



Public Health
England

**UWE
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England

Spatial Planning and Health

Getting Research into Practice (GRIP): study report

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-leading science, research, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health and Social Care, and a distinct delivery organisation with operational autonomy. We provide government, local government, the NHS, Parliament, industry and the public with evidence-based professional, scientific and delivery expertise and support.

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Foreword



The built and natural environment has positive influence over people's physical and mental health and wellbeing. If planned and designed well with input from built environment and public health professionals, these environments can encourage healthy behaviour and support reducing health inequalities between social groups.

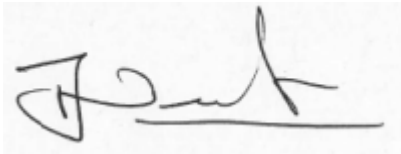
Public Health England published the Spatial Planning and Health: evidence resource in 2017 to establish an authoritative and evidence-informed set of principles for designing healthy places from an evidence review examining the links between health, and the built and natural environment. Qualities, such as a walkable environment free from pollution, and availability of well-maintained green spaces, can promote physical activity and wellbeing. Healthy homes with adequate space for living and a healthier food environment should be integrated into the design of new developments and the spatial planning system.

Achieving these elements of healthy planning and design, requires those working in local authority public health and planning teams, and other built environment professionals, such as transport and housing, to consider them when designing, creating sustainable places and spaces where people can live, work and relax.

This study recognises the complex political, economic, social and multi-disciplinary circumstances local teams are operating under, and, at times, the challenges to get research and evidence into practice. It also highlights the barriers and opportunities where local teams have tried to get evidence into practice and to work across multi-disciplinary teams.

The likely benefit of improving communication across sectors and professions, establishing meaningful collaboration through sharing of knowledge and experience, and making use of existing resources and guidance are some of the key findings from the study.

The outcomes of this study call for built environment partners to work more closely with local public health teams to deliver healthy places and environments for the whole population. They will assist PHE's Healthy Places team to deliver on PHE's responsibility to protect and improve the nation's health by successfully influencing the planning system and the processes that shape the health of current and future generations.

A handwritten signature in black ink, appearing to read 'John Newton', with a horizontal line underneath.

Professor John Newton
Director of Health Improvement
Public Health England

1. Executive summary

Spatial planning for health

Existing literature and research recognises the value of delivering healthier environments and its benefits to public health. In July 2017, PHE published an evidence resource following an umbrella review of literature undertaken by the University of the West of England (UWE), Bristol (1). The *Spatial Planning and Health: evidence resource* (the Resource) illustrated up to date evidence between the built and natural environment, and health for public health professionals and town planners working in local authorities in the UK, with the purpose to inform policy and action. It centred on 5 aspects of the built and natural environment:

- neighbourhood design
- housing
- healthier food
- natural and sustainable environment, and
- transport

The Resource translated the existing evidence into a series of innovative infographics and design principles to help local teams trying to implement these in practice. Questions remain in terms of the overall benefit for health of such environments and how these can, in practice, be delivered and promoted, particularly in the context of a complex political, economic, social and professional circumstances.

Getting research into practice

The aim of the Getting Research into Practice (GRIP) initiative was to explore how local teams have been able to use the Resource and the challenges of applying the principles set out in Resource into practice at a local level. This study sought to identify those opportunities and barriers systematically, and through the learning generated, to consider how to support local public health and town planning professionals in better integrating health and wellbeing into local planning policies and decisions.

PHE sought to establish what types of support are required to enable the local translation of public health research and evidence, and implementation of policy requirements set out in the National Planning Policy Framework (NPPF) (2) and Planning Practice Guidance (PPG) (3) in practice. From the Resource, we know “what works”. In practice it is not known if what the Resource recommended can be applied systematically in different localities under different conditions by local public health and planning professionals.

The objectives of the GRIP study were:

1. To develop clarity and direction of user needs in translating public health research and evidence, such as the Resource, into practice.
2. To identify and understand the scale and scope of practical challenges and opportunities, by engaging relevant stakeholders from the fields of public health, planning and the wider built environment.
3. To elicit stakeholder views on the *Spatial Planning for Health* Resource and other relevant tools and guidelines through a two-stage process:
 - i. Completion of in-depth interviews with public health and town planning professionals.
 - ii. An online questionnaire survey for public health and planning practitioners based on findings from the in-depth interviews.

These objectives were achieved by means of:

- in-depth qualitative interviews in late 2018 with 12 public health and town planning professionals working in local authority settings
- a national survey of 162 public health and town planning professionals responding across England, and the wider built environment sector, such as transport, housing and environment, during the spring of 2019
- a PHE Spatial Planning and Health Seminar held in London during March 2019, attended by over one hundred delegates to discuss findings from the GRIP interviews on barriers and opportunities

Findings

Awareness and use of the Resource: The majority of the survey respondents (63%) were aware of the Resource; public health professionals (72%) were more aware of the Resource than those with a town planning and built environment roles (56%). Around half (51%) of the respondents who were aware of the Resource had used it in their local authority. Public health professionals reported using it as a reference document to communicate with planning colleagues; as an evidence base to support Health Impact Assessments (HIA); for making a case for integrating health into local planning; and, for developing local guidance and protocols within their local authorities. Other reasons for using the Resource among town planning and other built environment professionals included responding to local planning applications and for training purposes.

Usefulness of the Resource: Over 80% of respondents who had used the Resource found the evidence presented under each of the 5 topic areas useful. The best aspects of the Resource identified were the infographics, case studies, clear planning principles, layout and accessibility, as well as the holistic nature of the Resource content.

Dissemination of the Resource: Over a third (38%) of respondents who were aware of the Resource, found out either from PHE newsletters or the PHE Healthy Places Knowledge Hub, while another 26% of respondents became aware of it through their colleagues. Many of the town planning professionals were told about the Resource by their public health colleagues, suggesting that different channels are needed to raise its awareness among town planning and built environment professionals.

Integrating health in planning: Despite national planning policy requirements since 2012 that explicitly link the planning process to public health considerations, the survey found that 46% of respondents agreed that planning policies and decisions in their local authority area support local health and wellbeing. Over a quarter of respondents disagreed with the statement that “health is integrated into planning in my local authority area”, signalling scope for better integration of healthy design principles into planning and policy at local level.

Delivering joint training and education across the workforce. This need for systematic training to introduce and improve shared knowledge and competencies can be jointly delivered with key partners such as professional institutes and universities. These can be targeted across the spectrum of the workforce career path from undergraduate modules to Continuing Professional Development programmes.

Responsibilities: Local authorities, planning committees and Health and Wellbeing Boards were ranked as the top 3 organisations/decision-making bodies perceived to have the greatest responsibility for integrating health into spatial planning at the local level. Town planners, both those involved in setting policy and in development management along with directors of public health, were the top 3 professions perceived to have the greatest responsibility for integrating health into local planning.

Barriers and challenges: Respondents identified differences between public health and town planning professions in the interpretation and use of ‘evidence’; lack of economic incentives for developers; limited political support; and, limited resources and capacity to implement evidence at local authority level.

Opportunities and facilitators: Respondents identified the need to build relationships with developers; the importance of articulating the wider benefits of integrating spatial planning and health; the potential for simplifying the evidence base; and, the need to prioritise consideration of health issues in the development of local plans.

Actions to consider

The findings were encouraging and demonstrated the significant range and potential for PHE products to reach not only local public health professionals but other professional groups whose work directly impacts on health and wellbeing.

The report concludes by setting out some recommended actions for further consideration by specific stakeholder groups including directors of public health, heads of planning, local authority public health and planning teams to get health and wellbeing into planning locally.

