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To cite this article: Geoff Bates, Md Nazmul Hasan, Andrew Barnfield & Krista Bondy (18 Oct 2023): Urban policies and the creation of healthy urban environments: A review of government housing and transport policy documents in the United Kingdom, Journal of Urban Affairs, DOI: [10.1080/07352166.2023.2260029](https://doi.org/10.1080/07352166.2023.2260029)

To link to this article: <https://doi.org/10.1080/07352166.2023.2260029>



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Urban policies and the creation of healthy urban environments: A review of government housing and transport policy documents in the United Kingdom

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ABSTRACT

Urban environments are key health determinants and play a critical role in improving health outcomes and equity. However, urban policies in the United Kingdom (UK) and globally frequently fail to produce healthy towns and cities. Given the highly centralized nature of UK policy, we analyzed national UK policy documents published since 2010 in two key areas of urban policy: housing supply and transport. We found that health is largely absent in narratives shaping urban development and, where health is included, it is as an assumed indirect outcome of delivering other policy agendas. Thus, we recommend that explicit direct and measurable health objectives must be integrated front and center in urban policies, and cross-sector collaboration across national government on health prevention to manage the complex linkages across policy areas. Evidencing the interactive effects between improving health outcomes and dominant urban policy agendas can incentivize shared accountability for health outcomes.

KEYWORDS

Urban health; policy; housing

Introduction

If we want to improve health outcomes in particular contexts, the policies surrounding those contexts need to include explicit statements that strongly emphasize health goals. The World Health Organization (WHO) recommends that health and health equity should be central to the governance and planning of urban areas (de Sa et al., 2022; UN-Habitat & World Health Organization, 2020). There are examples of how health has historically been an important factor within urban policymaking in the United Kingdom (UK). For example, the desire to reduce outbreaks of cholera and water-borne diseases were driving factors in the redesign of urban sanitation systems in 19th-century England (Cook, 2001; Tulchinsky, 2018). In the mid-20th-century, health and social well-being considerations were central to the development of new standards and recommendations for housing quality, size, layout, and space (Clifford & Ferm, 2021). However, currently it is rare to find health determinants prioritized in urban development and the current policy context is identified as restricting the potential for healthy place-making (Black et al., 2021; Carmichael et al., 2019). Given substantial evidence to suggest that urban spaces are an important determinant of health outcomes (Ige-Elegbede et al., 2021; Marmot et al., 2020; McKinnon et al., 2020) and that further vulnerabilities have been exposed by COVID-19 (Daras et al., 2021; Scott, 2020), understanding more about the limitations within the current national policy environment are crucial.

We focused on national-level UK government legislation and policy in the areas of housing supply and transport for two reasons: one, housing and transport are crucial parts of the built environment

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 Supplemental data for this article can be accessed online at <https://doi.org/10.1080/07352166.2023.2260029>

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and exert strong directly measurable effects on human and planetary health (Cooper et al., 2019; Mansour et al., 2022); and two, the national policy context is the core from which all other policy is created in centrally driven political systems, such as the UK which is “highly centralized and extremely top-down in terms of governance decision-making systems . . . and this is especially the case in England” (Billing et al., 2019, p. 743). While aspects of transport, housing and urban planning are devolved to regional and local administrations,¹ the UK Parliament still has the power to legislate over the devolved areas, and controls policy in England. Devolution and localism have been shaped by centralist governance structures and national government remains powerful (Colomb & Tomaney, 2016; Gurran et al., 2014). This is particularly the case in urban development, as the planning system remains highly centralized with local authorities adhering to nationally set regulations and targets (Askew, 2018). Local urban planning in England is therefore required to address national policy priorities, such as to increase the delivery of new housing (Ferm & Raco, 2020). We therefore set out to investigate: (i) the extent to which health is a factor within recent national government policies acting on the urban environment and (ii) what factors are most dominant in this policy space.

Following this introduction, we review the literature on the associations between health, the urban environment, and UK urban policies. We proceed to apply rigorous review methods to identify and analyze the content of national government policy documents. We critically evaluate how health is included in housing supply and transport policies and what other factors are used to justify and shape these areas. We identify that there is a hierarchy of justifications used to support housing supply and transport policy; and secondly, health is largely absent within this hierarchy. We discuss two key implications of these findings. One, it is often assumed that good or improved health is an automatic indirect outcome associated with achievement of other policy objectives, such as reducing air pollution. However, this is often not the case. Two, the current national policy environment in the UK is insufficiently managing the cross-sector issue of health and overlooks how the urban environment acts as a key health determinant. We make four recommendations on how to overcome these issues and to integrate health and national urban policy agendas, extending current international debates on improving how health and health equity are included in policies shaping sustainable urban environments (Giles-Corti et al., 2022; Lein et al., 2023; Mullenbach & Wilhelm Stanis, 2022).

Literature review: Associations between health and the urban environment

The built environment has long been identified as an important determinant of health outcomes (Dahlgren & Whitehead, 1991) and, therefore, policy frameworks have a critical role in shaping the design of urban environments that maximize health outcomes (de Sa et al., 2022). However, important policy frameworks for appraising and evaluating urban development policies in the UK such as the Transport analysis guidance (Department for Transport, 2022) and the Green Book (HM Treasury, 2022) do not focus on health outcomes. The places where people spend their lives have a substantial impact on their physical, mental, social, environmental, and economic well-being (Barton et al., 2015). The buildings and the characteristics of the neighborhoods they are built in, such as the presence of urban green space, transport and leisure facilities, and street layouts can all have protective or detrimental effects on health through pathways such as crime and anti-social behavior, safety, access to health and goods, and social support (Gibson et al., 2011; Hordyk et al., 2015; Jacobs et al., 2009; Swope & Hernández, 2019). Urban environments also have a dramatic impact on health equity and wider societal inequalities, where those who are most disadvantaged often endure the poorest quality urban environments (Marmot et al., 2020). This is known as environmental justice/racism, where the environmental burdens of society, such as vulnerability to flood risk, are disproportionately faced by poor and marginalized communities (Walker & Burningham, 2011).

Those exposed to poor quality housing that fails to protect them from internal and external hazards, such as damp, poor heating and ventilation, and poor noise insulation, may suffer affect upon health such as respiratory disease and poor mental well-being (Braubach & World Health Organization, 2011; Liddell & Guiney, 2015; Sharpe et al., 2018). While there are lower levels of

poverty and severe housing deprivation in higher income countries, poor quality housing remains a substantial concern in the UK where one third of households have at least one major housing problem relating to over-crowding, affordability, or poor-quality housing (Tinson & Clair, 2020). The cost of poor-quality housing to the UK National Health Service has been estimated to be £1.4 billion annually, with wider societal costs of £18.6 billion (Roys et al., 2016).

According to a recent review, urban transport systems are also linked to health and well-being in four ways: (i) access to key public services, particularly for groups such as older people and people living with disabilities, (ii) mode of transport, including the mental and physical health benefits of physical activity, (iii) facilitating social interactions and social inclusion, and (iv) impacts on the local environment such as air and noise pollution (Cooper et al., 2019). An estimated 40,000 deaths per year in the UK are attributed to outdoor air pollution (Royal College of Physicians [RCP], 2016) to which transport contributes around one third of nitrogen oxide emissions and 12% particulate matter emissions (DEFRA, 2019). Those living in more deprived areas suffer the worst health impacts associated with the transport system (Nieuwenhuijsen et al., 2016). For example, concentrations of air pollution are highest in the most deprived areas (Brunet et al., 2017) and lower-income groups typically endure lower quality and more limited transport options that are associated with poorer economic, social and health outcomes (International Transport Forum, 2017). Thus, it has been clear for some years now, that an effective government response to widespread inequalities must include considering the role of the urban environment and urban policies as important health determinants (World Health Organization & UN-Habitat, 2016).

Policy in the UK and the creation of healthy urban environments

Urban housing and transport policies therefore represent not only essential activity for regulating land development and providing places to live and work, but opportunities to support the creation or maintenance of the conditions likely to support good health outcomes (Carmichael et al., 2013; de Sa et al., 2022). Government policies such as those regulating land use, connectivity, transport, and green infrastructure can provide an opportunity to improve health outcomes (Nieuwenhuijsen et al., 2016) and the UK government are in a position to establish the national policy context, and to promote the importance of creating healthy environments.

