Play Space—AQ Assessment Methodology
R: LPS-CD:S	Reasons—Location of Play Space—Competing Demands on Space
R: LPS-E	Reasons—Location of Play Space—Engagement
RtC?	Right to the City?
RtC? N/RR	Right to the City? National/Regional Rights?
RtC? LI	Right to the City? Local Innovation
RtC? SV	Right to the City? Spatial Variation
I	Implications for Policy and Practice
SV	Spatial Variation
C	Centralisation/Top-Down Policy
PM	Possible Mechanisms

This document analysis simply examined each planning application for the proportion that each contained of the considerations below. Collated application data were captured in a proforma template for ease of comparison. The data collected included: (i) number of residential units proposed; (ii) estimated child yield living in the completed development; (iii) evidence of play space delivered and, if so, whether it was on site, off site or a financial contribution towards the maintenance of public facilities; (iv) evidence of the need for an Environmental Impact Assessment (EIA) and, if so, whether the socio-economic or air quality assessments reviewed, as key sources of data, the extent of play space provision and the assessment of air quality within that space; (v) evidence of the author of the air quality assessment having expressly considered the exposure of children to air pollution whilst using areas of open space/play space within the development (e.g., the extent to which children/play space areas were identified as a sensitive receptor); (vi) evidence of the preparation of a health impact assessment and, if so, to what extent it expressly considered and reported on the exposure of children to air pollution whilst using areas of open space/play space within the development; (vii) evidence of an EIA chapter that details the evolution of the design in response to environmental constraints (a mandatory legal requirement), demonstrating any amendment to the design as a result of air quality considerations and, in particular, air quality exposure of children using the proposed play space; (viii) evidence of engagement with children in the statement of community involvement; (ix) evidence of an equalities impact assessment having been undertaken during decision making and, if so, whether it considered children as a protected group following UNCRC protections; and (x) evidence within the decision notices and committee reports of any consideration of children’s exposure to air quality whilst using areas of open space/play space.



Semi-structured, follow-up interviews explored possible reasons for the findings of the policy and planning application analyses. Interviewees were selected from the range of people in the built environment professions and disciplines who contributed to the major residential applications, including those involved in air quality and general environmental/EIA consultancy, architectural and urban design, and landscape architecture. The contributions of each interviewee were different, reflecting the varied experiences of each professional within the planning and development process. The interview with the landscape architect touched on their experiences of engaging children in the design of development proposals and some of the challenges of doing so. The interview with the architect highlighted the importance of child-friendly design and why children are often overlooked. The interview with the air quality consultant and the EIA consultant looked at issues around (1) design being semi-fixed before it is scrutinised by environmental assessors; and (2) the challenge of convincing a client developer to factor in such design considerations where there is no express policy requiring they do so—especially when they are having to balance multiple competing demands on space, such as the need to deliver biodiversity net gains, which is a firm policy requirement

These empirical data were then transcribed and analysed using a framework of thematic codes—as set out in Table 2 above. The results of this coding process were then cross-referenced with that of the document analysis of planning applications and policy documents (Table 1), informing us of the extent to which children’s rights to clean-air play spaces were conferred (Table 3).

**Table 3.** Rights conferred. Summary of findings from document analysis and interviews.

Research Question (RQ) 1: Has the notion of a right to play space been factored into local planning policy and practice? If so, to what extent and how has it been framed within policy?	
Codes/Themes	Rights Conferred(?)
Competing Demands on Space (CD:S)—Adults (A), Children (C), Green Infrastructure (GI) and Housing (H); Provision/Location of Play Space (PPS/LPS)—Competing Demands (CD:S)/Value (EV/UV); Play Space (PS)—Location (L).	None (locally)—but justification is given for the creation of such rights.
Right to the City (RtC?)—National and Regional Rights (N/RR).	Institutional rights at the regional/metropolitan level of Greater London, providing top-down policy applicable to all London boroughs.
Right to the City (RtC?); Policy Implications (I); Top-down Policy (C); Community and Social Infrastructure (CI/SI).	Local policy weakens the institutional rights argued at the regional/metropolitan level of Greater London.
Research Question (RQ) 2: Has the notion of a right to clean air in play space been factored into local planning policy and practice? What mechanisms facilitate or inhibit the delivery of clean air in play space in London?	
Codes/Themes	Rights Conferred(?)
Children (C)—Vulnerability to Air Pollution (V), Need for Physical Activity (A).	None (locally)—but justification is given for the creation of such rights.
Health (H); Air Quality—Children (AQ-C).	An emerging institutional right at the regional/metropolitan level of Greater London.
Right to the City (RtC?)—National and Regional Rights (NRR), Local Innovation (LI); Children (C); Community and Social Infrastructure (CI/SI); Residential Amenity (RA).	Institutional rights generated where local policy expressly requires the minimisation of pollution in play areas.
Air Quality (AQ)—Policy (P), Objectives (O); Play Space (PS)—Environmental Quality (EQ); Right to the City (RtC?)—Spatial Variation (SV); Health Inequality/Deprivation (HI); Health Impact Assessment (HIA).	Not consistently applied; other policy mechanisms not sufficiently targeted. There is spatial variation in terms of what LPAs require concerning AQ assessment methodologies and what constitutes air quality.
Research Question (RQ) 3: To what extent have children been actively engaged in shaping the planning and design of urban play space?	
Codes/Themes	Rights Conferred(?)
Children (C); Provision/Location of Play Space (PPS/LPS)—Engagement (E); Location of Play Space (LPS)—Timing of Engagement (T), Policy and Guidance (P&G); Health Inequality/Deprivation (HI); Health Impact Assessment (HIA); Open Space (OS).	No institutional rights conferred.
Implications for Policy and Practice (I); Community and Social Infrastructure (CI/SI); Possible Mechanisms (PM); Health (H).	Some attempt by local authorities to translate non-binding national and international resolutions into practice.