They should consider what they might do together in local settings to ensure that:

- local health and wellbeing needs and priorities are integrated into the local plan and decision-making process
- there are clear communication and engagement processes between public health and town planning teams
- there are local opportunities for joint training, education and continuing professional development across professions
- there are opportunities made to ensure that local politicians are aware of the wider impacts on health arising from planning as political support is essential to integrating health into planning at the local level
- spatial planning and health tools and evidence are presented to meet the practical needs of both town planning and public health professionals
- identify what access is needed to the ever-growing international and national evidence base on health and spatial planning, and how these can be systematically provided to support local practitioners

PHE is available to support local areas on planning healthy places through their local plan development and planning decision-making. Please contact healthyplaces@phe.gov.uk for further information.

2. Introduction

In 2017, PHE published '*Spatial Planning for Health: An evidence resource for planning and designing healthier places*' (1) (the Resource). The Resource was based on findings of an umbrella review that examined links between health and the built and natural environment (4). The review identified, critically appraised and summarised existing review-level evidence and relevant stakeholder organisation documentation for associations between the built and natural environment and health outcomes.

The Resource aimed to provide public health professionals, town planners, communities and private sector consultants and developers with evidence-informed principles for designing healthy places. It included 1 diagram for each of the environmental topic areas explored, which include neighbourhood design, housing, transport, natural environment and food. They were designed to assist discussions between public health and town planning professionals, and to better articulate the ways in which the environment can contribute to health.

Both health and the built and natural environment are complex, multidimensional systems, with a multitude of interdependent factors. To harness the health benefits identified and reported within the evidence review, a holistic and integrated approach is required, that looks at how the environment shapes and influences our choices and behaviours. As highlighted in the Resource, there are good examples of place-based actions that encompass healthy planning, such as the NHS England Healthy New Towns guide which provided practical tools for creating new places (5). While existing evidence recognises the value of a healthier environment and its benefits to public health, challenges remain about how these can best be delivered in practice.

Purpose of the study

This report presents the findings from the GRIP study. Its aim was to explore how local authority teams have been able to use the Resource and the challenges of applying the Resource's principles into local practice. Its objectives were:

1. To develop clarity and direction of user needs of translating public health research and evidence into practice.
2. To identify and understand the scale and scope of practical challenges and opportunities, by directly engaging relevant stakeholders from the fields of public health, town planning and the wider built environment.
3. To elicit stakeholder views on the Resource and other relevant tools and guidelines through a two-stage process:
 - i. Completion of in-depth interviews with public health and planning professionals

- ii. A national online questionnaire survey for public health and planning practitioners based on findings from the in-depth interviews.

Intended audience

The primary target audience of this report is local public health professionals and town planners, and other built environment professionals, working in local authority and other place-based settings. The findings are designed to be suitable for both public health practitioners and planning professionals, facilitating two-way communication between disciplines. Local authority directors of public health and heads of planning will find this report useful in informing actions by officers to promote healthy places through the planning and development processes.

3. Methodology and survey findings

This section presents a summary of the methods and the main findings from the national survey conducted in the Spring of 2019. Further methodological details and results from both the interviews and survey are set out in Annex 1.

Methodology

A sequential exploratory mixed method design was utilised, with initial collection of qualitative data through in-depth semi-structured interviews, followed by the collection and analysis of quantitative survey data (6).

In-depth interviews with public health and town planning professionals

A series of in-depth semi-structured interviews were conducted with public health and planning professionals working in local authority settings. UWE aimed to recruit 1 public health professional (for example, a consultant in public health with portfolio responsibilities for health and planning) and 1 planning professional (for example, a planner who has experience of working with public health colleagues) from a local authority to participate in a 'joint interview'. A total of 6 semi-structured joint interviews were conducted with 12 public health and planning professionals working in local authority settings.

In addition to joint interviews, in-depth semi-structured interviews were conducted with 5 public health professionals specialising in each of the 5 built and natural environment topics areas identified in the *Spatial Planning for Health* Resource. Individuals were purposively selected using existing networks and links. Potential interviewees were invited via email to participate in a face-to-face or telephone interview.

Survey with public health and town planning professionals

Potential participants were identified and contacted through existing mailing lists held by PHE and the UWE research team, and through other networks and stakeholder organisations, and a link to the survey was shared on various communication channels including Twitter, and regional built environment networks. Delegates at PHE's first Spatial Planning for Health Seminar, held in March 2019, were also alerted to the existence of the survey and were sent a link following the seminar via email inviting their participation. Through this method, the survey was disseminated to all local authorities in England. A total of 162 public health and built environment professionals completed the online survey, with a breakdown spread across all the English regions.

Main findings from the survey with public health and town planning professionals

A total of 175 participants participated in the survey, with 162 of these respondents completing it in full. The breakdown of participant characteristics in Table 1 shows that almost half of the participants were public health professionals (48%) while 16% were planning policy planners. 52% of respondents indicated that they held a senior/managerial position.

Table 1. Characteristics of respondents who participated in the survey

Respondent characteristics	Number of respondents	Percentage
Role		
Architect	2	1%
Planning policy planners	27	17%
Development management	6	4%
Planners in government departments	2	1%
Transport planning professional	6	4%
Urban designer	2	1%
Housing	6	4%
Public health professional	77	48%
Director of public health	3	2%
Private sector consultants	4	3%
Other	25	15%
Professional seniority		
Apprentice/ junior	4	3%
Technical	38	24%
Senior/Manager	84	52%
Director/Deputy director	19	12%
Others	15	9%
Main area of responsibility		
National	20	12%
London	11	7%
South West	45	28%
South East	14	9%
North West	5	3%
North East	6	4%
East Midlands	15	9%
West Midlands	9	6%
Yorkshire and Humber	8	5%
East of England	21	13%
Other, please state	7	4%

a. Awareness of the Spatial Planning for Health Resource

The majority of respondents (N=102, 63%) indicated that they were aware of the *Spatial Planning for Health* Resource, while 37% of respondents were unaware. Analysis revealed that 72% of public health professionals had heard of the Resource compared with 56% of planning and built environment professionals (Table 2). Findings

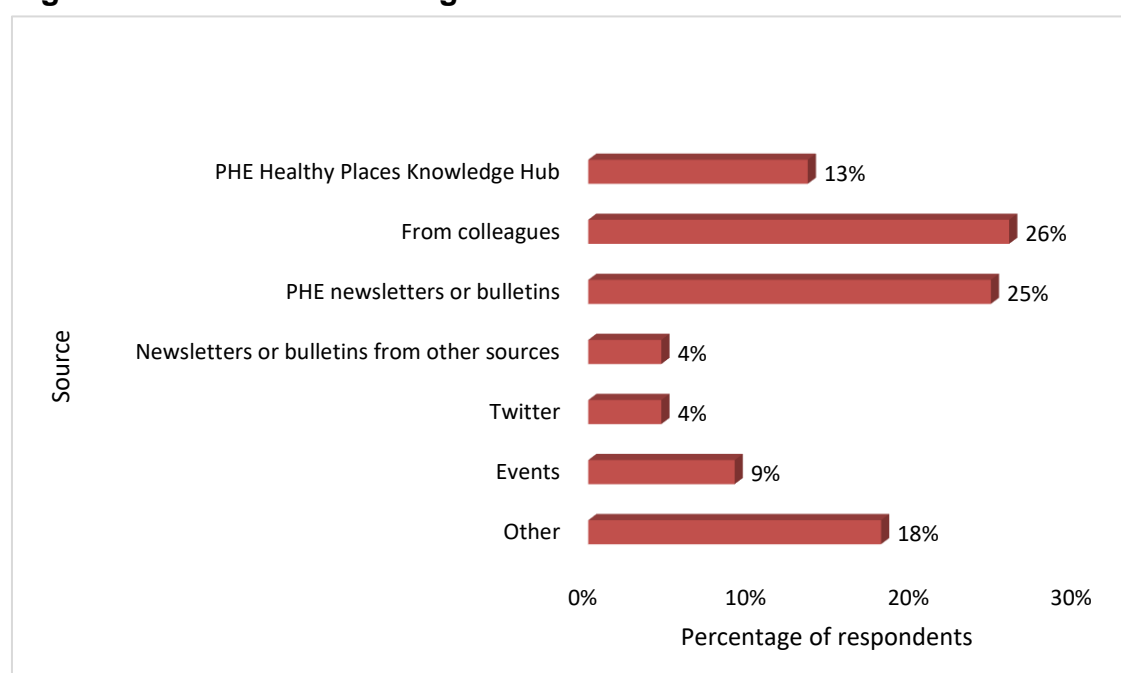
from the survey corroborates interview findings where nearly all public health professionals were aware of the Resource and only a few planning professionals knew of its existence.