Currently, national urban development policy is falling short of creating the conditions to support healthy placemaking, however. For example, in housing supply the government has introduced a range of policies that aim to support the building of 300,000 homes per year across England over the next decade (Barton & Wilson, 2021). However, these new homes are more likely to be of lower quality or fail to meet standards for internal space (Tinson & Clair, 2020) and imposing national targets that do not account for regional variations risks failing to respond to local needs and widening disparities (Ayres et al., 2023). A recent examination of English national building regulations reveals substantial gaps in the use of public health evidence, leading to the negation of health in building standards and absence of health integration across the wider policy system (Carmichael et al., 2020). This comes at a time of change and uncertainty in the UK's urban development system with the establishment of the government-wide Net Zero and Levelling Up agendas,² with government attempts to overhaul the planning system (Ministry of Housing, Communities and Local Government [MHCLG], 2021a), and with changes in government spending due to economic crisis and instability (Broadbent et al., 2023).

Likewise in transport policy, opportunities to create healthy environments appear not fully supported by current national approaches. The government has made significant efforts to address air pollution associated with transport systems through expanding measures in some cities such as Clean Air Zones and Low Traffic Neighbourhoods.³ Where introduced, such measures have had some success at reducing pollution with likely health co-benefits (Carnell et al., 2019; Yang et al., 2022). However, local implementation of these approaches remains challenging (Rashid et al., 2021) and such measures only reduce some of the adverse exposures generated by air pollution and noise and do not address many complex linkages between transport and health (Cohen et al., 2014). In the UK and other developed countries, new technological solutions such as autonomous vehicles and electric cars

have been promoted as key tools to tackle the health impacts of motor vehicles (Choma et al., 2020). However, electrifying the transport system does not directly address risk to health and well-being from, for example, inactive lifestyles, road traffic accidents, or traffic congestion. Further challenges remain such as overdependence on fossil fuel-driven cars. More pro-health and pro-environmental transport planning and policies are therefore warranted to provide greater, greener and cost-effective connectivity, safer urban environments, and active travel friendly amenities (Nieuwenhuijsen & Khreis, 2019b).

By establishing pro-health agendas in national policies, the UK government can provide one part of the intervention landscape necessary in responding to the intersection of two complex systems—health and urban development. An area of complexity is that many stakeholder groups are involved in urban development in the UK and power and decision-making is dispersed across different levels and sectors. Local authorities have responsibility in areas such as land allocation, planning decisions and enforcing regulations, and private sector stakeholders such as developers, investors and landowners hold substantial power in the system (World Health Organization, 2016). However, the private sector sees the government as having responsibility for integrating health in urban development (Black et al., 2021) and, in the UK's highly centralized system, national agendas can act as a barrier or facilitator to how health is included in local development by establishing priorities, standards and targets that local actors in public and private sectors must adhere to (Carmichael et al., 2019; Reid, 2023). Given this view, and the fact that the private sector is largely responsible for generating new housing provision in the UK (Black et al., 2021), it is crucial that health outcomes and requirements must be clearly stated in nationally implemented policies and regulations to enable and support healthy local development (Ayres et al., 2023). Where they are not, this restricts the potential for healthy placemaking (Le Gouais et al., 2023) as there is limited opportunity for local authorities to enforce additional standards (Carmichael et al., 2019).

Clearly, changes in national policy alone are insufficient to nudge the health and urban development systems into better alignment. It will require a range of interventions across all aspects of delivery of urban development spaces. For example, one intervention that is helping to integrate health at the local level is the health impact assessment (HIA), which can be applied to urban development plans to understand the possible health impacts of proposals. HIA is undertaken by spatial planning and public health departments in local authorities at the project, program, or plan scale (Public Health England, 2020). However, this intervention is itself limited in its impact, for instance in that while HIA is recommended during urban planning processes it is not mandatory, and consequently is frequently not carried out (Callway et al., 2023). Additionally, healthy placemaking does not only involve new developments, but the improvement and regeneration of existing housing and infrastructure. The UK has some of the oldest housing stock in the world (Piddington et al., 2020) which has implications for health through energy inefficiency and poor housing conditions, with older housing more likely to be classed as “non decent” (Tinson & Clair, 2020). Therefore, HIAs are themselves another part of the necessary intervention landscape, and connecting these to other interventions designed to better manage health in existing housing stock through national policy could be very useful.

Materials and methods

The method used in this review was adapted from a method for thematic synthesis of qualitative research in systematic reviews (Thomas & Harden, 2008) to identify and analyze the content of government policy documents in a rigorous, transparent, and consistent manner.

Inclusion and exclusion criteria

Identified documents were assessed against pre-determined criteria. Only documents authored by the UK national government from May 2010 to August 2022 were eligible. This choice was made to reflect the period that the current Conservative government has been in power in the UK, and to cover

a substantial period of urban development policy initiatives with sufficient documents in which to identify common justifications. Policy documents were defined as any document that set out or discussed legislation, policy or strategy, and included, but were not limited to, Acts of Parliament, white papers, and green papers.⁴ Where Acts of Parliaments were identified, the accompanying explanatory notes⁵ and the second reading of the Bill in Parliament, recorded in Hansard,⁶ were included for review as sources of context and background for policy beyond that recorded in the act itself.

Documents that focused on (i) the provision of transport services or transport infrastructure and (ii) housing supply were eligible. To support our aim to understand policy acting on urban environments specifically, we excluded documents that focused on the transport system outside of urban areas specifically (for example motorway, national railway, aviation, and maritime policies). To maintain focus on housing supply, we excluded housing-related documents that focused on maintenance or safety, regulation of the rental market, and commercial developments.

Document identification

A comprehensive search was designed to identify relevant policy documents in UK government databases. The titles of all documents within the relevant sections of three databases (see [Table 1](#)) were scanned and potentially relevant documents downloaded for further scrutiny against the inclusion criteria. All decisions on whether to include or exclude a document assessed as potential relevant were checked by a second member of the team.

Through our search, we identified 38 documents to include in the analysis; 22 documents focused on transport and 16 focused on housing supply. A variety of document types were identified throughout the review period, including acts and their relevant explanatory materials, post-legislative assessments, policy statements, strategies, and white and green papers.

Analysis process

Given the heterogeneity of documents identified and our goal of identifying explicit justifications used to support the policy, we followed a five-step process. First, using Excel, we organized the included documents according to four identifying characteristics (e.g., authoring department) and policy area (housing or transport). Second, we identified sections of the document focused on explaining or justifying the policy. We sought sections that explained the problems being addressed, the justifications for the policy, and its intended outcomes. In shorter documents, the entire document was reviewed. In very lengthy documents, we coded only sections that not only featured justifications, but were given greater emphasis, for example where concepts were referred to multiple times or were highlighted as being of particular significance. This typically included sections such as the foreword, executive summary, and introduction, but also included additional sections specific to the document identified on a case-by-case basis. Detail on the specific document sections coded is included within the supplementary materials ([Appendix 1: Documents analyzed in the review](#)).

Table 1. Search methods.

Source	Search approach
Legislation.gov.uk	All acts listed were screened. For potentially relevant acts, explanatory notes and the second reading of the bill recorded in Hansard were sought.
Gov.uk/official-documents	All titles screened within topics: Housing, Local and Community; Transport
Gov.uk/search/all	All titles screened within topics: Housing, Local and Community; Driving and Road; Local Transport; Rail; Road; Infrastructure; Accessibility and Mobility; Transport Planning; Modelling and Appraisal; Freight and Cargo

Third, we coded relevant pieces of text using our coding framework, provided in the online supplementary materials (Appendix 2: Coding framework). The first iteration of the coding framework was developed using deductive codes based on the literature review summarized above and was populated by terms/phrases used to justify urban development policy. To test the validity of this coding framework a pilot analysis was conducted. Three members of the research team reviewed five documents covering a mixture of topics within both housing supply and transport. They independently selected relevant sections and used an inductive coding approach to code text within these sections. The selected document sections and the codes identified were discussed by the team to support mutual understanding of what codes meant and what content was to be coded. Codes identified in this pilot analysis were used to further develop the coding framework.

Fourth, codes were used to capture the explicit policy justifications in these documents, including how health features as well as any other important factors within the documents that explained or justified the policy. This included a determination as to whether the factor mentioned was the main or dominant justification, or whether it was a secondary justification. Secondary justifications were given less emphasis in documents or presented as a co-benefit of the dominant justification. Where additional codes were identified post-pilot, these were added to the framework following discussion. When this step was complete, the fifth step was the research team independently grouped codes into initial themes. These independent groupings were compared and further developed as one set of themes and subthemes through an iterative process of discussion and revision between the team.