### 3. Results

The results from the thematic coding (Tables 1 and 2) of the document analysis and interview findings suggest that planning, as a discretionary and democratic process, is not consistently delivering a city where children's health and wellbeing needs (in terms of access to clean-air play space) are consistently being met (Table 3). This suggests there is lack of collaboration between disciplines involved in the production of urban space to ensure the health and wellbeing needs of the vulnerable and under-engaged are met. In some of the case studies, no dedicated play space was provided solely for use by children—instead relying upon informal 'playable space' within the public realm to provide multifunctional space for use by all age groups and the wider public. Air quality in play areas of large residential developments was not always assessed on the assumption that children would not be spending longer than 60 min in these locations. Yet children are advised to take at least 60 min of physical activity per day [43]. The analysis also showed spatial variation, with some areas showing more proactivity in ensuring delivery of play spaces with acceptable air quality, supporting other research that found social inequalities expressed in the disproportionate exposure to poor air quality in London [17].

#### 3.1. Access to Play Space

All the LPAs studied recognised (in policy documents) the importance of play space for children's health. Whilst there is a 'discretionary right' to 10 m<sup>2</sup> of play space per child in new residential developments conferred by the regional planning authority [25], there is spatial variation in how this was incorporated into local policy. Some local authorities expressly recognised that other factors might take priority over play space:

*"In some locations, the Royal Borough may accept the provision of a play area in a nearby area of public open space rather than within the development itself, where more beneficial to the local community. Alternatively, a financial contribution towards enhancing existing, nearby provision may be acceptable." (Royal Borough of Greenwich para Local Plan 4.1.51–4.1.54)*

*"Major housing developments are expected to make appropriate provision of play space ... The Council will take into consideration the London Plan benchmark for 10 sqm of play space to be provided per child as a starting point, but it is recognised that in Islington's context, delivery at this level may not always be feasible" (Islington Council Local Plan para 3.167)*

A child's right to play space is not absolute, giving discretion to the decision maker and the democratic process. Only one of the LPAs required that play space be provided in addition to other communal open spaces (whereas all others allowed generally accessible 'open space' to satisfy multiple policy requirements). In this LPA, all application case studies also met and exceeded the policy target, and all play space was located on site and included some element of dedicated play space for children. Of those studied, it also had the highest proportion of children living in poverty—commensurate with most action in policy and decision making. Yet, while other local authorities had significant pockets of deprivation and deficiencies in open space provision, they displayed less proactivity in this area.

Rights to play space conferred in policy are not always delivered in practice. Although all case studies provided play space, there was significant variance in the nature of the play space provided. In some cases, no dedicated space for children was provided: only areas labelled 'informal play space' within the communal, public realm. One third of applications relied upon existing, off-site play spaces rather than providing on-site play space. Finally, two of the boroughs assessed equalities impacts and/or international human rights/UNCRC rights in the decision notice—but this was not consistent across all boroughs studied.

### 3.2. Air Quality in Play Space

All LPAs recognised children’s particular vulnerability to air pollution, yet there was variation in the mechanisms employed to ensure acceptable air quality in play space. Whilst many relied upon the processes of the Environmental Impact Assessment (EIA), Air Quality Assessment (AQA) or Health Impact Assessment (HIA), others produced express policy that requires consideration of air quality in relation to play space:

*“[C]hildren’s play space or housing (including schools) should be located away from roads with high levels of air pollution” (RBKC Air Quality SPD Para 5.3)*

*“New build developments which propose . . . child play space in areas of sub-standard air quality are required to demonstrate that they have considered the positioning and design of the open space to reduce exposure of future users to air pollution.” (Tower Hamlets Adopted Policy D.ES2)*

*“Locate outdoor amenity space and outdoor play space away from areas of existing and future poor air quality, away from major roads” (Tower Hamlets High Density Living SPD Design guideline 41)*

*“[O]utdoor communal spaces must perform to high environmental standards to support the health of residents . . . Outdoor spaces should be comfortable, pleasant and adapt and mitigate to climate change through consideration of light, wind, and air quality.” (Tower Hamlets High Density Living SPD—Vision: Communal Space)*

The London regional planning authority’s emerging policy required that air quality be considered early to help influence site layout and design [7] (Chapter 9, Policy SI 1). Developments involving large numbers of children must demonstrate how exposure has been minimised.

The analysis considered the effectiveness of such policy mechanisms, which require the submission of AQAs, EIAs and/or HIAs with planning applications. The results suggest these policy mechanisms are not effective at ensuring robust assessment of exposure to harmful air pollution when using outdoor play space. EIAs and AQAs do not always assess air quality in outdoor parts of a proposed development. Pollutant concentrations in play space were not assessed in 57% of the planning applications analysed. Assessment often focused upon predicting air quality for internal building environments rather than users of open space.

Though there is spatial variation in approaches that were taken, one LPA did consistently consider short-term NO<sub>2</sub> concentrations in open space in all applications analysed. Three other LPAs assessed this in some but not all the applications analysed. Elsewhere, no reference was made to air quality in open space/play areas. In some applications, for example, pollutant concentrations on private roof terraces and balconies were assessed yet not in children’s play areas at ground level (which are closer to traffic sources). Adult-centric thinking was also observed in air quality assessment methodology in that ‘adult head height’ was utilised as the selected point above ground to be assessed. A HIA was carried out in 33% of the applications, following the accepted ‘HUDU’ (Housing Urban and Development Unit) process which considers access to open space and minimisation of air pollution. All the HIAs concluded that the development had positive health impacts due to provision of play space. Yet, of those, 43% were not actually providing any dedicated play space on site and were reliant upon multifunctional, communal, open space areas or off-site facilities for older children.