Table 2. Cross-tabulation of role of respondents and awareness of the Resource
Before taking part in this study, had you heard of Public Health England's 'Spatial Planning for Health' Resource

Role of respondents	Yes	No	Total
Public health role	54	21	75
	72%	28%	100%
Planning/built environment role	30	24	54
	56%	44%	100%
Fisher's Exact Test 1 sided	p=0.041		

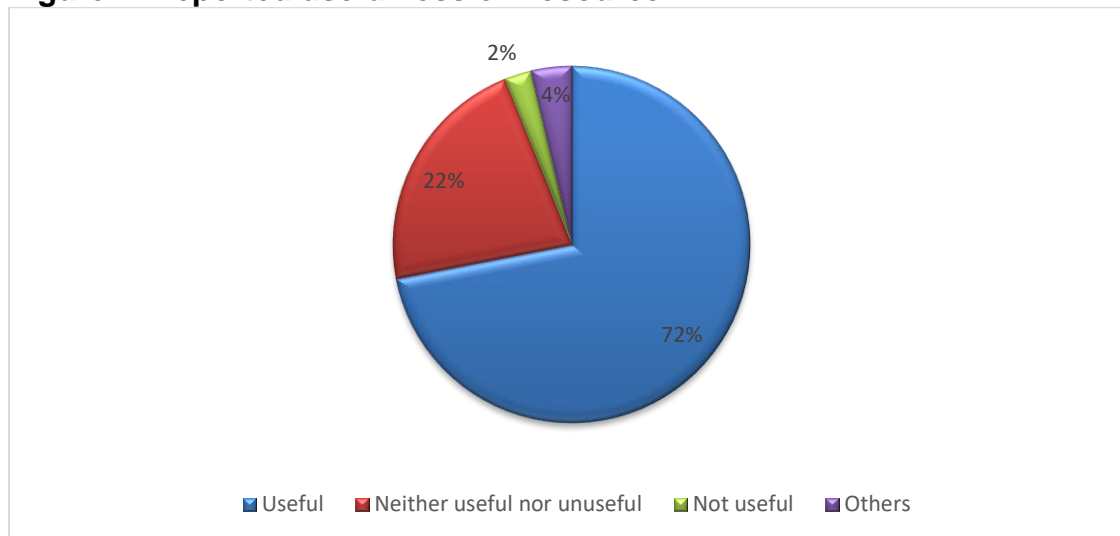
Just over one quarter of respondents indicated that they had found out about the *Spatial Planning for Health* Resource from colleagues while a quarter of respondents said they became aware of the Resource via PHE newsletters or bulletins (Figure 1). The high rate of awareness of the Resource among public health professionals could be linked to the promotion and appeal of the Resource to public health professionals

Figure 1. Source of knowledge of the Resource



Over 70% of respondents indicated that they found the Resource to be useful, while 22% of respondents indicated that they found the Resource to be 'neither useful nor un-useful' (see Figure 2).

Figure 2. Reported usefulness of Resource



b. Best aspects of the Resource

Respondents were provided with an opportunity to highlight what they considered to be the best aspects of the Resource.

- The *Spatial Planning for Health* Resource is a **holistic evidence resource**
 - “The spatial planning for health resource brings together evidence and guidance into one document, which is easy to read with helpful diagrams which link planning issues with health impacts and outcomes”
- The **case-studies** provide added value
 - “It’s organised by subject area, includes case studies and provides a list of references which are useful when justifying to planning colleagues the need for applying the health principles to new developments”
- The **infographics** present an accessible way of visualising the evidence
 - “The infographics gives a good summary of each topic, all in one place”
- Layout, language and accessibility
 - “The plain language and layout make it easy to read and understand”
- Clear planning principles
 - “Lays out key principles with evidence, such as improving walkability and connectivity”

c. Ways to improve the Resource

Suggestions for improving the Resource were:

- Provide opportunities to update the Resource
 - “Keeping it up to date, e.g. with new evidence”
 - “Update to provide more practical case studies. Also add links to green space and mental health”
- Enhance practical application at local levels
 - “More explicit advice on what to look for in planning proposals”
 - “Make it more applicable to policy and practice decision making”
- Promote the Resource across multiple stakeholder groups
 - “Make more people aware of it”
 - “Find a way to make it available easily to NGOs, community groups”
- Include more practical case-studies
 - “Possibly more case studies, or a companion web resource where they can be added”
 - “More specific case studies that link with the planning process, especially local plan production”
- Simplify the layout of the Resource and improve accessibility
 - “There are too many references. Stick to key ones as the reader is faced with a wall of text which is difficult to digest. Could add hyperlinks to references available online”
 - “Make it little more concise”
- Broaden the scope of the review
 - “The scope of the review is limited e.g. evidence surrounding the wider health benefits of allotments/orchards outside scope”
 - “Two extra areas where we need the evidence 1. First ‘connectedness’ in our digital age - to reduce isolation and loneliness; to improve services; how to plan and build for a digitally connected future? Connected places; inclusive and fast communications infrastructure; we are a very large rural area and this is hugely important - especially with an ageing population. 2. Secondly, creating the right environments for business growth e.g. evidence about encouraging small and medium enterprises being committed to local communities and enhancing skills and employment opportunities; Introducing responsible working practices in the workplace to benefit people and wider area; worker cooperatives - how to build for these? Social enterprises - any evidence around these? Anchor institutions - any evidence around these?”

d. Use of the Resource

Over half of respondents (51%) that were aware of the Resource said they had used it. The most common reasons for using it included:

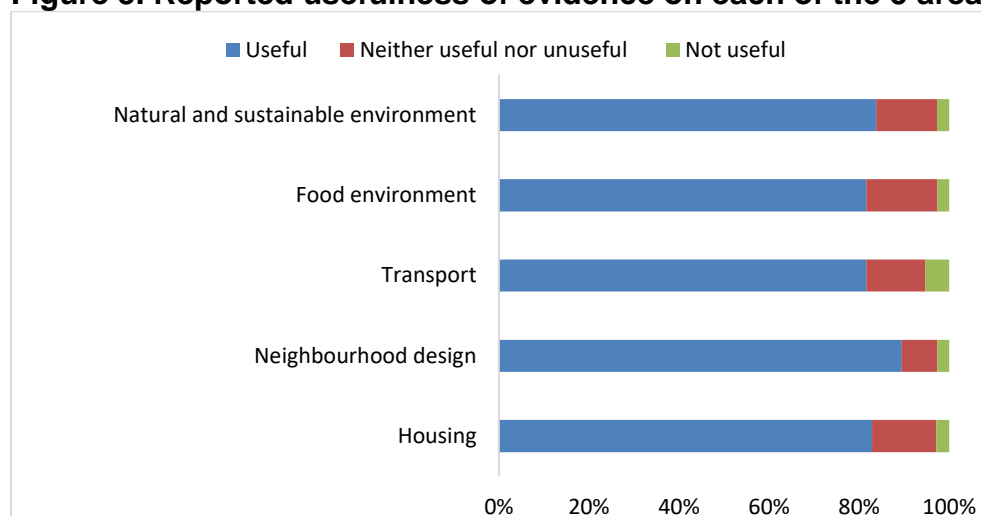
- As a reference document to communicate with planning colleagues
 - “Have used it in presenting to planners so that they can see the range of impacts that planning can have on health”
- Evidence to support Health Impact Assessments
 - “A reference for the evidence base underpinning a health impact assessment on an urban development project”
- Making a case for health integration in local planning
 - “To make the case for including further guidance on walkability, connectivity, compact neighbourhoods etc”
- Developing local plans and protocols
 - “I used this as a resource to direct and inform the process of enquiry involved in the design of a Healthy Weight Plan for the local authority area. It provided examples across different domains including transport, food and the natural environment which provided a more holistic approach to the enquiry and informed the final outcome”
 - “To seek to influence a new local plan”
- Responding to local planning applications
 - “As a resource to respond to local plans and planning applications”
- As a training resource
 - “Training with parish councillors”
 - “Teaching colleagues (public health and planning), referencing in critique of a local plan, referencing in responses to planning applications”

Other uses included being a resource for teaching and presentations.

e. Evidence on each of the 5 areas of the Resource

Respondents were asked to rate how useful they found the content presented for each of the 5 topic areas covered by the Resource. A total of 89% of respondents indicated that they found the evidence on the neighbourhood environment useful, while 82% indicated that they found the evidence for transport and the food environment useful (Figure 3).

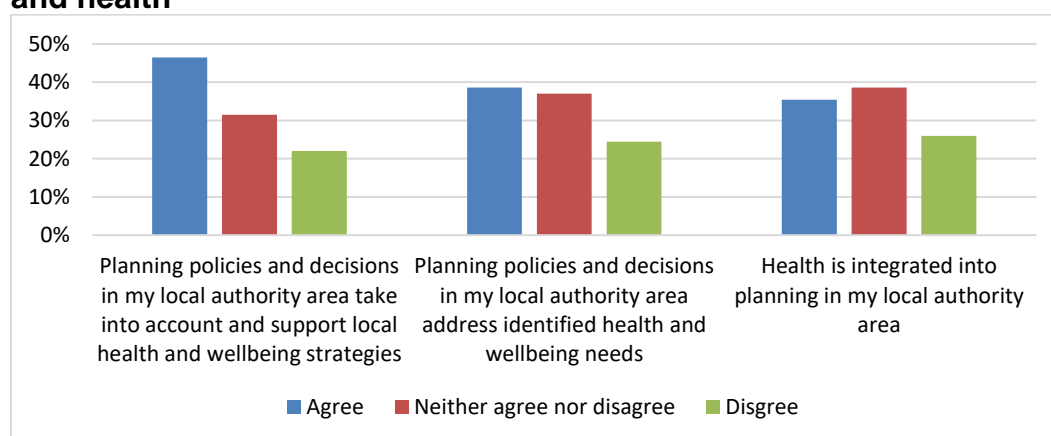
Figure 3. Reported usefulness of evidence on each of the 5 areas of the Resource



f. Experience of planning and health in local authority areas

Respondents were asked a series of questions to assess the extent to which planning decisions in their local authority take health into account. 46% of respondents agreed that planning policies and decisions in their local authority area support local health and wellbeing strategies. A total of 26% of respondents disagreed with the statement 'Health is integrated into planning in my local authority area' (Figure 4).

Figure 4. Extent to which respondents agreed with statements about planning and health



Respondents were asked to rank which organisations/decision-making bodies and which professional groups should be responsible for ensuring that health is integrated into spatial planning at the local level (Table 3 and 4).

Local authorities were ranked at the top (most responsible) while housing associations were ranked number 8 (least responsible) (See Table 3).

Planning policy professionals, development management planners, and directors of public health were the top 3 professions that respondents considered should be

responsible to ensure health integration into spatial planning at the local level (see Table 4).

Table 3. Rank of organisations/decision-making bodies perceived to have responsibility for integrating health into spatial planning at the local level

Rank	Organisations/decision-making bodies
1	Local authorities
2	Planning committees
3	Health and Wellbeing Boards
4	Public Health England
5	Combined Authorities (where present)
6	Planning Inspectorate
7	Department of Health and Social Care
8	Housing associations

Note. 1 = most responsible, 8 = least responsible

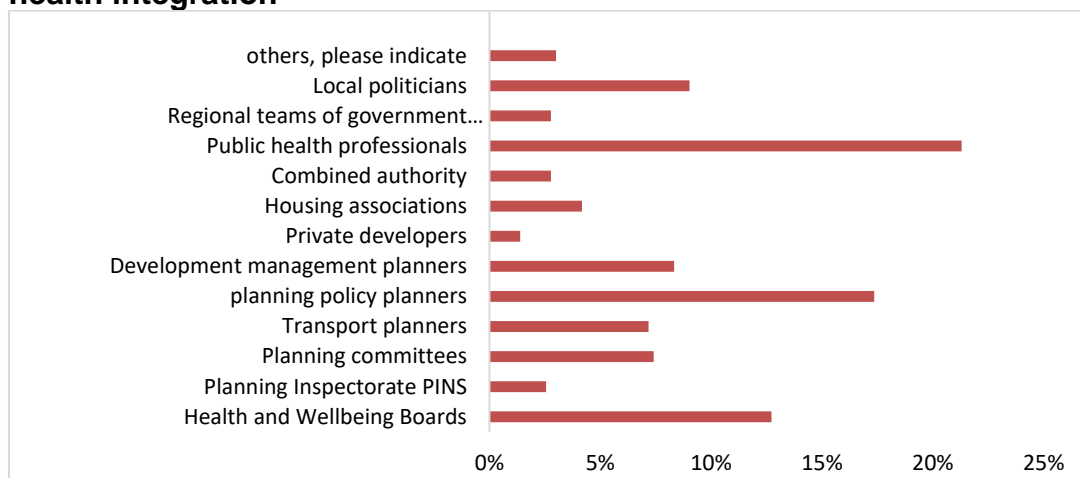
Table 4. Rank of professions perceived to have responsibility for integrating health into spatial planning at the local level

Rank	Professions
1	Planning policy planners
2	Development management planners
3	Directors of public health
4	Public health professionals
5	Transport planning professionals
6	Planners in government departments
7	Elected members
8	Private developers
9	Urban designers
10	Architects
11	Private sector consultants
12	Landscape architects

Note. 1 = most responsible, 12 = least responsible

g. Opportunities for integrating health and spatial planning evidence at a local level

Public health professionals, planning policy planners and Health and Wellbeing Boards were identified as the top 3 organisations/professionals perceived to facilitate spatial planning and health integration at the local level (Figure 5).

Figure 5. Organisations/professionals perceived to facilitate spatial planning and health integration

A total of 96% of respondents agreed that integrating health into the local plan facilitates better consideration of health in spatial planning. Table 5 shows respondents' assessment of some potential facilitators and their level of importance.