Results

Our five-step analysis process led to two main findings: one, there is a hierarchy of factors used to justify the need for both housing and transport policy; and two, health is *neither* a dominant justification, *nor* it is often a secondary justification, with it frequently being absent in the policy space. We discuss first the dominant and secondary factors we identified and then proceed to discuss health narratives within the documents included in our review.

Finding 1: Mapping the hierarchy of justifying factors

Overall, five themes, representing two levels of hierarchy, were identified through our analysis that demonstrate the key narratives used to justify UK housing supply and transport policies since 2010. These five overarching themes, representing the factors used to explicitly justify the policy being discussed, were made up of one or more related subcomponents. Housing supply and transport each had one dominant factor used to justify policy above other factors in the period under review, *increasing housing supply* and *improving urban mobility* respectively. The three secondary justifying factors were shared by both policy fields: *supporting social well-being*, *improving the economy*, and *improving the natural environment*. Full details and characteristics of the 38 documents included in this review⁷ are presented in the supplementary materials (Appendix 1: Documents analyzed in the review), including the themes identified in each individual document.

Dominant justifying factors in housing supply and transport

Within housing supply and transport documents, one dominant factor each were identified. These, along with the key components of each dominant factor, are presented in Table 2. The central justification of housing policy documents strongly emphasized the importance of increasing the supply of new housing. Other justifications were used to support this central justification, reflecting the priority given to increasing homebuilding in response to what was commonly identified as insufficient new housing and blockages within the planning system. Documents consistently referenced the shortage of housing compared to demand and recognized shortages in social housing and desires to facilitate increased home ownership (*component 1.1 increasing access to housing*). To meet supply demands, documents emphasized the importance of improving the

Table 2. Example of dominant justifications within policy documents.

Dominant justifications	Components of dominant justifications	Policy field (# of documents)	Illustrative extract
1. Increasing housing supply	1.1 Increasing access to housing	Housing ($n = 13$)	"The consensus is that we need from 225,000 to 275,000 new homes per year to keep up with population growth," Fixing Our Broken Housing Market (2017).
	1.2 Facilitating housing delivery	Housing ($n = 12$)	"Central government departments need to play a role in making more land available for development . . . so increasing the supply of housing," Accelerating the Release of Public Sector Land, 2011
2. Improving urban mobility	2.1 Supporting innovation & modernisation	Transport ($n = 12$)	"We will create a fertile environment for innovation and investment," Future of Mobility: Urban Strategy (2019)
	2.2 Changing modes of transport	Transport ($n = 12$)	"Vast numbers of car journeys are very short and could easily be traveled by bicycle," Gear Change (2020)
	2.3 Improving experiences of using the transport system	Transport ($n = 17$)	"We want any bus traveler to purchase tickets quickly and conveniently while seamlessly moving from one operator, or mode of transport, to another," Green Light for Better Buses (2012)

efficiency and speed of delivery mechanisms to increase the rate of land release and of simplifying the planning system (*component 1.2 facilitating housing delivery*). Recently the government have proposed radical reform to the planning system with seeds planted throughout the documents reviewed here establishing the need for such reform. The Prime Minister's foreword in the recent white paper Planning for the Future emphasizes "we have nowhere near enough homes in the right places" and proposes a system that will deliver "results in weeks and months rather than years and decades" (Ministry of Housing, Communities and Local Government [MHCLG], 2020, p. 6).

Transport documents were not as clearly structured around one central issue. However, a core justification for improving mobility in urban areas was identified, which recognized the need to facilitate changes in how we travel around urban areas. This included modernizing the transport system with new technology and innovation (*component 2.1 Supporting innovation and modernization*) to support the use of different transportation methods (*component 2.2 Changing modes of transport*). Most commonly ($n = 17/22$ documents) it included the need to reduce congestion and reduce the cost and time involved in using urban transport systems, to get around more easily (*component 2.3 Improving transport experience*). Within this theme was an intent to change urban transport systems, for example to replace car use with public transport or active travel options, or to upgrade infrastructure to support electric vehicles. While the dominant justification for housing policy had remained constant since 2010, our analysis suggests that in recent years, the push toward decarbonization and Net Zero across UK government policy areas is becoming a dominant narrative used to justify transport policies. Recent government commitments to end sale of new petrol cars by 2030 (Department for Transport. et al., 2020) and to facilitate active travel as the first-choice form of transportation as outlined in the 2020 report Gear Change: A Bold Vision for Cycling and Walking have clear intended impacts on how the population travels around. In the transport documents reviewed here since 2018, decarbonization was becoming a dominant issue above, rather than as a co-benefit from, improving mobility.

Shared secondary justifications

As well as being important priorities themselves, housing supply and urban mobility were discussed as having important supporting outcomes, or co-benefits, based on environmental and economic sustainability. These secondary justifications were found to coalesce around three areas that were shared by both housing and transport policy spaces. These secondary justifications are summarized in Table 3. In some cases, these were presented as the dominant justification in a small number of documents, but in the overall body of documents reviewed were secondary to the two dominant factors.

Table 3. Secondary justifications within policy documents.

Secondary justifications	Component of secondary justifications	Policy field (# of documents)	Illustrative extract
1. Improving the natural environment	3.1 Environmental sustainability	Transport ($n = 14$); Housing ($n = 3$)	"To protect and enhance our natural, built and historic environment; including . . . improving biodiversity, using natural resources prudently," National Planning Policy Framework, 2021.
	3.2 Air pollution	Transport ($n = 11$)	"We want new cars and vans to be as clean as possible as fast as possible," The Road to Zero, 2018.
	3.3 Climate change	Transport ($n = 8$)	"Climate change is the most pressing environmental challenge of our time," Decarbonising Transport, 2020.
2. Improving the economy	-	Transport ($n = 19$); Housing ($n = 8$)	"Unblocking the market will provide a much-needed boost to employment," Laying the Foundations: A Housing Strategy for England, 2011.
3. Supporting social well-being	5.1 Empowering communities	Housing ($n = 7$); Transport ($n = 7$)	"We will ensure our social homes are safe and decent, that issues are resolved and residents' voices are heard," A New Deal for Social Housing, 2018.
	5.2 Creating good quality places	Housing ($n = 7$)	"Collectively, we need to remember how to build beautiful homes and create beautiful places," Planning for the Future, 2020.
	5.3 Connecting people	Transport ($n = 8$)	"Bus services . . . help connect people to education, jobs and healthcare, together with boosting our local economies," Bus Services Act, 2017.

Secondary justification: Improving the natural environment (#3). Improving the quality of urban environments and supporting planetary sustainability was an important and growing narrative within transport documents. This was particularly true in the most recent documents from 2018 onwards. Most frequently this was discussed in the context of reducing emissions and the related issue of improving air quality, and the importance of responding to the climate crisis. For example, the 2022 Electric Vehicle Infrastructure Strategy begins with statements on decarbonization and reducing emissions, and the 2022 Cycling and Walking Investment Strategy highlights improved air quality as a key driving factor for supporting promotion of active travel. Beyond the most recent documents, decarbonization and air pollution were more commonly discussed in close relation to modernizing the transport system, and as benefits of switching to alternative modes of transport from petrol and diesel cars. Plans to end sales of new petrol and diesel cars have become more ambitious recently, with the new target date of 2030 replacing that of 2040 set out in documents as recently as in 2018's *The Road to Zero*. These narratives were most common amongst the more recent publications and are likely to remain an important theme in the context of the looming climate crisis. For example, in "Decarbonising transport: Setting the challenge," the documents starts with the clear statement of intent "Climate change in the most pressing environmental challenge of our time. There is overwhelming scientific evidence that we need to take action, and doing so is a clear priority for the Government" (Department for Transport, 2020, p. 3).

Improving the environment was a less common theme within housing supply documents. Environmental sustainability was identified as an important narrative within a small minority of documents, despite the significance of decarbonization targets when planning new housing and the need to ensure that new developments are resilient to climate change (Committee on Climate Change, 2019). However, it should be noted that this review excluded policy documents focusing specifically on building regulations where this theme may have been more prominent. However, that factors relating to planetary health were rarely identified within the included housing documents, perhaps reflecting concerns about the UK government's commitment to act on climate change (Somerville, 2020) including in housing policy (O'Neill & Gibbs, 2020).