The analysis also found no evidence to suggest air quality influenced the evolution of site designs, except for in three planning applications—and none of those cases resulted in improved air quality in play space for children. The themes emerging from the semi-structured practitioner interviews suggest that collaboration between disciplines is important, as is the timing of engagement between consultants. Planners have a key role in ensuring collaboration between professionals engaged in the production of urban space at an early stage of project development. Air quality specialists can influence site design to

minimise exposure to harmful pollution but only if they are engaged at a point at which they can influence the broad layout and massing of the development proposal.

*“The problem often comes down to how good your consultant team is, and how well they work together . . . so often what would happen is the developer will get a design team, reach a design fix, and only then get an EIA team and say ‘ok, now assess it, prepare the EIA.’”*

*“To be honest, sometimes we don’t get involved early enough. So, it’s basically, whoever is coordinating the planning application or EIA, they start appointing consultants. And normally there is a design in place, that you are asked to assess.”*

*“[T]hey have a design in mind. And it’s really difficult to change the design. Unless it’s . . . minor tweaks. For example, set back distance. But to change location of a whole building block because of air quality—no, it’s not going to happen.”*

*“What you tend to find, is . . . the disciplines that you can either physically feel or see, or you can see quite clearly the outcome associated with that discipline— . . . that is quite high up the agenda”.*

*“Quite often we are, or were, presented with a scheme that was frozen, and had already been designed. And the implications of that would be . . . [W]e were simply assessing a scheme that was frozen, as opposed to influencing a scheme for greater environmental good, really.”*

The interviews also suggested that, when designing developments for dense urban locations, policy to protect the vulnerable or under-engaged is important. Express policy assists consultants in justifying the need for amendments to a design (for example, changes to layout/density of development to improve air quality) even where this might negatively impact the overall perceived exchange value of residential development on site. The interviews additionally pointed to the role of regional planning, applicable across London, in reducing spatial variations in health inequality because of different local government policy approaches:

*“And it also comes down to the planning department at the local authority. How the application is reviewed. Who does the reviewing? I’m sure you could put the same project down in front of two different people and get two slightly different perspectives and get a different answer.”*

*“But I suppose that is what the GLA add to the party—they try to lift all London local boroughs and hold them to the same level. Rather than allowing them to drift apart and do things very differently.”*

### 3.3. Children’s Engagement

The policy analysis found limited focus upon engagement of children in the production of urban space. Statements of Community Involvement (SCI) produced by local authorities recognised difficulties engaging children and tailored engagement methods accordingly (such as through the use of digital methods and social media). One LPA went further, providing case studies of good practice engagement with children:

*“In one workshop children and young people illustrated their ideas by making pizzas—each ingredient representing something that they would like to see in the new developments.” (Tower Hamlets 2019 SCI).*

In one other LPA, an independent review was commissioned which recommended a Local Plan requirement that places be designed:

*“[S]ometimes with a child/youth ‘lens’, to provide children and young people with experiences to be healthy, safe, learn, play, and connect with each other. This is an opportunity to create a sense of ownership for the place they live in” (Islington Fair Futures Commission 2018).*

Many of the SCIs referred to human rights and public sector equality duties. Only one of the LPAs' documents expressly considered whether the policies affected children's rights under the UNCRC.

The planning application analysis found that children were directly engaged in the design of large-scale residential developments in few of the applications. Of the applications, 67% made no mention of having engaged with children, and 9% did so only indirectly (engaging with the Children's Services department or facilitating parents' attendance at consultation events). In one LPA, all the planning applications analysed demonstrated efforts to engage with children. By comparison, in another LPA, the Children's Services department were internally consulted on the planning applications but provided no response. In other boroughs, the Children's Services department did not appear to have been consulted on the applications.

In one planning application the 'Commissioning Manager for Play & Youth' requested attention be paid to the quality and quantity of child play space—due to the development being in an area with known play space deficiency. They also asked that young people be involved in the consultation process. Yet the statement of community involvement submitted by the developer with the application suggested "each age group" was represented, despite no responses from anyone under the age of 24. The application did, however, provide a quantum of play space significantly over the policy requirement, including both dedicated and informal play spaces. This suggests the input of advocates could assist in ensuring children's needs are met, even where children are not engaged directly.

#### 4. Discussion

##### 4.1. Access to Play Space—Conferring "Rights" to Children

Our findings suggest that a right to play space has been conferred by the UK national government in ratifying the UNCRC. This is implemented via regional—metropolitan-wide—planning policy for Greater London, which provides a *discretionary right* [28] to 10 m<sup>2</sup> of play space per child in new residential developments. Local authorities explicitly recognise the importance of play space for children's health—establishing a social and moral right. Yet these rights are discretionary and are executed inconsistently by policy and decision makers. Some local authorities expressly state (in policy documents) that other demands on space may take priority over children's right to play space in the urban environment. Planning rights are discretionary, as opposed to absolute, because they are subject to democratic processes associated with consultation in which the decision maker has discretion over the weight afforded to various policy requirements and rights.