Table 5. Potential facilitators to implementing research on healthy planning into practice at the local level

Potential facilitators	Important (%)	Neither important nor unimportant (%)	Not important (%)
Integrating health into the local plan	96%	3%	1%
Shared vision of delivery by those involved in spatial planning decisions	95%	4%	1%
Simplifying the evidence on planning and health to aid communication between public health and planners	86%	9%	4%
Building relationships with developers to improve health awareness	84%	10%	6%
Community engagement through consultations with local communities	82%	9%	8%
Developing good partnership with developers/ private sector that take a long-term view	81%	13%	5%
Forward funding of transport infrastructures	79%	15%	6%
Engaging housing association in place making and health	74%	17%	8%
Improved synergy between public health and resilience planning	73%	16%	11%
Joined up collaborations with multiple stakeholders including academics	69%	23%	8%
Incentivising developers	68%	24%	8%
Streamlining the process for developers through the use of checklists	63%	26%	11%

As shown in Table 6, 9 out of every ten respondents agreed that a lack of evidence that can be translated to practice at the local level is a barrier to health integration into spatial planning at the local level, 89% of respondents considered limited capacity to be a major barrier.

Table 6. Barriers to implementing research on healthy planning into local practice

Barriers	Important (% of responders)	Neither important nor unimportant (% of responders)	Unimportant (% of responders)
Existing evidence is not translatable to practice at the local level	91%	19%	3%
Lack of resource and capacity at local authority level	89%	6%	5%
Quality versus quantity: prioritising the number of houses over the impact on health	89%	6%	5%
Communication and cultural gap between planners and public health professionals	85%	19%	5%
Lack of monitoring and evaluation of planning decisions	81%	15%	5%
Disconnect between government agencies responsible for providing leadership on spatial planning and health	79%	20%	6%
Lack of a designated funding stream for green infrastructure	78%	14%	2%
Political priorities and buy-in from local politicians	78%	9%	2%
Lack of robust planning guidance or regulation	72%	6%	6%
Lack of partnership structure required to deliver healthy places	71%	22%	9%
Lack of understanding/engagement with local public health priorities and needs	70%	20%	11%
Evidence exists, but very often planners and stakeholders aren't aware	70%	20%	11%
Planning inspectors not supporting decisions	67%	20%	13%

h. Recommendations for improving future implementation of health and spatial planning evidence at a local level

Respondents were asked to rank a list of recommendations identified during the interview stage for the future development and implementation of health and spatial planning evidence. Improving national guidance and having stronger policies for place-making and health were ranked as the most important recommendations, while organising networking events was ranked as the least important recommendation (Table 7).

Table 7. Rank of future recommendations for improving implementation of research into practice in spatial planning for health

Rank	Future recommendations
1	Improved national guidance and stronger policies for place making and health
2	Engaging politicians with healthy spatial planning
3	Taking a holistic view of health and place
4	Articulating the wider benefits to multiple stakeholders
5	Strategic partnerships between public health and planning agencies at national level
6	Funding high-quality research with practical application at the local level
7	Research on cost-benefit of healthy places for various sectors
8	Creating a central repository of good practice
9	Joint Continuing Professional Development (CPD) events/training for public health and built environment professionals
10	Recruiting strong champions and advocates for spatial planning and health
11	Organising networking and knowledge exchange events

4. Discussion of findings

The following section provides a discussion of key themes which emerged from the research activity results in the Annex 1 and considers recent research and policy developments.

a) Improving picture on integrating planning and health in practice

A total of 35% of respondents agreed with the statement that “health is integrated into planning in my local authority area” while a larger proportion (39%) provided a neutral response. Evidence and anecdotal experience from other research sources (7, 8, 9) suggest positive and established relationships between public health and teams such as planning. The results of this survey provide a useful baseline for future surveys to track the progression of reuniting health with planning since the **Health and Social Care Act 2012 Act** and the introduction of the National Planning Policy Framework (NPPF) in 2012.

Since 2012, the NPPF from the Ministry of Housing, Communities and Local Government (MHCLG) has been clear about the requirement to connect planning policies with public health systems, in particular about meeting identified needs in the joint strategic needs assessment (NPPF Paragraph 91 c) and supporting delivery of health and wellbeing strategies (NPPF Paragraph 92 b).

A total of 39% of survey respondents believe planning policies and decisions in their local authority areas address needs identified in the local needs assessment, while 46% believe they take into account and support delivery of the joint health and wellbeing strategy. These findings present an optimistic picture of practitioner perspectives on policy integration of public health with planning and reflect the increasing emphasis on health and wellbeing in planning practice. This may however, represent some improvement of findings from a policy review by the Town and Country Planning Association (TCPA) of all English local authority local plans, where they found that 27% of local plans referred to the needs assessment and 23% referred to the health and wellbeing strategy (7).

There is a clear perception from respondents in the survey and from wider research (10) that local authorities planning policy and development management planners, and public health professionals, have the main responsibility for integrating health and planning. This reflects discussions in the **Marmot Review** of health inequalities in England where it was suggested a greater interaction of local authority departments such as planning, public health and environment can better address the social determinants of health (11). Some respondents did think that the main responsibilities should be with developers, architects and private sector consultants. However, all

sectors have important roles to play under the Health in All Policies approach (12), and the survey responses do recognise the important role played by other organisations and professionals such as local politicians, Health and Wellbeing Boards, transport planners and local planning committees.

b) Awareness of the Resource

The overall results of the survey found 63% of respondents were aware of the Resource. When separating the results of those working in public health and those working in the built environment, those from public health backgrounds were much more likely to be aware of it (72%) than those from planning backgrounds (56%). Despite this difference, over half of planners, who responded to the survey, indicated an awareness of the Resource.

The importance of word-of-mouth communication in spreading knowledge is evident in that over half of respondents were made aware of the Resource from colleagues. The reach of PHE, its Centres¹ and its various networks and sharing platforms such as the Healthy Places Knowledge Hub² as a means of dissemination, was also important, given that a combined 38% of respondents found out about the Resource via these routes. 18% found out about the Resource via “other” sources. UWE did not gather information to explore what these “other” methods were but these are likely to include more bespoke methods such as web searches, professional blogs or trade/ industry publications. It is important to consider all possible routes to raise awareness of publications like the Resource, particularly those that can more effectively reach the main target audience groups.

Awareness of the Resource provides an important indicator of how effective dissemination strategies have been to communicate and cascade the Resource to practitioners since publication in July 2017. From the results, it appears the Resource has a high brand recognition and that a variety of means have been used for dissemination, including during the time of publication in 2017 and subsequent events such as at the March 2019 Spatial Planning and Health Seminar and the healthy places webinar held in May 2019³. To date, the Resource has been downloaded from the PHE website more than 5,000 times since it was first published in 2017 (as of July 2019). Interestingly, newer forms of communication, such as Twitter, although used for dissemination, accounted for less than 5% of awareness.

¹ <https://www.gov.uk/guidance/contacts-phe-regions-and-local-centres>

² <https://khub.net/group/healthypeoplehealthyplaces>

³ A series of Healthy Places webinars is being delivered throughout 2019 starting with Spatial Planning and Health on the 29th May.