Secondary justification: Improving the economy (#4). Economic growth was a very common feature of transport documents that highlighted how investing in transport can stimulate the economy on local and national levels in different ways. It was closely linked with the core transport justification

(*Increasing urban mobility*) and its component 2.1 *Supporting innovation and modernization*. For example, in “Decarbonising Transport: Setting the Challenge” (2020) and the “Urban Mobility Strategy” (2019), the ministerial forewords emphasized the economic opportunities that tackling emissions and the shift toward electric car ownership presents for design and manufacturing industry and technological innovation. In “Decarbonising Transport: Setting the Challenge,” one of six strategic priorities identified is the “UK as a hub for green transport technology and innovation” (Department for Transport, 2020, p. 7) and the document highlights from the outset that the UK is a “global center for world-leading science, technology, business and innovation and we are perfectly placed to seize the economic opportunities that being in the vanguard of this changes presents” (Department for Transport, 2020, p. 3). The first Cycling and Walking Investment Strategy (2017) highlighted productivity benefits for businesses from increasing active travel for business alongside cheaper travel, better health, and environmental improvements. Economic benefits from increasing the supply of housing have been highlighted in documents throughout the decade, although in comparison to transport the economy was less emphasized amongst the sample of documents. For example, the 2011 Laying the Foundations strategy includes dual aims of driving the economy and local job creation, and opportunities for home ownership, and 2021’s updated National Planning Policy Framework emphasizes the importance of building a strong economy and giving significant weight in decisions for policy that support economic growth and productivity.

Secondary justification: Supporting social well-being (#5). Within housing documents, health was most closely recognized as the need to empower residents to be engaged with local development and to create fairer and better-designed communities that they feel attached to (component 5.1 *Empowering communities*). Urban planning can affect social well-being through supporting or limiting opportunities to form networks and sustain rich communities through housing and transport strategies (Barton & Tsourou, 2013). This was best exemplified here in the 2018 green paper “A New Deal for Social Housing” that also highlighted the need to empower social housing residents to gain control over their home, hold landlords to account and reduce stigma.

Planning policy documents, including the 2020 white paper “Planning for the Future” and the 2021 updated “National Planning Policy Framework,” emphasized the need to support social opportunity through quality of place. For example, the “National Planning Policy Framework” includes a social objective to “support communities’ health, social and cultural well-being” through increasing housing supply, as well as “fostering well-designed, beautiful and safe places with accessible services and open spaces” (Ministry of Housing, Communities and Local Government [MHCLG], 2021b, p. 5).

These documents stated the case for supporting residents to better engage with planning decisions that will impact them. Involving communities in local planning processes and decision-making can empower residents and improve attitudes toward their local areas and create positive sense of place (Baba et al., 2017; Nieuwenhuijsen et al., 2017). The 2020 white paper “Planning for the Future” and a small number of other documents also highlighted the importance of attractive and well-designed urban areas that people will enjoy being in and feel proud of (component 5.2 *Creating good quality places*). In the aftermath of the influential 2020 report “Living with Beauty” from the Building Back Building Beautiful Commission (2020), the government’s response indicates a strong support to focus on the creation of beautiful places, good design and placemaking (Ministry of Housing, Communities and Local Government [MHCLG], 2021c). This may therefore become an important narrative, although the extent to which health and well-being outcomes are a factor driving thinking is unclear.

The central theme in transport documents of improving urban mobility has clear implications for social well-being, although these were not necessarily well-recognized in the documents with only a minority represented within component 5.3 *Connecting people*. Improving access to services such as shops and education featured in several documents. Within one document, the “Inclusive Transport Strategy,” improving mobility was more directly discussed in the context of social well-being including the importance of creating an inclusive transport network and reducing social exclusion, as well as

supporting the rights of local people. However, these well-being benefits were not widely highlighted across the documents promoting mobility and in the quoted example the emphasis from the outset on work and societal contribution is noted.

Finding 2: Health is rarely featured in policy acting on the urban environment

Conceptualizations of health common to public health such as preventing disease, prolonging life and promoting good physical and mental health rarely featured to any substantial extent in either housing or transport documents. We identified scant examples of an explicit emphasis on influencing health outcomes, such as morbidity, mortality or specific health conditions, and a lack of any clear and measurable health targets from implementing urban policies. Similarly, overarching concepts such as public health, health improvement, and health protection were very rarely discussed compared with the dominant and secondary factors. When mentioned, more commonly in transport documents, health was typically referred to briefly and in broad terms, such as stating the desire to improve health or quality of life without providing detail such as targets or specific conditions. For example, in the 2017 “Transport Investment Strategy” the case is made for a transport investment strategy and refers to the importance of safeguarding health with no elaboration on what this means or how it should be delivered.

Health does not appear therefore to be a strong driving factor in UK housing and transport policy. We can however draw associations between the themes identified in this analysis and health. For example, increasing access to affordable housing or reducing fuel emissions has evidence-based benefits for health and well-being. However, health appears to be viewed more as an outcome from achieving other policy aims rather than a key driver of policy in itself. For example, in the 2020 white paper “Planning for the Future,” the ministerial foreword begins with a statement of the need for reform to urban planning with reference to COVID-19, but uses this as a springboard to discuss economic and social impacts rather than any explicit health ones.

In the most recently published transport documents in this review however, there are indications that health has become a more important narrative since the start of the COVID-19 pandemic. For example, in the 2020 report “Gear Change: A Bold Vision for Cycling and Walking,” the prime minister states how the pandemic has drawn attention to the value and enjoyment of cycling and on our health. This document stands out in this review with its emphasis on specific health benefits including prevention of chronic conditions including heart disease, cancers and depression as important reasons why changes in modes of transport are needed. In contrast, the Cycling and Walking Investment Strategy from 2017 includes broad reference to health, but they are not emphasized alongside three key ambitions to create better streets, better mobility, and better safety. Beyond safety-related outcomes, the objectives in the 2017 strategy do not include any health outcomes. However, in the 2022 update to this strategy, health appears as a dominant justification for increasing cycling and walking. Alongside environmental and economic benefits the update points to how active travel improves health and fitness and how by increasing physical activity and improving air quality. While health remains absent in housing supply and much of transport policy, it appears to have gained a greater foothold within rhetoric about active travel.

Discussion

While our findings show some early movement toward mention of health in recent policy documents, it is clear that the UK government’s housing supply and transport policies are falling short of creating the policy context for urban development to improve and protect health and health equity. This is important because it is through these documents and policies that the context for urban development in the UK is designed, implemented, and lived. As the COVID-19 pandemic has reinforced, where we live matters for our health. Integrating health into urban planning and including health in policy decision-making is critical for the creation of healthy towns and cities and to tackle widespread

inequalities (de Sa et al., 2022; World Health Organization & UN-Habitat, 2016). In the highly centralized system in the UK, integrating health into local decision-making requires health agendas to be set out in national-level policies (Ayres et al., 2023; Le Gouais et al., 2023). Our two key findings highlight two interesting implications for placemaking and placemaking policy. First, it is often assumed that good or improved health is an automatic and indirect outcome associated with achievement of other policy objectives, such as reducing air pollution. Second, the current UK policy environment is insufficiently managing the cross-sector issue of health and mostly overlooks the complex linkages between policy areas, failing to connect the proposed social, environmental and economic benefits in ways that would enable a robust scrutiny of their contribution to health and health equity outcomes. The health implications of key policy areas, such as housing and transport, are not being explicitly addressed, leaving us vulnerable in the long-term to health crises such as COVID-19, and continued and/or worsening poor health experienced by many in urban spaces. We discuss these important factors that currently limit opportunities for healthy placemaking and actions to help to overcome them under four broad and reinforcing recommendations. Together these can support the integration of health and national urban policies.

Recommendation 1: Health needs to be a direct outcome of policy

The hierarchy of justifications for the housing and transport policy spaces leave little doubt that national government policy creating urban environments does not prioritize health. Notions of health common to public health as preventing disease, prolonging life and promoting good physical and mental health rarely featured in the documents we analyzed. Where it is included, it is an assumed indirect outcome from achieving other dominant policy objectives. This implicit assumption that health benefits will be created through the achievement of other policy objectives, such as reducing air pollution, is a crucial insight. There is little evidence to suggest that policies assuming health benefits as implied outcomes of other objectives will result in anything more than ancillary or ad hoc improvements in health. For example, policy actions to improve environmental sustainability appear to have mixed or little impact on health measures (Swann et al., 2019).

Integrating health and health actors into urban decision-making and including health outcomes to measure policy impact, and not simply numbers of houses being built, is vital to ensure urban development foregrounds good health for all (Wernham & Teutsch, 2015; World Health Organization & UN-Habitat, 2016). Beyond broad rhetoric about the importance of healthy urban environments, policies must include clear and measurable health targets if they are to be effective (Giles-Corti et al., 2022; Lowe et al., 2022). Where health objectives and justifications are not included in policy shaping the urban environment, non-health actors may overlook the health implications of their decisions and opportunities may be missed (Corburn et al., 2014). There are reasons for optimism in the direction of policy as identified in our analysis, such as increasing attention on quality of place, decarbonization, and active travel. These agendas are likely to have health as an indirect outcome, but new policies must include clear requirements to achieve health objectives if health outcomes are to remain prioritized alongside other dominant agendas.