'Child Friendly Cities' literature promotes 'playable landscapes' within the public realm to reduce children's marginalisation in public space. The document analysis of planning applications and policy documents showed that, despite all applications providing some play space, only 52% provided  $\geq 10$  m<sup>2</sup> per child on site. One third relied upon off-site areas, and 57% of applications did not provide any dedicated on-site space where children's play was prioritised. Rather, developers provided communal/public realm areas which contain 'informal play' elements, such as lawn and interactive water features, but in areas which are for use by adults and children. The findings suggest some applications are focusing on the delivery of informal play at the expense of any dedicated space where children can be active. Whilst multifunctional space delivers benefits for all age groups and minimises 'spatial land take' (thereby, making efficient use of land and maximising housing supply), such an approach enables the decision maker to weigh up various policy ambitions and to take an approach that balances the needs of the many (adults and children) rather than prioritising the needs of the few (children).

Institutional rights frameworks can assist in the delivery of child-friendly cities—yet the findings suggest planning only incorporates UNCRC/Equalities Act rights to a limited extent. Spatial variation was evident. Again, this is consistent with other research that identified social inequalities expressed in the disproportionate exposure to poor air quality in London [17]. In one case study, the LPA concluded a large, regenerative development



scheme had a positive impact on children's rights—despite the proposal's apparent lack of any dedicated space in which children's needs were prioritised over those of adults or the public. This LPA was already severely deficient in outdoor play space (meeting only 14% of the national playing field standards). The Local Plan policy in force in that area indicated key regeneration sites would mitigate this borough-wide open space deficiency. This would suggest that the requirement for general access to open space was prioritised over the allocation of dedicated children's play space, reinforcing the incidence of user conflicts within communal spaces which may impact on children's ability to engage in physical activity.

Such policy framings fail to confer to children, as a marginalised group with limited engagement in the planning system, a right to the city [26,29,31,33,35]. These policy actions also highlight breaks in governance levels from international accords led by the UNCRRC, Habitat II, Unicef and SDGs and the extent to which their non-binding resolutions are translated into practice locally. That is, questions of age discrimination in public sector decision making and coordination between tools, such as HIAs, EIAs and AQAs, remain largely underexplored [27,33,34].

#### *4.2. Air Quality in Play Space—A Discretionary Right*

Air quality policy focuses heavily upon the long-term goals of reducing sources of pollution. Emerging London-wide policy also seeks to ensure early consideration of exposure to air pollution when using amenity areas. This proactive approach is seen in the policy of one of the LPAs studied, which required play space to be designed and positioned “to reduce [the] exposure of future users to air pollution”. Other LPAs did not have equivalent provisions. All the local authorities expressly recognised children's vulnerability to the effects of air pollution and, therefore, had a social justification for the creation of planning rights, though it remains to be seen whether this new, emerging, London-wide policy may assist in regularising approaches across London as Local Plans are updated.

Notwithstanding policy efforts to regularise planning practice that recognises children's entitlement to clean-air play spaces, it is important to note that a recognition of children's vulnerability in these circumstances can be captured by notions of “rights” that contain both legal and moral—non-binding—components [48,61,62]. That is, legal components are attested to an organisation's commitment to law, but moral components only signify a voluntary duty or ethic of care to the issue at hand. Moreover, as this research highlighted, an ethic of care to children, as a marginalised group, and their entitlement to clean-air in play spaces often competes indeterminately with other commitments in the public interest. This, consequently, paves the way to forms of ‘discretionary reasoning’ [28], which translate into varying and, at times, conflicting modes of governance over air quality at different levels of practice—from international, non-binding resolutions to local planning policy and practice.

Various processes exist for the assessment of air quality and the health impacts of a development. Our analysis shows that air quality within open space areas is not always assessed in an EIA/AQA. One reason for this observation can be attributed to industry guidance that only requires the assessment of outdoor areas where they would be used for over an hour. In some cases, no-one was expected to be in these areas for that duration. Yet government guidance recommends over one hour of physical activity for children per day, which does not appear to be routinely reflected in the assessment of air quality practice. The interviews suggest that this can be partly explained by variations in air quality assessment methodology, with requirements contingent on individual planning officers' views or discretion.

Planners have a key role in ensuring positive impacts on future occupants' health and wellbeing. The interviews reinforced this view—that the environmental quality of a development site may be influenced by a planning consultant or project manager's decisions concerning which consultants to engage and when. Yet, often, air quality consultants are

engaged late in the process once a design is effectively fixed. This misses an opportunity to improve designs and to minimise children's exposure to air pollution when using play space. In this paper, city and regional planning was taken to be an institutional framework of practice that confers rights upon groups affected by planning decisions. This includes ensuring human/non-human rights protections by *virtue* of the ratification of international rights conventions. However, such rights are translated into practice in so far as LPAs are tasked with protecting the "public interest". This paper clearly has evidenced that planning does not preclude individual human rights, based on legal or moral normative imperatives, from becoming disadvantaged under democratically controlled decision-making processes [62,63].

#### 4.3. Children's Engagement and the "Public Interest"

Our findings also suggest there is a potential for spatial injustice and health inequality to arise due to the local variations observed in policy and practice above. That is, whilst an institutional right to clean-air play space exists, approaches to its delivery through the English planning system vary. This research further reveals how such rights may be overridden by competing demands upon space because of democratic processes. In other words, the discretionary planning system does not preclude individual human (children's) rights from becoming disadvantaged under democratically controlled decision-making processes.