A vital route in awareness raising at a local level has been from public health professionals in local authorities to their planning colleagues. Innovators and early adopters are crucial to improving the rate of adoption, acting as a vital part of a multi-layered engagement strategy (13). To supplement this, publications, newsletters, email groups and other routes of dissemination that are focused on town planning and the wider built environment professionals, such as *The Planner*, *Planning Resource* or *Town & Country Planning* could help to address the relative lower awareness of the Resource among those from a non-public health background.

c) Application of the Resource

The focus for this study was to better understand how and by whom the Resource is applied in practice across the many aspects of the planning system. Of those who had used the Resource (from all professional groups), the majority (72%) found it useful. When asked to elaborate on the initial question, respondents highlighted specific elements of the Resource such as the infographics, case studies, layout and language and overall holistic approach of the evidence base as particularly useful. The Resource has been used for a wide variety of activities, including input into the development of Local Plans, undertaking of Health Impact Assessments (HIA), responding to planning applications and as a means of initiating engagement with planning professionals to improve the understanding of issues relating to health and wellbeing. These insights reflect willingness on the part of both public health and planning teams to collaborate on planning for health around the various entry points what exist to the planning process (14).

In particular, respondents highlighted the strengths of the Resource as a holistic and 'one-stop-shop' document where the various elements such as the diagrams, case studies and research summaries could be extracted for different purposes. The use of case studies provided added value to demonstrate how and where else the principles have been applied, the accessibility of the visual infographics to summarise each of the 5 topics on 1 page and clarity of the planning principles and modifiable features which can be readily transposed into practical application.

Any future dissemination and communication activities should consider how to better engage with those 24% or respondents who did not find the Resource useful or provided a neutral response. This could be subject to activities to provide further professional training to improve their knowledge or awareness of the strength of evidence (15) or specific engagement to better understand their capability, motivation and opportunity to support the behaviour change sought from policy and decision-makers. For example, formal behaviour change approaches (such as the COM-B model) (16) could be used to consider how to increase the uptake of the Resource by respondents as key policy and decision-makers.

d) Strengths and limitations of the Resource

Advocates of the Resource highlighted its particular strengths around the infographics, case studies, layout, language and overall holistic approach of the evidence base presented. Insight from in-depth interviews with national experts indicated a need to examine possible improvements to the resource in any future iteration or creation of new resources by PHE so that they can be made even more useful to practitioners.

When analysing responses from different professional groups, public health professionals were more likely to value the detail of the evidence, including evidence outlined in the full umbrella review technical document. Conversely, town planning professionals commented on the usefulness of the case studies. The clear planning principles illustrated in the Resource were viewed as a key strength across respondents of all professional backgrounds.

There is no shortage of evidence reviews or reports that discuss links between health and spatial planning (17). Key challenges remain in how they are communicated and presented in formats suitable to inform policy development and aid planning decisions. The use of diagrams to summarise the pathway from planning principles to modifiable features, to health behaviour and health outcomes, set this Resource apart from publications in this field.

Limitations of the Resource were noted. Interestingly, some respondents wanted an even simpler and shorter summary of the evidence. Others expressed a preference for more case studies and a broader scope to the review to include emerging issues such as mental health, isolation, work and health, use of allotments and community gardens.

It is important to address the views expressed in both the interviews and survey in order to maximise the uptake of the Resource but also recognise the complex interconnections of people's health and wellbeing as well as place on issues such as obesity (18). This may involve further research at a local level, possibly using a case study approach to dive deeper into the issues of using the Resource.

e) Existence of other tools and guidance

As part of the survey, we also wanted to determine what other sources of evidence and guidance exist, in addition to the Resource which practitioners were aware of and using in planning for health and wellbeing. Options were put forward to survey respondents setting out a variety of publications from organisations in the public and third sectors, such as the Royal Town Planning Institute (RTPI), Town and Country Planning Association (TCPA), National Institute for Health and Care Excellence (NICE), Sport England, Building Research Establishment (BRE) and Transport for London amongst others.

The NPPF and Planning Practice Guidance (PPG) set out a clear set of policies and guidance about health and wellbeing in planning from MHCLG, but these have been introduced incrementally. The NPPF was first published in March 2012 and updated in February 2019. The first Health and Wellbeing in planning guidance in the PPG was published in 2014 and the PPG on the food environment in 2017. The PPG on Health and Wellbeing was more recently updated in July 2019 and retitled **Healthy and Safe Communities** and incorporates the food environment.

This incremental development and revision of policy and guidance have allowed other organisations and public agencies to develop supplementary guidance which have often been adopted into local planning frameworks and have helped inform local planning decisions. Therefore, whilst only a minority of survey respondents provided responses to the question of their 'Awareness of spatial planning and health guidance from other organisations', it is clear that as many as 40% were aware of other PHE guidance, 38% from the TCPA and 30% from the RTPI.

f) Barriers and facilitators associated with the implementation of health and spatial planning evidence at a local level

Respondents ranked 'Existing evidence is not translatable to practice at the local level' as the top barrier (91%), particularly from town planners. Lack of local capacity (89%) came as the second most important barrier facing local professionals, and this finding aligns with findings from other research by the Design Council (19) and the TCPA (7), as well as by the LGA (20).

Some local authority areas have built and are improving local capacity through recruiting healthy urban planners or ensuring there is a dedicated public health lead on the environment and healthy places team. Improving the training of public health and town planning professionals may also help to upskill the existing workforce and facilitate implementation of healthy spatial planning at a local level. This can be achieved through short courses, seminars, continuing professional development courses for public health and planning practitioners, as well as delivering lectures on spatial planning in MSc public health and planning programmes.

While 72% of survey respondents highlighted lack of planning guidance and regulation as a barrier, improving national guidance and stronger policies for place-making and health, was the top recommendation. Addressing the plethora of non-statutory guidance from external organisations and other public agencies and ensuring an element of consistency and regularity, can help to manage this challenge in the future, for example, through the production of best practice guidance. Many local authorities welcome the opportunity and flexibility to develop local standards and procedures to reflect local circumstances and needs around planning for health, and different working arrangements, such as those in two-tier authority areas.

Respondents highlighted the lack of a strong legislative hook with explicit requirements of healthy spatial planning targets, for example on housing space standards, or green space requirements for residential requirements.

Overall, these are interesting findings and validate the University College London (UCL) Lancet Commission perspective that decision-makers in planning healthy cities are not in direct control but are participants in a system responding and managing the outcomes and effects of interventions as they occur (21). Those barriers identified by practitioners need to be addressed for them to have greater confidence in healthy planning at the local level.

5. Conclusions and key messages

This study has clearly demonstrated how the Spatial Planning for Health Resource has been valued both in identifying, summarising and critiquing research in the field of health and spatial planning and how the findings were presented in an accessible way for practitioners at a local level from both public health and planning backgrounds. Furthermore, this study has helped to demonstrate both the strengths and the limitations of the Resource and also surfaced the challenges and opportunities for translating this evidence into on-the-ground practical results.

It has been a ground-breaking study that has allowed the researchers to probe in-depth and demonstrate how a PHE resource is being used in the 'real world', including the challenges faced by local professionals in using such tools. The results have provided invaluable feedback and can only help improve the reach and influence of future PHE publications and activities within the Healthy Places team and PHE Centres.

It has been 6 years since the Health and Social Care Act 2012 came into effect and transferred public health responsibilities into local authorities from the NHS, and reunited public health with town planning functions in county and district level local authorities. Applying health evidence and research to the practice of planning policy development and decision making is framed around the requirements of the NPPF which sets out the government's expectations for sustainable local development, including promoting healthy and safe communities. Local plans and planning decisions should be made based on public health evidence of need and priorities. It is important therefore to ensure the strength and applicability of such public health evidence of the impacts on health arising from the built and natural environment.

The Resource illustrated the links between the built and natural environment and health for public health professionals and planners working in local authorities in the UK. It was developed with the purpose to inform action and support local policy development. It has helped to address the need for a UK-centric evidence review from current academic literature.

The study identified the importance of integrating health into the local plan as a main facilitator of healthy planning. This reflects the plan-led planning system where planning decisions are taken based on the local plan together with requirements in the NPPF.