Recommendation 2: Health sensitive policy requires cross-sector, collaborative action

Establishing health front and center in urban policies and delivering on such objectives will require greater collaborative action across government. Currently, the UK policy environment is insufficiently managing the cross-sector issue of health and even where health is included in urban policies, there is insufficient collaboration between health experts and other policymakers. The following extract from the government's response to a recent report by the Building Better, Building Back Building Beautiful Commission (2020) that called for the creation of beautiful urban areas illustrates this. On the one hand, it promotes the importance of supporting good health and well-being, yet it omits health stakeholders from the list of important partners and leaders in its delivery:

To fulfil this role, the Secretary of State works collaboratively with many other Cabinet Ministers to ensure successful placemaking, including with the Secretary of State for Transport, the Secretary of State for Environment, Food and Rural Affairs and the Secretary of State for Business, Energy and Industrial Strategy, and with relevant Ministers of State, in particular, the Minister for Housing and Minister of State for Regional Growth and Local Government. (MHCLG, 2021c, p. 33)

The WHO emphasizes the need for cooperation between public health, planning and environmental sectors to support better health (Prüss-Üstün et al., 2016), and a lack of partnership working in the planning system has long been recognized as a barrier to integrating health into decision-making (Carmichael et al., 2012; Wernham & Teutsch, 2015). If we want to ensure that health outcomes are established in urban policies, then closer integration between urban developers and health stakeholders is required. This is not a unique problem in urban development—there is a lack of joined up working across government departments (Coyle & Muhtar, 2023) and policy silos are common where teams focus on delivering their own departmental agendas without considering interactive effects across policy areas (Shearer, 2022).

Recommendation 3: Shared accountability in national policy is needed to embed health in policymaking

Increasing shared accountability and collaborative working across areas of national policy on health appears key therefore for supporting the integration of health outcomes in urban policies. This requires a coordinated cross-government approach to establish health prevention in areas of policy outside of the health sector (Iacobucci, 2022; O’Dowd, 2023). As demonstrated in our review, the “leveling up” and Net Zero agendas have become established cross-government agendas commonly featured in urban development policy documents. Approaches supporting collective ownership and collaboration across government departments on the Net Zero strategy include the establishment of two ministerial cabinet committees and a strategy implementation group including senior officials across government departments (Smith, 2021). Embedding a similar “whole of government” approach whereby actors work across departmental boundaries to understand policy co-benefits and other agendas (Ortenzi et al., 2022) for health prevention is critical if health outcomes are to be integrated into urban development policy. This will require leadership at national level underpinned by long-term thinking and commitment to promote the health agenda (Guglielmin et al., 2018; Stahl, 2018) with ownership for the strategy from the Prime Minister and Treasury who have the power to drive this agenda (Dixon & Everest, 2021; Merrifield & Nightingale, 2021). This would not only raise the health agenda in national policy documents but can strengthen the integration of health into other policy areas at local level (Guglielmin et al., 2018).

Recommendation 4: Emphasizing the interactive effects between health and key urban policy agendas can incentivize stakeholders across government silos

To reach across silos and incentivize a shared pro-health agenda, messages can be reframed to demonstrate how health can help to deliver dominant agendas. Our review demonstrates how health outcomes currently fall underneath other departmental agendas in a hierarchy of priorities for urban policy actors. “Win-win” approaches that emphasize the interactive effects between health, economic and environmental benefits can create the case for investing in health without reducing attention on other agendas (Freiler et al., 2013; Molnar et al., 2016). Reframing how health is important *for* all policies, rather than *in* all policies, will help to emphasize mutual benefits across policy areas from improving population health (Greer et al., 2022). For example, supporting a healthier workforce will improve productivity and reduce absence from work, which can help drive economic growth and innovation (British Medical Association [BMA], 2022). Healthier adults are more likely to choose alternative transportation than using their car (Bopp et al., 2013; Naumann et al., 2009), which could help to deliver on agendas on air pollution,

transport congestion and decarbonization. These examples illustrate how health is not only a by-product of delivering other important agendas, but is a critical factor in their success that may incentivize stakeholders who are not primarily concerned with health objectives. Recognizing that in urban development many actors are not driven primarily by health or social concerns (Leclercq et al., 2020), evidencing the co-benefits from improving public health for achieving other agendas may be a more effective message that facilitates implementation of health in other policy areas (Molnar et al., 2016).

Strengths and limitations

The strengths of the review include the comprehensive approach adapted from established systematic review methods to scrutinize policy documents in a consistent and transparent manner. This included extensive searching within government databases and the application of clear inclusion and exclusion criteria. We included processes to ensure our analysis was robust and replicable in the context of the challenges of reviewing this heterogeneous literature. The pilot analysis helped to develop the process as well as the coding framework used to support consistent and transparent analysis of these documents. We hope that the methods we employed in this review will help other researchers interested in reviewing large-scale policy documents to identify policy narratives, justifications, and gaps in critical areas to understand and inform the desired policy space.

We recognize that policy can have long-term causes and that examining the historical context can help us understand current policy (Howlett, 2019). However, it was beyond the scope of this review to examine how health featured within documents earlier than 2010. Housing supply and transport are two significant policy areas associated with health impacts and provide good examples through which to examine how health features. However, we recognize the significance of other aspects of the urban development system, such as building safety and air quality, and the importance of locally driven policies and interventions as well as what happens at national level. Finally, while we have examined what these policies set out to do, we acknowledge the “policy-implementation gap” where what is implemented does not necessarily reflect what is proposed. We argue however that by understanding the important narratives in policy documents, we can better frame evidence and narratives to support policymaking that prioritizes healthy urban development.

Conclusion

Current UK housing and transport policies rarely prioritize health outcomes and fail to provide the context through which healthy urban development can be achieved. Future policy acting on urban development will need to consider how to protect against and mitigate the impacts of future infectious disease outbreaks (Megahed & Ghoneim, 2020) and, more widely, the increased attention on the association between health, inequalities and urban development presents an opportunity to go further. This is global problem. For example, a review of urban policies in Latin America concluded that health is insufficiently included in justifying policy (Lein et al., 2023) and housing and transport policies are frequently failing to improve, or even harming, health outcomes (Nieuwenhuijsen & Khreis, 2019a). We need housing and transport policies that seek to explicitly prioritize health outcomes alongside other important agendas, recognizing their role as key drivers of non-communicable diseases and health inequalities in urban areas. By prioritizing the prevention of poor health and health inequalities, such as by investing in providing good-quality housing and developing connected, safe, and pleasant communities, we can protect health and mitigate the health impacts of crisis events such as future outbreaks of infectious disease and the impacts of climate change. However, urban policy conditions in the UK may not be conducive to taking advantage of this opportunity: government does not prioritize health outcomes, and there is insufficient cross-departmental collaboration on health despite the urban environment’s critical role as a health determinant. Overcoming this requires health to be front and center in urban policies through direct and measurable outcomes, which can be achieved

through cross-sector collaboration across national government on the health prevention agenda. Establishing this cross-government strategy requires buy-in and commitment from the top of government and across key departments and leaders. Evidencing the interactive effects between improving health outcomes and dominant urban policy agendas can help to incentivize this shared accountability.

Notes

1. The UK government makes laws and policies that can include England, Wales, Scotland and Northern Ireland. However, there are many devolved powers and legislative competencies to the administrations in each country.
2. Levelling Up in the UK has become an important part of government policy in recent years. It is a cross-government agenda with the stated intention to reduce widespread geographical economic inequalities. The UK government's Net Zero strategy is to gradually reduce greenhouse gas emissions and achieve a decarbonized economy by 2050.
3. Clean Air Zones are areas of a city with measures in place to improve air quality, including charges for vehicles entering the zone that fail to meet environmental standards. Low Traffic Neighbourhoods restrict access to roads in residential areas for vehicles while supporting use by cyclists and pedestrians.
4. White and green papers are consultation papers produced by the government. Green papers discuss potential policy proposals and white papers provide a statement of the intended government policy or strategy.
5. Explanatory Notes accompany each Act of Parliament.
6. Hansard is the official record of all parliamentary debates. In the UK, a bill must pass through first reading, committee, second reading and third reading in both houses of Parliament. It is at the second reading that the principles of the bill are debated in Parliament.
7. To avoid confusion occurring from citing the same small number of government departments when referring to the 38 documents included in this review, the documents are identified by their title. Full citation details for each document are included in the supplementary materials in Appendix 1.