A child's right to clean-air play space is ultimately a 'discretionary right'; as a result, this right is granted inconsistently or ignored through processes of "discretionary reasoning" in planning practice, albeit generally democratically controlled through consultation [28] (p. 219). As Molander et al. argued: "When a right's entitlement clause is weakly specified, exactly what the right holder is entitled to and what public institutions have a duty to provide must be determined by discretion" [28] (p. 216, italics added). The indeterminacy here lies squarely on what planners feel they can arguably reason in the "public interest". While there are legal limits on air quality, pollution is viewed as a transboundary indeterminate one and, consequently, disassociated from the criteria or conditions determining the placement of children's play areas.

Our findings suggest that a child's right to clean-air play, which has legal and moral components [66], does not sit within one area of judgement because the legal dimension of this right is linked to air quality—not the placement of park/play areas, which is largely handled through different modes of reasoning that are contingent on a planner's varying ability to professionally argue or defend their decision over such placement under different circumstances. This challenge of delivering clean-air play space in practice is a "rights" issue because what is conferred to children is only a 'discretionary right', requiring a fuller consideration of the multi-level institutional arrangements behind air quality obligations and the provision of play space in practice. In other words, the legal dimension of children's right to clean-air play space is linked to air quality legislation, but the institutional duty to the appropriate siting or layout of a park or play area is not legally constrained where air quality is considered. An audit of play space delivery (against the GLA target) [25] could be undertaken, as this study was based upon a limited sample size.

Altogether, the legal institutional duties associated with clean air provision operates separately from those moral ethical duties of care over the placement of play areas, leaving planners to operate within a sphere of decision making that is institutionally plural and in which there is, consequently, no single principle of distributive justice. This raises significant questions for further research, namely, regarding legitimacy in the face of such institutional pluralism [67], the institutional limits of planning practice itself [68] and the validity of utilitarian notions of the "public interest" [69]. Answers to these questions will require additional, qualitative, in-depth research. Given the positive results found in Tower Hamlets (in policy and in practice), it would be useful to qualitatively explore, for example, the internal institutional processes within this organisation and others like it.



## 5. Conclusions

This study has considered the extent to which the institution of planning is conferring and delivering a right for urban children to access play space with clean air. Local planning policy and practice in London were reviewed, comparing mechanisms for delivery of play space and assessment of air quality as part of large-scale residential development proposals. Children's involvement in policy formulation was reviewed, as well as policy requirements for engagement with children in the design of proposals for specific sites.

Children's exposure to air pollution was not always considered in the early concept design of a site, with air quality consultants sometimes engaged late in the process after the design has been fixed. Air quality in play areas was not always assessed—not simply due to timing but also because of assumptions around the short duration of use of the space. Thus, planning, as an institutional rights framework, may not, at present, be delivering a city where children's health and wellbeing needs are consistently being met. Thus, there is a need for a broader academic consideration of a children's 'right to the city', recognising the challenge of delivering clean-air play space in practice as a broader "rights" issue. That is, there is a need to closely examine the paradox inherent in multi-level institutional arrangements that confer a child's legal right to clean-air play space through air quality legislation but where the institutional duty to appropriately deliver such play spaces is left to professional discretion.

Our findings suggest there is a potential for spatial injustice and health inequality to arise due to local variations in policy and practice. Whilst an institutional right to clean-air play space exists, approaches to its delivery through the English planning system vary. This research further reveals how such rights may be overridden by competing demands upon space because of democratic processes. In other words, the discretionary planning system does not preclude individual human (children's) rights from becoming disadvantaged under democratically controlled decision-making processes.

**Author Contributions:** B.T.: Conceptualization, methodology, formal analysis, investigation, data curation, writing—original draft preparation, writing—review and editing; R.N.: Conceptualization, methodology.; writing—review and editing, supervision. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research received no external funding.

**Institutional Review Board Statement:** This project was subject to ethical review, according to the procedures specified by the Henley Business School's departmental ethics review process (c/o University of Reading's Research Ethics Committee) and was given a favourable ethical opinion for conduct.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** The data presented in this study are available on request from the corresponding author. The data are not publicly available due to restrictions of anonymity.

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

## Abbreviations

$\mu\text{g}/\text{m}^3$	Micrograms per cubic metre of air—a measure of concentration in terms of mass per unit volume
AQ	Air Quality
AQA	Air Quality Assessment
AQMA	Air Quality Management Area—a designated zone where a local authority has specified proposals to improve air quality
AQO	Air Quality Objective—the limit for a particular pollutant over a particular time period, as defined in the Air Quality Regulations
AQS	Air Quality Standard—standards for air quality of a particular environmental quality, taking into account human health effects
EIA	Environmental Impact Assessment in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulation 2017—an assessment to determine the likely significant effects of a proposed development upon the environment
ES	Environmental Statement—the written output of an EIA process
Gigl	Greenspace Information for Greater London
GLA	Greater London Authority
HIA	Health Impact Assessment (a report prepared in accordance with the Healthy Urban Development Unit’s Rapid Health Impact Assessment process)
HUDU	Healthy Urban Development Unit
IMD	Indices of Multiple Deprivation
LBHF	London Borough of Hammersmith and Fulham
$\text{NO}_2$	Nitrogen dioxide—a gas which is a respiratory irritant
PHE	Public Health England
PM	Particulate Matter
PM <sub>2.5</sub> /PM <sub>10</sub>	Particulate matter with a diameter of 2.5 or 10 microns or less in diameter
RBKC	Royal Borough of Kensington and Chelsea
RTPI	Royal Town Planning Institute
UNCRC	United Nations Convention on the Rights of the Child/United Nations Committee on the Rights of the Child
WHO	World Health Organization