The interviews and national survey carried out with these groups demonstrated that although significant progress was being made in many areas, there remains a clear set of challenges and opportunities to be addressed by practitioners in order to take the necessary actions in practice - even with the tools and evidence available to them.

While there was a high level of awareness of the existence of the Resource, not unexpectedly, the levels differed between public health professionals and town planners. A range of strengths of the Resource as a key source were outlined, most notably the use of the infographics/ diagrams to summarise the evidence and associations between planning principles, modifiable features, health behaviour and health outcomes. Limitations included a sense that the information could be presented in an even simpler form, with an expansion of the use of case studies.

Critical factors identified over the course of this study to support the development of 'healthy planning' included: building relationships and partnerships, and making the evidence base both more accessible and raising awareness of the emerging evidence base of the impacts of the built and natural environment on health and health promoting behaviours are critical factors in healthy planning. These were identified as key issues to address over the course of this study. Indeed, it was recommended that an emphasis on joint training for public health and planning professionals was a good starting point to promote better joint working locally.

Study participants identified the issue of local capacity and resourcing as a barrier, in particular in two-tier areas where public health functions sit at the upper tier authority while planning functions sits at the lower tier district authority. There is increasing evidence of some local areas that have employed specialists in the field, such as healthy urban planners or public health professionals with a focus on planning and health. This response to addressing capacity issues needs to be considered seriously in all local authorities.

There was a broad consensus on the need to develop a central repository for sharing good practice and locating evidence that can be applied locally. Some practitioners suggested that academic institutions with greater expertise could offer support with developing a repository that can be regularly updated.

In conclusion there are some key actions for consideration:

Spatial planning and health resources to meet the practical needs of both planning and public health professionals. Planners require more concise and visual information while public health professionals rely on robust and detailed analysis of evidence. The Resource provides a useful example how these needs can be met in 1 document without compromising on quality. National and local bodies, including PHE, can recognise these different needs when developing future resources and the impact they will have on document format, length and style.

Integrate local health and wellbeing needs and priorities into the local plan and decision-making process. Planning teams have a responsibility to formalise the statutory joint strategic needs assessment of health and the joint health and wellbeing strategy in local plans and planning decision processes as required by the NPPF.

Heads of Planning have a key role to ensure their local plans are up to date and meet those health and wellbeing requirements in the NPPF and PPG. Achieving this can also help to leveraging support and compliance by housebuilders and planning applicants.

Establish clear communication and engagement processes between public health and planning teams. This will ensure public health teams have a clearer understanding of how and when to engage with their planning colleagues to have maximum influence and input on health and wellbeing issues. Directors of public health have an important role to making this happen with the agreement of the Heads of Planning.

Delivering joint training and education across the workforce. This need for systematic training to introduce and improve shared knowledge and competencies can be jointly delivered with key partners such as professional institutes and universities. These can be targeted across the spectrum of the workforce career path from undergraduate modules to Continuing Professional Development programmes. Different methods can also be explored including online learning, short courses, workshops and networking events.

Political support is essential to integrating health into planning at the local level. Political support from Elected Members and clear corporate priorities were identified as crucial determinants of the extent to which health is integrated into spatial planning. As such, it is important to engage with local politicians in discussions on healthy spatial planning and where possible further training and awareness raising of relevant public health evidence.

Identify and improve access to an existing wealth of research knowledge and good practice. There is a significant wealth and breadth of information available to practitioners on healthy planning developed by a range of international and national organisations to support implementation of legislative and policy requirements. Practitioners appreciate clearer signposting and access to this information to support local actions, and there are suggestions that national organisations or institutions with greater capacity such as universities can take on this role.

Launched in 2018, the GRIP initiative has the ambition to support local authority public health and planning teams to effectively influence the planning process in an evidenced-based way in ensuring that improvements in health and wellbeing underpin all local plans and the design of local development projects. This study forms the first stage of GRIP with an aim to explore the challenges of applying the evidence-informed principles set out in the Resource into practice at a local level. The next stage of GRIP will seek to undertake a programme of direct engagement with public health and town planning professionals to apply evidence to co-produce locally-led resources which are directly translatable into practice in policy, guidance or development processes.

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Annex: Research methods and results

This Annex presents details of the methods and results of research activities undertaken by the University of the West of England between late 2018 and the Spring of 2019.

Methods

Study design

A sequential exploratory mixed method design was utilised, with initial collection of qualitative data through in-depth semi-structured interviews, followed by the collection and analysis of quantitative survey data (6).

Ethical approval to conduct this study was granted by the UWE Bristol Ethics Committee (Project reference: HAS.18.10.044).

Participant recruitment

In-depth interviews with public health and planning professionals

A series of in-depth semi-structured interviews were conducted with public health and planning professionals working in local authority settings. To ensure representation and feedback from public health and planning teams working across England, participants were purposively selected using existing networks and links related to each of the 9 PHE Centres:

- London
- South East
- South West
- North West
- North East
- East Midlands
- West Midlands
- Yorkshire and the Humber
- East of England

UWE aimed to recruit 1 public health professional (for example, a consultant in public health with portfolio responsibilities for health and planning) and 1 planning professional (for example, a planner who has experience of working with public health colleagues) from a local authority to participate in a 'joint interview'. The joint interview approach is associated with potential benefits including the generation of more comprehensive data, and eliciting shared and/or dissimilar understandings (22).

A total of 6 semi-structured joint interviews were conducted with 12 public health and planning professionals working in local authority settings. Time and resource constraints in London, Yorkshire and the Humber, and North East regions meant that 2 individual interviews were conducted with public health professionals alone in London and Yorkshire and the Humber. Due to unforeseen circumstances, it was unfortunately not possible to conduct an interview with public health and planning professionals in the North East.

In addition to joint interviews, in-depth semi-structured interviews were conducted with 5 public health professionals specialising in each of the 5 built and natural environment topics areas identified in the *Spatial Planning for Health* Resource. Individuals were purposively selected using existing networks and links. Potential interviewees were invited via email to participate in a face-to-face or telephone interview. An overview of interview recruitment is presented in Table 9.

Table 9. Participant recruitment

PHE Centre	Participants
London	One-to-one interview with public health professional
South East	Joint interview with public health and planning professional
South West	Joint interview with public health and planning professional
North West	Joint interview with public health and planning professional
North East	No interview conducted
West Midlands	Joint interview with public health and planning professional
East Midlands	Joint interview with public health and planning professional
Yorkshire and the Humber	One-to-one interview with public health professional
East of England	Joint interview with public health and planning professional
Topic Area Specialists	
Neighbourhood design	One-to-one interview with public health professional
Housing	One-to-one interview with public health professional
Healthier food	One-to-one interview with public health professional
Natural and sustainable environment	One-to-one interview with public health professional
Transport	One-to-one interview with public health professional

Survey with public health and planning professionals

Potential participants were identified and contacted through existing mailing lists held by PHE and the UWE Bristol research team, and a link to the survey was shared on various communication channels including Twitter, and regional built environment networks. Delegates at PHE's first Spatial Planning for Health Seminar, held in March 2019, were also alerted to the existence of the survey and were sent a link following the seminar via email inviting their participation. A total of 162 public health and built environment professionals completed the online survey.

Data collection

In-depth interviews with public health and planning professionals. Interviews were conducted between November 2018 and February 2019.

The interview schedule was designed to be adapted for use with the 2 populations of interest: public health and planning professionals working in local authority settings, and public health professionals specialising in each of the 5 built and natural environment topic areas identified in the *Spatial Planning for Health* Resource. It was piloted with a public health professional and a planning colleague, both working in a local authority setting, to assess whether questions were applicable to the audience and to identify any additional areas for exploration. All interviews were audio recorded.