Acknowledgments

The authors would like to thank colleagues at the University of Bristol Sarah Ayers, Daniel Black, and Jenny Hatchard for their input on the development of study methods and reviewing the article drafts.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was supported by the UK Prevention Research Partnership (award reference: MR/S037586/1), which is funded by the British Heart Foundation, Cancer Research UK, Chief Scientist Office of the Scottish Government Health and Social Care Directorates, Engineering and Physical Sciences Research Council, Economic and Social Research Council, Health and Social Care Research and Development Division (Welsh Government), Medical Research Council, National Institute for Health Research, Natural Environment Research Council, Public Health Agency (Northern Ireland), The Health Foundation and Wellcome.

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Data availability statement

The data that support the findings of this study are available from the corresponding author, [GB], upon reasonable request email: gb818@bath.ac.uk.

References

- Askew, J. (2018). A British perspective on added value capture: Ups and downs during its history. In J. Gerber, T. Hartmann, & T. Hengstermann (Eds.), *Instruments of land policy: Dealing with scarcity of land* (pp. 74–77). Routledge.
- Ayres, S., Barnfield, A., Bates, G., Le Gouais, A., & Pearce, N. (2023). What needs to happen to ‘level up’ public health? *Contemporary Social Science*, 1–27. <https://doi.org/10.1080/21582041.2023.2232765>
- Baba, C., Kearns, A., McIntosh, E., Tannahill, C., & Lewsey, J. (2017). Is empowerment a route to improving mental health and wellbeing in an urban regeneration (UR) context? *Urban Studies*, 54(7), 1619–1637. <https://doi.org/10.1177/0042098016632435>
- Barton, H., Thompson, S., Burgess, S., & Grant, M., Barton, H., Thompson, S., Burgess, S., Grant, M. (2015). *The Routledge handbook of planning for health and well-being: Shaping a sustainable and healthy future*. Routledge. <https://doi.org/10.4324/9781315728261>
- Barton, H., & Tsourou, C. (2013). *Healthy urban planning*. Routledge.
- Barton, C., & Wilson, W. (2021). *Tackling the under-supply of housing in England*. House of Commons Library.
- Billing, C., McCann, P., & Ortega-Argilés, R. (2019). Interregional inequalities and UK sub-national governance responses to Brexit. *Regional Studies*, 53(5), 741–760. <https://doi.org/10.1080/00343404.2018.1554246>
- Black, D., Ayres, S., Bondy, K., Brierley, R., Campbell, R., Carhart, N., Coggon, J., Eaton, E., Fichera, E., Gibson, A., Hatleskog, E., Hickman, M., Hicks, B., Hunt, A., Pain, K., Pearce, N., Pilkington, P., Rosenberg, G., & Scally, G. (2021). Tackling root causes upstream of unhealthy urban development (TRUUD): Protocol of a five-year prevention research consortium. *Wellcome Open Research*, 6, 30. <https://doi.org/10.12688/wellcomeopenres.16382.1>
- Black, D., Pilkington, P., Williams, B., Ige, J., Prestwood, E., Hunt, A., Eaton, E., & Scally, G. (2021). Overcoming systemic barriers preventing healthy urban development in the UK: Main findings from interviewing senior decision-makers during a 3-year planetary health pilot. *Journal of Urban Health*, 98(3), 415–427. <https://doi.org/10.1007/s11524-021-00537-y>
- Bopp, M., Kaczynski, A. T., & Campbell, M. E. (2013). Health-related factors associated with mode of travel to work. *Journal of Environmental and Public Health*, 2013, 1–9. <https://doi.org/10.1155/2013/242383>
- Braubach, M., & World Health Organization. (2011). *Environmental burden of disease associated with inadequate housing: A method guide to the quantification of health effects of selected housing risks in the WHO European Region*. World Health Organization, Regional Office for Europe.
- British Medical Association. (2022). *Valuing health: Why prioritising population health is essential to prosperity*.

- Broadbent, P., Thomson, R., Kopasker, D., McCartney, G., Meier, P., Richiardi, M., McKee, M., & Katikireddia, S. (2023). The public health implications of the cost-of-living crisis: Outlining mechanisms and modelling consequences. *The Lancet Regional Health - Europe*, 27, 100585. <https://doi.org/10.1016/j.lanep.2023.100585>
- Brunt, H., Barnes, J., Jones, S. J., Longhurst, J. W. S., Scally, G., & Hayes, E. (2017). Air pollution, deprivation and health: Understanding relationships to add value to local air quality management policy and practice in Wales, UK. *Journal of Public Health*, 39(3), 485–497. <https://doi.org/10.1093/pubmed/fdw084>
- Building Back Building Beautiful Commission. (2020). *Living with beauty. Promoting health, well-being and sustainable growth*. Building Back Building Beautiful Commission.
- Callway, R., Le Gouais, A., Bird, E. L., Chang, M., & Kidger, J. (2023). Integrating health into local plans: A comparative review of health requirements for urban development in seven local planning authorities in England. *International Journal of Environmental Research and Public Health*, 20(5), 4079. <https://doi.org/10.3390/ijerph20054079>
- Carmichael, L., Barton, H., Gray, S., & Lease, H. (2013). Health-integrated planning at the local level in England: Impediments and opportunities. *Land Use Policy*, 31, 259–266. <https://doi.org/10.1016/j.landusepol.2012.07.008>
- Carmichael, L., Barton, H., Gray, S., Lease, H., & Pilkington, P. (2012). Integration of health into urban spatial planning through impact assessment: Identifying governance and policy barriers and facilitators. *Environmental Impact Assessment Review*, 32(1), 187–194. <https://doi.org/10.1016/j.eiar.2011.08.003>
- Carmichael, L., Prestwood, E., Marsh, R., Ige, J., Williams, B., Pilkington, P., Eaton, E., & Michalec, A. (2020). Healthy buildings for a healthy city: Is the public health evidence base informing current building policies? *Science of the Total Environment*, 719, 137146. <https://doi.org/10.1016/j.scitotenv.2020.137146>
- Carmichael, L., Townshend, T. G., Fischer, T. B., Lock, K., Petrokofsky, C., Sheppard, A., Sweeting, D., & Ogilvie, F. (2019). Urban planning as an enabler of urban health: Challenges and good practice in England following the 2012 planning and public health reforms. *Land Use Policy*, 84, 154–162. <https://doi.org/10.1016/j.landusepol.2019.02.043>
- Carnell, E., Vieno, M., Vardoulakis, S., Beck, R., Heaviside, C., Tomlinson, S., Dragosits, U., Heal, M. R., & Reis, S. (2019). Modelling public health improvements as a result of air pollution control policies in the UK over four decades —1970 to 2010. *Environmental Research Letters*, 14(7), 074001. <https://doi.org/10.1088/1748-9326/ab1542>
- Choma, E. F., Evans, J. S., Hammitt, J. K., Gómez-Ibáñez, J. A., & Spengler, J. D. (2020). Assessing the health impacts of electric vehicles through air pollution in the United States. *Environment International*, 144, 106015. <https://doi.org/10.1016/j.envint.2020.106015>
- Clifford, B., & Ferm, J. (2021). Planning, regulation and space standards in England: From ‘homes for heroes’ to ‘slums of the future’. *Town Planning Review*, 92(5), 537–560. <https://doi.org/10.3828/tpr.2021.11>
- Cohen, J. M., Boniface, S., & Watkins, S. (2014). Health implications of transport planning, development and operations. *Journal of Transport & Health*, 1(1), 63–72. <https://doi.org/10.1016/j.jth.2013.12.004>
- Colomb, C., & Tomaney, J. (2016). Territorial politics, devolution and spatial planning in the UK: Results, prospects, lessons. *Planning Practice & Research*, 31(1), 1–22. <https://doi.org/10.1080/02697459.2015.1081337>
- Committee on Climate Change. (2019). *Summary report: 2019 progress report to Parliament*.
- Cook, G. C. (2001). Construction of London’s Victorian sewers: The vital role of Joseph Bazalgette. *Postgraduate Medical Journal*, 77(914), 802–802. <https://doi.org/10.1136/pgmj.77.914.802>
- Cooper, E., Gates, S., Grollman, C., Mayer, M., Davis, B., Bankiewicz, U., & Khambhaita, P. (2019). *Transport, health and wellbeing: An evidence review for the Department for transport*. Department for Transport.
- Corburn, J., Curl, S., Arredondo, G., & Malagon, J. (2014). Health in all urban policy: City services through the prism of health. *Journal of Urban Health*, 91(4), 623–636. <https://doi.org/10.1007/s11524-014-9886-3>
- Coyle, D., & Muhtar, A. (2023). Levelling up policies and the failure to learn. *Contemporary Social Science*, 1–22. <https://doi.org/10.1080/21582041.2023.2197877>
- Dahlgren, G., & Whitehead, M. (1991). *Policies and strategies to promote social equity in health. Background document to WHO-Strategy paper for Europe*. Institute for Future Studies.
- Daras, K., Alexiou, A., Rose, T. C., Buchan, I., Taylor-Robinson, D., & Barr, B. (2021). How does vulnerability to COVID-19 vary between communities in England? Developing a small area vulnerability index (SAVI). *Journal of Epidemiology and Community Health*, 75(8), 729. <https://doi.org/10.1136/jech-2020-215227>
- DEFRA. (2019). *Air quality: Explaining air pollution - At a glance*. Retrieved September 10, 2022, from www.gov.uk/government/publications/air-quality-explaining-air-pollution
- Department for Transport. (2020). *Decarbonising transport. Setting the challenge*.
- Department for Transport. (2022). *Transport analysis guidance*. Retrieved September 5, 2023, from www.gov.uk/guidance/transport-analysis-guidance-tag
- de Sa, T. H., Mwaura, A., Vert, C., Mudu, P., Roebbel, N., Tran, N., & Neira, M. (2022). Urban design is key to healthy environments for all. *The Lancet Global Health*, 10(6), e786–e787. [https://doi.org/10.1016/S2214-109X\(22\)00202-9](https://doi.org/10.1016/S2214-109X(22)00202-9)
- Dixon, J., & Everest, G. (2021). *Briefing: The government’s levelling up agenda. An opportunity to improve health in England*. Health Foundation.
- Ferm, J., & Raco, M. (2020). Viability planning, value capture and the geographies of market-led planning reform in England. *Planning Theory & Practice*, 21(2), 218–235. <https://doi.org/10.1080/14649357.2020.1754446>