## References

1. PHE—Public Health England. Review of Interventions to Improve Outdoor Air Quality and Public Health. 2019. Available online: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/795185/Review\\_of\\_interventions\\_to\\_improve\\_air\\_quality.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/795185/Review_of_interventions_to_improve_air_quality.pdf) (accessed on 24 July 2020).
2. Greater London Authority. Clearing the Air the Mayor’s Air Quality Strategy. 2010. Available online: [https://www.london.gov.uk/sites/default/files/Air\\_Quality\\_Strategy\\_v3.pdf](https://www.london.gov.uk/sites/default/files/Air_Quality_Strategy_v3.pdf) (accessed on 24 July 2020).
3. Greater London Authority. London Environment Strategy. 2018. Available online: <https://www.london.gov.uk/what-we-do/environment/london-environment-strategy> (accessed on 17 June 2020).
4. Greater London Authority. Good Growth by Design—Making London Child Friendly. 2019. Available online: [https://www.london.gov.uk/sites/default/files/ggbd\\_making\\_london\\_child-friendly.pdf](https://www.london.gov.uk/sites/default/files/ggbd_making_london_child-friendly.pdf) (accessed on 20 May 2020).
5. Greater London Authority. Air Pollution Monitoring Data in London: 2016 to 2020. 2020. Available online: [https://www.london.gov.uk/sites/default/files/air\\_pollution\\_monitoring\\_data\\_in\\_london\\_2016\\_to\\_2020\\_feb2020.pdf](https://www.london.gov.uk/sites/default/files/air_pollution_monitoring_data_in_london_2016_to_2020_feb2020.pdf) (accessed on 8 June 2020).
6. Hankey, S.; Julian, D.; Marshall, J.D. Urban Form, Air Pollution, and Health. *Curr. Environ. Health Rep.* **2017**, *4*, 491–503. [CrossRef] [PubMed]
7. Greater London Authority. The London Plan: The Spatial Development Strategy for Greater London. 2021. Available online: [https://www.london.gov.uk/sites/default/files/the\\_london\\_plan\\_2021.pdf](https://www.london.gov.uk/sites/default/files/the_london_plan_2021.pdf) (accessed on 24 March 2022).
8. Defra. Clean Air Strategy. 2019. Available online: <https://www.gov.uk/government/publications/clean-air-strategy-2019> (accessed on 24 July 2020).
9. Environmental Protection UK (EPUK). Development Control: Planning for Air Quality. 2010. Available online: <https://www.environmental-protection.org.uk/wp-content/uploads/2013/07/EPUK-Development-Control-Planning-for-Air-Quality-2010.pdf> (accessed on 24 July 2020).
10. EPUK; IAQM. Land-Use Planning & Development Control: Planning for Air Quality. 2017. Available online: <http://www.iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf> (accessed on 25 July 2020).