- Freiler, A., Muntaner, C., Shankardass, K., & O'Campo, P. (2013). Glossary for the implementation of health in all policies (HiAP). *Journal of Epidemiology and Community Health*, 67(12), 1068–1072. <https://doi.org/10.1136/jech-2013-202731>
- Gibson, M., Petticrew, M., Bambra, C., Sowden, A. J., Wright, K. E., & Whitehead, M. (2011). Housing and health inequalities: A synthesis of systematic reviews of interventions aimed at different pathways linking housing and health. *Health & Place*, 17(1), 175–184. <https://doi.org/10.1016/j.healthplace.2010.09.011>
- Giles-Corti, B., Moudon, A. V., Lowe, M., Cerin, E., Boeing, G., Frumkin, H., Salvo, D., Foster, S., Kleeman A., & Bekessy, S. (2022). What next? Expanding our view of city planning and global health, and implementing and monitoring evidence-informed policy. *The Lancet Global Health*, 10(6), e919–e926. [https://doi.org/10.1016/S2214-109X\(22\)00066-3](https://doi.org/10.1016/S2214-109X(22)00066-3)
- Greer, S. L., Falkenbach, M., Siciliani, L., McKee, M., Wismar, M., & Figueras, J. (2022). From health in all policies to health for all policies. *The Lancet Public Health*, 7(8), e718–e720. [https://doi.org/10.1016/S2468-2667\(22\)00155-4](https://doi.org/10.1016/S2468-2667(22)00155-4)
- Guglielmin, M., Muntaner, C., O'Campo, P., & Shankardass, K. (2018). A scoping review of the implementation of health in all policies at the local level. *Health Policy*, 122(3), 284–292. <https://doi.org/10.1016/j.healthpol.2017.12.005>
- Gurran, N., Austin, P., & Whitehead, C. (2014). That sounds familiar! A decade of planning reform in Australia, England and New Zealand. *Australian Planner*, 51(2), 186–198. <https://doi.org/10.1080/07293682.2014.890943>
- HM Treasury. (2022). *The green book*. Central Government Guidance on Appraisal and Evaluation. Retrieved September 5, 2023, from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1063330/Green_Book_2022.pdf
- Hordyk, S. R., Hanley, J., & Richard, É. (2015). “Nature is there; its free”: Urban greenspace and the social determinants of health of immigrant families. *Health & Place*, 34, 74–82. <https://doi.org/10.1016/j.healthplace.2015.03.016>
- Howlett, M. (2019). Procedural policy tools and the temporal dimensions of policy design. Resilience, robustness and the sequencing of policy mixes. *International Review of Public Policy*, 1(1), 27–45. <https://doi.org/10.4000/irpp.310>
- Iacobucci, G. (2022). Health inequalities: Sunak is urged to honour government's pledge. *BMJ*, 379, o2683. <https://doi.org/10.1136/bmj.o2683>
- Ige-Elegbede, J., Pilkington, P., Bird, E. L., Gray, S., Mindell, J. S., Chang, M., Stimpson, A., Gallagher, D., & Petrokofsky, C. (2021). Exploring the views of planners and public health practitioners on integrating health evidence into spatial planning in England: A mixed-methods study. *Journal of Public Health*, 43(3), 664–672. <https://doi.org/10.1093/pubmed/fdaa055>
- International Transport Forum. (2017). *Income inequality, social inclusion and mobility*. Roundtable Report 164. ITF OECD.
- Jacobs, D. E., Wilson, J., Dixon, S. L., Smith, J., & Evens, A. (2009). The relationship of housing and population health: A 30-year retrospective analysis. *Environmental Health Perspectives*, 117(4), 597–604. <https://doi.org/10.1289/ehp.0800086>
- Leclercq, E., Pojani, D., & Van Bueren, E. (2020). Is public space privatization always bad for the public? Mixed evidence from the United Kingdom. *Cities*, 100, 102649. <https://doi.org/10.1016/j.cities.2020.102649>
- Le Gouais, A., Bates, G., Callway, R., & Bondy, K. (2023). Understanding how to create healthier places: A qualitative study exploring the complex system of urban development decision-making. *Health & Place*, 81, 103023. <https://doi.org/10.1016/j.healthplace.2023.103023>
- Lein, A., Indvik, K., Braslow, J., Rollins, H., Cortinez O'Ryan, A., Frenz, P., Caiaffa, W. T., & Diez Roux, A. V. (2023). Health as a driver for urban policy in Latin America: A scoping review of literature from international organizations. *Cities & Health*, 7(1), 158–173. <https://doi.org/10.1080/23748834.2020.1757371>
- Liddell, C., & Guiney, C. (2015). Living in a cold and damp home: Frameworks for understanding impacts on mental well-being. *Public Health*, 129(3), 191–199. <https://doi.org/10.1016/j.puhe.2014.11.007>
- Lowe, M., Adlakha, D., Sallis, J. F., Salvo, D., Cerin, E., Moudon, A. V., Higgs, C., Hinckson, E., Arundel, J., & Boeing, G. (2022). City planning policies to support health and sustainability: An international comparison of policy indicators for 25 cities. *The Lancet Global Health*, 10(6), e882–e894. [https://doi.org/10.1016/S2214-109X\(22\)00069-9](https://doi.org/10.1016/S2214-109X(22)00069-9)
- Mansour, A., Bentley, R., Baker, E., Li, A., Martino, E., Clair, A., Daniel L., Mishra S. R., Howard, N. J., Phibbs, P., Jacobs, D. E., Beer, A., Blakely, T., & Howden Chapman, P. (2022). Housing and health: An updated glossary. *Journal of Epidemiology and Community Health*, 76(9), 833–838. <https://doi.org/10.1136/jech-2022-219085>
- Marmot, M., Allen, J., Boyce, T., Goldblatt, P., & Morrison, J. (2020). *Health equity in England: The Marmot review 10 years on*. Institute of Health Equity.
- McKinnon, G., Pineo, H., Chang, M., Taylor-Green, L., Strategy, A. J., & Toms, R. (2020). Strengthening the links between planning and health in England. *BMJ*, 369, m795. <https://doi.org/10.1136/bmj.m795>
- Megahed, N. A., & Ghoneim, E. M. (2020). Antivirus-built environment: Lessons learned from COVID-19 pandemic. *Sustainable Cities and Society*, 61, 102350. <https://doi.org/10.1016/j.scs.2020.102350>
- Merrifield, K., & Nightingale, G. (2021). *Briefing: A whole-government approach to improving health*. Health Foundation.
- Ministry of Housing, Communities and Local Government. (2020). *Planning for the Future. white paper*.
- Ministry of Housing, Communities and Local Government. (2021a). *MHCLG outcome delivery plan: 2021 to 2022*.
- Ministry of Housing, Communities and Local Government. (2021b). *National planning policy framework*.

- Ministry of Housing, Communities and Local Government. (2021c). *Building better, Building beautiful commission. Government response to the living with beauty report.*
- Molnar, A., Renahy, E., O'Campo, P., Muntaner, C., Freiler, A., Shankardass, K., & Vrana, K. E. (2016). Using win-win strategies to implement health in all policies: A cross-case analysis. *PLoS One*, 11(2), e0147003. <https://doi.org/10.1371/journal.pone.0147003>
- Mullenbach, L. E., & Wilhelm Stanis, S. A. (2022). Climate change adaptation plans: Inclusion of health, equity, and green space. *Journal of Urban Affairs*, 1–16. <https://doi.org/10.1080/07352166.2022.2091449>
- Naumann, R. B., Dellinger, A. M., Anderson, M. L., Bonomi, A. E., Rivara, F. P., & Thompson, R. S. (2009). Preferred modes of travel among older adults: What factors affect the choice to walk instead of drive? *Journal of Safety Research*, 40(5), 395–398. <https://doi.org/10.1016/j.jsr.2009.09.001>
- Nieuwenhuijsen, M., & Khreis, H. (2019a). Integrating human health into the urban development and transport planning agenda: A summary and final conclusions. In M. Nieuwenhuijsen & H. Khreis (Eds.), *Integrating human health into urban and transport planning: A framework* (pp. 707–718). Springer International Publishing.
- Nieuwenhuijsen, M., & Khreis, H. (2019b). Transport and health. In S. Galea, C. Ettman, & D. Vlanov (Eds.), *Urban health* (pp. 52–58). Oxford University Press.
- Nieuwenhuijsen, M. J., Khreis, H., Verlinghieri, E., Mueller, N., & Rojas-Rueda, D. (2017). Participatory quantitative health impact assessment of urban and transport planning in cities: A review and research needs. *Environment International*, 103, 61–72. <https://doi.org/10.1016/j.envint.2017.03.022>
- Nieuwenhuijsen, M. J., Khreis, H., Verlinghieri, E., & Rojas-Rueda, D. (2016). Transport and health: A marriage of convenience or an absolute necessity. *Environment International*, 88, 150–152. <https://doi.org/10.1016/j.envint.2015.12.030>
- O'Dowd, A. (2023). Government agrees to fewer national targets for ICSs but rejects call on prevention spending. *BMJ*, 381, 1386. <https://doi.org/10.1136/bmj.p1386>
- O'Neill, K., & Gibbs, D. (2020). Sustainability transitions and policy dismantling: Zero carbon housing in the UK. *Geoforum*, 108, 119–129. <https://doi.org/10.1016/j.geoforum.2019.11.011>
- Ortenzi, F., Marten, R., Valentine, N. B., Kwamie, A., & Rasanathan, K. (2022). Whole of government and whole of society approaches: Call for further research to improve population health and health equity. *BMJ Global Health*, 7(7), e009972. <https://doi.org/10.1136/bmjgh-2022-009972>
- Piddington, J., Nicol, S., Garrett, H., & Custard, M. (2020). *The housing stock of the United Kingdom*. BRE Trust.
- Prüss-Ustün, A., Wolf, J., Corvalán, C., Bos, R., & Neira, M. (2016). *Preventing disease through healthy environments: A global assessment of the burden of disease from environmental risks*. World Health Organization.
- Public Health England. (2020). *Health impact assessment in spatial planning*. Retrieved July 16, 2023, from www.gov.uk/government/publications/health-impact-assessment-in-spatial-planning
- Rashid, R., Chong, F., Islam, S., Bryant, M., & McEachan, R. R. C. (2021). Taking a deep breath: A qualitative study exploring acceptability and perceived unintended consequences of charging clean air zones and air quality improvement initiatives amongst low-income, multi-ethnic communities in Bradford, UK. *BMC Public Health*, 21(1), 1305. <https://doi.org/10.1186/s12889-021-11337-z>
- Reid, A. (2023). Closing the affordable housing gap: Identifying the barriers hindering the sustainable design and construction of affordable homes. *Sustainability*, 15(11), 8754. <https://doi.org/10.3390/su15118754>
- Royal College of Physicians. (2016). *Every breath we take: The lifelong impact of air pollution*.
- Roy, M., Nicol, S., Garrett, H., & Margolis, S. (2016). *The full cost of poor housing*. IHS BRE Press.
- Scott, M. (2020). Covid-19, place-making and health. *Planning Theory & Practice*, 21(3), 343–348. <https://doi.org/10.1080/14649357.2020.1781445>
- Department for Transport, Office for Low Emissions Vehicles, Department for Business, Energy & Industrial Strategy, Sharma, A., & Shapps, G. (2020). *Government takes historic step towards net-zero with end of sale of new petrol and diesel cars by 2030*. Retrieved September 20, from www.gov.uk/government/news/government-takes-historic-step-towards-net-zero-with-end-of-sale-of-new-petrol-and-diesel-cars-by-2030
- Sharpe, R. A., Taylor, T., Fleming, L. E., Morrissey, K., Morris, G., & Wigglesworth, R. (2018). Making the case for “whole system” approaches: Integrating public health and housing. *International Journal for Environmental Research & Public Health*, 15(11), 2345. <https://doi.org/10.3390/ijerph15112345>
- Shearer, E. (2022). *Will the levelling up missions help reduce regional inequality?* Institute for Government.
- Smith, C. (2021). *Net zero and integrated policymaking*. House of Lords Library. Retrieved July 10, 2023, from <https://lordslibrary.parliament.uk/net-zero-and-integrated-policymaking/>
- Somerville, P. (2020). The continuing failure of UK climate change mitigation policy. *Critical Social Policy*, 41(4), 628–650. <https://doi.org/10.1177/0261018320961762>
- Stahl, T. (2018). Health in all policies: From rhetoric to implementation and evaluation—The Finnish experience. *Scandinavian Journal of Public Health*, 46(S20), 38–46. <https://doi.org/10.1177/1403494817743895>
- Swann, W. L., Brixey, E., & Wohler, W. (2019). Linking local sustainability policies to health outcomes: An analysis of the urban sustainability-health nexus. *Journal of Urban Affairs*, 43(7), 1010–1027. <https://doi.org/10.1080/07352166.2019.1638268>

- Swope, C. B., & Hernández, D. (2019). Housing as a determinant of health equity: A conceptual model. *Social Science & Medicine*, 243, 112571. <https://doi.org/10.1016/j.socscimed.2019.112571>
- Thomas, J., & Harden, A. (2008). Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Medical Research Methodology*, 8(1), 45. <https://doi.org/10.1186/1471-2288-8-45>
- Tinson, A., & Clair, A. (2020). *Better housing is crucial for our health and the COVID-19 recovery*. Health Foundation.
- Tulchinsky, T. H. (2018). John Snow, cholera, the broad street pump; waterborne diseases then and now. In T. H. Tulchinsky (Ed), *Case Studies in Public Health* (pp. 77–99). Academic Press. <https://doi.org/10.1016/B978-0-12-804571-8.00017-2>
- UN-Habitat & World Health Organization. (2020). *Integrating health in urban and territorial planning: A sourcebook*. World Health Organization.
- Walker, G., & Burningham, K. (2011). Flood risk, vulnerability and environmental justice: Evidence and evaluation of inequality in a UK context. *Critical Social Policy*, 31(2), 216–240. <https://doi.org/10.1177/0261018310396149>
- Wernham, A., & Teutsch, S. M. (2015). Health in all policies for big cities. *Journal of Public Health Management and Practice*, 21(S1), S56–65. <https://doi.org/10.1097/PHH.0000000000000130>
- World Health Organization. (2016). *Health as the pulse of the new urban agenda: United Nations conference on housing and sustainable urban development*.
- World Health Organization & UN-Habitat. (2016). *Global report on urban health: Equitable healthier cities for sustainable development*. World Health Organization.
- Yang, X., McCoy, E., Hough, K., & de Nazelle, A. (2022). Evaluation of low traffic neighbourhood (LTN) impacts on NO₂ and traffic. *Transportation Research, Part D: Transport & Environment*, 113, 103536. <https://doi.org/10.1016/j.trd.2022.103536>