11. NICE. Air pollution: Outdoor Air Quality and Health Guideline. 2017. Available online: <https://www.nice.org.uk/guidance/ng70> (accessed on 5 August 2020).
12. Derr, V.; Tarantini, E. "Because we are all people": Outcomes and reflections from young people's participation in the planning and design of child-friendly public spaces. *Local Environ.* **2016**, *21*, 1534–1556. [CrossRef]
13. Derr, V.; Chawla, L.; Mintzer, M.; Flanders Cushing, D.; Van Vliet, W. A City for All Citizens: Integrating Children and Youth from Marginalized Populations into City Planning. *Buildings* **2013**, *3*, 482–505. [CrossRef]
14. Wilks, J. Child-friendly cities: A place for active citizenship in geographical and environmental education. *Int. Res. Geogr. Environ. Educ.* **2010**, *19*, 25–38. [CrossRef]
15. Pastor, M., Jr.; Morello Frosch, R.; Sadd, J. Breathless: Schools, Air Toxics, and Environmental Justice in California. *Policy Stud. J.* **2006**, *34*, 2006. [CrossRef]
16. Stewart, J.A.; Mitchell, M.; Edgerton, V.; Van Cott, R. Environmental Justice and Health Effects of Urban Air Pollution. *J. Natl. Med. Assoc.* **2015**, *107*, 50–58. [CrossRef]
17. Sheridan, C.; Roscoe, C.; Gulliver, J.; de Preux, L.; Fecht, D. Inequalities in Exposure to Nitrogen Dioxide in Parks and Playgrounds in Greater London. *Int. J. Environ. Res. Public Health* **2019**, *16*, 3194. [CrossRef]
18. Fecht, D.; Fischer, P.; Fortunato, L.; Hoek, G.; de Hoogh, K.; Marra, M.; Kruize, H.; Vienneau, D.; Beelen, R.; Hansell, A. Associations between air pollution and socioeconomic characteristics, ethnicity, and age profile of neighbourhoods in England and the Netherlands. *Environ. Pollut.* **2015**, *198*, 201–210. [CrossRef]
19. Marmot, M.; Allen, J.; Boyce, T.; Goldblatt, P.; Morrison, J. Health equity in England: The Marmot Review 10 Years on. London: Institute of Health Equity. 2020. Available online: <https://www.health.org.uk/publications/reports/the-marmot-review-10-years-on> (accessed on 16 June 2020).
20. Ozdemir, H.; Mertoglu, B.; Demir, G.; Deniz, A.; Toros, H. Case Study of PM10 in playgrounds. *Theor. Appl. Climatol.* **2012**, *108*, 553–562. [CrossRef]
21. Ottosen, T.-B.; Kumar, P. The influence of the vegetation cycle on the mitigation of air pollution by a deciduous roadside hedge. *Sustain. Cities Soc.* **2020**, *53*, 101919. [CrossRef]
22. Minguillón, M.C.; Rivas, I.; Moreno, T.; Alastuey, A.; Font, O.; Córdoba, P.; Álvarez-Pedrerol, M.; Sunyer, J.; Querol, X. Road traffic and sandy playground influence on ambient pollutants in schools. *Atmos. Environ.* **2015**, *111*, 94–102. [CrossRef]
23. Schio, N.; Boussauw, K.; Sansen, J. Accessibility versus air pollution: A geography of externalities in the Brussels agglomeration. *Cities* **2019**, *84*, 178–189. [CrossRef]
24. Shackell, A.; Butler, N.; Doyle, P.; Ball, D. Design for Play: A Guide to Creating Successful Play Spaces. 2015. Available online: <http://www.playengland.net/wp-content/uploads/2015/09/design-for-play.pdf> (accessed on 8 June 2020).
25. Greater London Authority. Shaping Neighbourhoods: Play and Informal Recreation Supplementary Planning Guidance. 2012. Available online: [https://www.london.gov.uk/sites/default/files/osd31\\_shaping\\_neighbourhoods\\_play\\_and\\_informal\\_recreation\\_spg\\_high\\_res\\_7\\_0.pdf](https://www.london.gov.uk/sites/default/files/osd31_shaping_neighbourhoods_play_and_informal_recreation_spg_high_res_7_0.pdf) (accessed on 20 May 2020).
26. Carroll, P.; Witten, K.; Asiasiga, L.; Lin, E.Y. Children's Engagement as Urban Researchers and Consultants in Aotearoa/New Zealand: Can it Increase Children's Effective Participation in Urban Planning? *Child. Soc.* **2019**, *33*, 414–428. [CrossRef]
27. Van der Graaf, S. The Right to the City in the Platform Age: Child Friendly City and Smart City Premises in Contention. *Information* **2020**, *11*, 285. [CrossRef]
28. Molander, A.; Grimen, H.; Eriksen, E.O. Professional Discretion and Accountability in the Welfare State. *J. Appl. Philos.* **2012**, *29*, 214–230. [CrossRef]
29. UNICEF. UNICEF's Child Friendly Cities Initiative. *Child. Educ.* **2019**, *95*, 12–13. [CrossRef]
30. UNICEF IRC. *Building Child Friendly Cities, A Framework for Action*; UNICEF Innocenti Research Centre: Firenze, Italy, 2004.
31. Rismanchian, O.; Rismanchian, A. Children participation in planning processes: The case of Child Friendly City project in post-earthquake Bam, Iran. *Urban Des. Int.* **2007**, *12*, 143–154. [CrossRef]
32. United Nations Sustainable Development Goals. Available online: <https://www.un.org/sustainabledevelopment/sustainable-development-goals/> (accessed on 2 September 2020).
33. Wood, J.; Bornat, D.; Biquelet-Lock, A. Child Friendly Planning in the UK: A Review. 2019. Available online: <https://www.rtpi.org.uk/practice/2019/november/child-friendly-planning-in-the-uk-a-review/> (accessed on 22 March 2020).
34. Legislation.gov.uk. Equality Act. 2010. Available online: <https://www.legislation.gov.uk/ukpga/2010/15/contents> (accessed on 24 March 2022).
35. Lynch, K. Growing Up in Cities, MIT Press, Cambridge, Mass. in Derr (2015) 'Integrating community engagement and children's voices into design and planning education'. *CoDesign* **1977**, *11*, 119–133.
36. Chawla, L. Growing up in cities: A report on research under way. *Environ. Urban.* **1997**, *9*, 247–252. [CrossRef]
37. Chawla, L.; Van Vliet, W. *Handbook of Children's Rights*; Ruck, M., Peterson-Badali, M., Freeman, M., Eds.; Routledge: New York, NY, USA, 2017.
38. Ruck, M.; Peterson-Badali, M.; Freeman, M. (Eds.) *Handbook of Children's Rights*; Routledge: New York, NY, USA, 2017.
39. Gilbert, H.; Whitzman, C.; Pieters, J.; Allan, A. Children's everyday freedoms: Local government policies on children and sustainable mobility in two Australian states. *J. Trans. Geog.* **2018**, *71*, 116–129. [CrossRef]
40. RTPI Planning Horizons, no.3. Promoting Healthy Cities'. 2014. Available online: <https://www.rtpi.org.uk/media/1470/promoting-healthy-cities-full-report-2014.pdf> (accessed on 8 June 2020).

41. Children's Commissioner for England. Available online: <https://www.childrenscommissioner.gov.uk> (accessed on 24 March 2022).
42. Sport England. Planning for Sport Guidance. 2019. Available online: <https://www.sportengland.org/how-we-can-help/facilities-and-planning/planning-for-sport> (accessed on 2 September 2020).
43. UK CME (UK Chief Medical Officer). Physical Activity Guidelines'. 2019. Available online: <https://www.gov.uk/government/collections/physical-activity-guidelines> (accessed on 1 September 2020).
44. UNCRC (United Nations Committee on the Rights of the Child). General Comment No. 17 (2013) on the Right of the Child to Rest, Leisure, Play, Recreational Activities, Cultural Life and the Arts (Art. 31)'. 2013. Available online: <https://www.refworld.org/docid/51ef9bcc4.html> (accessed on 27 April 2020).
45. Lowe, M.; Foster, S. Neighbourhood characteristics and health: Advancing research and practice. *Lancet Public Health* **2021**, *6*, e351–e352. [CrossRef]
46. Finn, D. Streets, Sidewalks and COVID-19: Reimagining New York City's Public Realm as a Tool for Crisis Management. *J. Extrem. Events* **2020**, *7*, 2150008-1. [CrossRef]
47. Giles-Corti, B.; Sallis, J.F.; Sugiyama, T.; Frank, L.D.; Lowe, M.; Owen, N. Translating active living research into policy and practice: One important pathway to chronic disease prevention. *J. Public Health Policy* **2015**, *36*, 231–243. [CrossRef] [PubMed]
48. Lefebvre, H. The right to the city. In *Writings on Cities*; Original Work Published 1968; Kofman, E., Lebas, E., Eds.; Blackwell Publishers Ltd.: Oxford, UK, 2006; pp. 147–160.
49. Kemple, K.; Oh, J.; Kenney, E.; Smith-Bonahue, T. The Power of Outdoor Play and Play in Natural Environments. *Child. Educ.* **2016**, *92*, 446–454. [CrossRef]
50. Bento, G.; Dias, G. The importance of outdoor play for young children's healthy development. *Porto Biomed. J.* **2017**, *2*, 157–160. [CrossRef] [PubMed]
51. Krishnamurthy, S. Reclaiming spaces: Child inclusive urban design. *Cities Health* **2019**, *3*, 86–98. [CrossRef]
52. Frost, J.; Sutterby, J. Outdoor Play Is Essential to Whole Child Development. *YC Young Child.* **2017**, *72*, 82–85.
53. Dadvanda, P.; Nieuwenhuisena, M.; Esnaola, M.; Forsna, J.; Basagana, X.; Alvarez-Pedrerola, M.; Rivasa, I.; Lopez-Vicentea, M.; De Castro Pascuala, M.; Suf, J.; et al. Green spaces and cognitive development in primary schoolchildren. *Proc. Natl. Acad. Sci. USA* **2015**, *112*, 7937–7942. [CrossRef]
54. Bijnens, E.M.; Derom, C.; Thiery, E.; Weyers, S.; Nawrot, T.S. Residential green space and child intelligence and behavior across urban, suburban, and rural areas in Belgium: A longitudinal birth cohort study of twins. *PLoS Med.* **2020**, *17*, e1003213. [CrossRef]
55. Abhijith, K.V.; Kumar, P. Field investigations for evaluating green infrastructure effects on air quality in open-road conditions. *Atmos. Environ.* **2019**, *201*, 132–147. [CrossRef]
56. Bateson, T.; Schwartz, J. Children's Response to Air Pollutants'. *J. Toxicol. Environ. Health Part A* **2007**, *71*, 238–243. [CrossRef]
57. Oudin, A.; Braback, L.; Oudin Astrom, D.; Stromgren, M.; Forsberg, B. Association between neighbourhood air pollution concentrations and dispensed medication for psychiatric disorders in a large longitudinal cohort of Swedish children and adolescents. *BMJ Open* **2016**, *6*, e010004. Available online: <https://bmjopen.bmj.com/content/6/6/e010004> (accessed on 17 August 2020). [CrossRef]
58. Gehring, U.; Gruzjeva, O.; Agius, R.; Beelen, R.; Custovic, A.; Cyrus, J.; Eeftens, M.; Flexeder, C.; Fuertes, E.; Heinrich, J.; et al. Air Pollution Exposure and Lung Function in Children: The ESCAPE Project. *Environ. Health Perspect.* **2013**, *121*, 1357. [CrossRef]
59. Jedrychowski, W.; Mróz, E. The adverse effect of low levels of ambient air pollutants on lung function growth in preadolescent children. *Environ. Health Perspect.* **1999**, *107*, 669–674. [CrossRef]
60. Edwards, H.; Wellesley, L. Healthy Air for Every Child: A Call for National Action. Unicef. 2019. Available online: <https://downloads.unicef.org.uk/wp-content/uploads/2019/02/Healthy-Air-for-Every-Child-A-Call-for-National-Action-1.pdf> (accessed on 7 June 2020).
61. Parker, G.; Doak, J. *Key Concepts in Planning*; Sage Publications Ltd.: London, UK, 2012.
62. Alexander, E.R. Planning Rights: Toward Normative Criteria for Evaluating Plans. *Int. Plan. Stud.* **2002**, *7*, 191–212. [CrossRef]
63. Mandelbaum, S.M. Claiming rights warily. *J. Plan. Educ. Res.* **1989**, *8*, 193–194. [CrossRef]
64. IMD (Indices of Multiple Deprivation). 2019. Available online: <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019> (accessed on 12 April 2020).
65. Silva, E.; Healey, P.; Harris, N.; Van den Broeck, P. (Eds.) *The Routledge Handbook of Planning Research Methods*; Routledge: New York, NY, USA, 2015; p. 142.
66. Huchzermeyer, M. The Legal Meaning of Lefebvre's the Right to the City: Addressing the gap between global campaign and scholarly debate. *Geojournal* **2018**, *83*, 631–644. [CrossRef]
67. Nunes, R.J.; Parker, G. Institutional liminality, ideological pluralism and the pragmatic behaviours of a 'transition entrepreneur'. *Geoforum* **2021**, *126*, 215–223. [CrossRef]
68. Van Assche, K.; Verschraegen, G. The limits of planning: Niklas Luhmann's systems theory and the analysis of planning and planning ambitions. *Plan. Theory* **2008**, *7*, 263–283. [CrossRef]
69. Alexander, E.R. The public interest in planning: From legitimation to substantive plan evaluation. *Plan. Theory* **2002**, *1*, 226–249. [CrossRef]