On-line survey with public health and planning professionals

The survey was created in Qualtrics Survey Software and was live for 3 weeks during April 2019. It was developed by the UWE Bristol research team, with input from members of PHE's Healthy Places team. Survey items were derived from salient themes identified through the analysis of interview data:

- **Awareness** and **use** of the *Spatial Planning for Health* Resource
- **Strengths** and **limitations** of the *Spatial Planning for Health* Resource
- **Awareness** and **use** of other existing resources, tools, guidance
- **Strengths** and **limitations** of other existing resources, tools, guidance
- **Barriers** and **facilitators** associated with the **implementation** of health and spatial planning evidence at a local level
- **Recommendations** for improving **future implementation** of health and spatial planning evidence at a local level

The survey was piloted with a public health professional working in a local authority setting before the final version was made available.

Data analysis

In-depth interviews with public health and planning professionals

In-depth interview data were transcribed and imported into qualitative data analysis software (NVivo 12 (QSR International)). In-depth interview data from both populations of interest were analysed together using Thematic Analysis, a method commonly used to identify, analyse and report patterns in qualitative data (23).

Survey with public health and planning professionals

Survey data collected via Qualtrics Survey Software were extracted and imported into quantitative data analysis software (IBM SPSS Statistics v 22.0) to produce results.

Results

Part 1: In-depth interviews with public health and planning professionals

Respondents were asked a series of questions about their awareness of the *Spatial Planning for Health* Resource and their experience of using the Resource.

a. Awareness of the Spatial Planning for Health Resource

Nearly all public health professionals were aware of the Resource, while only a few planning professionals knew of its existence. In some cases, the planning professionals had been made aware of the Resource by their public health colleagues. Awareness of the Resource was explored further in the survey (see page 29).

“I’m aware of it, obviously, because I was involved in developing it.” (Public health professional)

“I have to hold my hand up – I’ve not come across this before. But I was quite impressed with it. It’s quite useful.” (Planning professional)

b. Use of the Spatial Planning for Health Resource

Public health professionals reported using the Resource as a reference document to communicate with their planning colleagues. Other reasons for using the Resource included making a case for health integration in local planning and developing local guidance and protocols in specific local authority areas.

Interview findings align with informal feedback obtained at PHE’s first Spatial Planning for Health Seminar in March 2019, where public health professionals were found to be more likely to have used the Resource than their planning colleagues. Some of the explanations for this relate to the Resource being less well-known to planners. This theme was further explored in the survey as respondents were asked to highlight ways in which they had used the Resource (see page 29).

c. Strengths of the Spatial Planning for Health Resource

Interviewees were asked to discuss what they considered to be the key strength of the Resource. Several features of the Resource were identified as the best aspects including the infographics, case-studies and the holistic nature of the evidence contained in the Resource. This aligns with discussions at the PHE Spatial Planning and Health seminar. This theme was also further explored in the survey (see page 31).

Infographics: The infographics summarising the planning principles, modifiable features, and corresponding health outcomes were described by a number of participants as being clear, accessible and a key strength of the Resource. However, 1 public health professional explained that the key benefit of the Resource for them is the detailed analysis of the evidence, as the diagrams were perceived as being too ‘busy’.

“I find I’m quite a visual learner... I do like how it’s summarised pictorially and how you could actually use some of the diagrams to actually link the planning and health principles, and how really those planning principles and those modifiable changes, how it has an impact on health. ...And, I think the evidence that supports each chapter is useful for, I suppose, a Public Health Practitioner to provide evidence to support any

response or query we might have for a consultation from our Planning Policy team.”
(Public health professional)

Case-studies: The case-studies presented under each of the 5 topic areas of the Resource were acknowledged by both public health and planning professionals as being useful, especially as a means of sharing good practice at local authority level.

“I think that the most valuable part of the document are the case studies, and basically how we could potentially use similar case studies in our own area.” (Planning professional)

Holistic evidence resource: Some public health and planning professionals described the Resource as a holistic publication that summarises the breadth of evidence on spatial planning and health in a friendly and accessible way.

d. Limitations of the *Spatial Planning for Health* Resource

“I think that as a resource that pulls all the information together, it’s very good, it’s very useful. No one document can be fully comprehensive, because it’s such a large area. But it’s certainly one of the most useful, in terms of pulling together the evidence. And pulling it together in a way that is applicable at local level.” (Topic area specialist)

The key limitations identified through the interview process relates to the promotion of the Resource, the intended audience, the layout and accessibility of the Resource to non-public health audience and the need for evidence that can be practically applied at the local level. Further details and discussions with interviewees are below.

Promotion of the Resource: Some planning professionals interviewed expressed a concern that the promotion of the Resource was targeted towards public health professionals and that more effort is needed to promote the Resource among the planning community.

“I think I wasn’t aware of it and I should have been. So, I think maybe it needs to be promoted not just on the public health website but, maybe on other websites, for example, the RTPI’s website or the Ministry of Housing and Local Government’s website. So, more people are aware of it as a tool.” (Planning professional)

Intended audience: Some of the interviewees emphasised that the focus, language and overall presentation of the Resource makes it more accessible to public health than planning professionals or other stakeholders. It was suggested that more emphasis should be placed on highlighting the co-benefits of spatial planning to multiple stakeholders.

“I think part of the barrier is that it reads and looks very much like a Public Health England evidence review type document. I mean, it’s useful, I suppose, to have all the references. The tiny reference document, I think that’s helpful on one hand. But on the

other hand, it's almost like too much, it puts people off. But then, I think obviously it has to have something, because this is a resource document but it's almost like it's branded PHE as well and I don't know. It depends who it's for, if this is for Public Health colleagues then I think it's really good. If it's for planning colleagues it would be nice if it could somehow be almost a joint document with one of the planning bodies, does that make sense?" (Public health professional)

Layout of the report: Both public health and planning professionals expressed concern that the overall length of the Resource makes it less accessible for planning professionals. Some planning professionals suggested having a summary version highlighting the key principles from each of the 5 areas and a signpost to the detailed evidence for reference purpose.

"If you're trying to influence development management officers and that side of planning, yeah, they're like developers they don't read a document. It's got to be short and snappy and really reach them." (Planning professional)

Depth of evidence – practical application: Some public health and planning professionals were concerned that the Resource provides a breadth of evidence without a clear focus on practical and evidence-based steps to address the issues identified at local authority levels. There was a consensus about the need to include data and metrics that indicate the level of investment required to improve health outcomes under each planning principle.

"I think the main thing is the depth, and I appreciate that we're trying to generate a useful picture of a breadth of evidence... it may be more useful to rapidly review the breadth of evidence and then focus in on, as I said, in consultation with the end-user, focusing on key questions that you could explore in more depth... So, there's something around the, 'how to?' being a lot more visible and shared, not just one or two case studies." (Topic area professional)

Overlaps existing guidance: The overlap between the Resource and other existing resources was also identified as a barrier. Some public health and planning professionals flagged that the existence of several overlapping documents and guidance makes it challenging for them to keep up abreast with new developments in their field.

"I think we get a little bit overwhelmed with toolkits, if you like and those sorts of documentation, you start to become a little bit blasé about them, if you like. There's lots of similar guidance through the NPPF and NPPG." (Planning professional)

In summary, the key limitations of this Resource according to the interviewees and echoed in the spatial planning and health seminar is that it needs to be more targeted,

tailored and designed for practical use by both planning and public health professionals alike.

e. Recommendations for improving *Spatial Planning for Health Resource*

Enhance practical application at local levels: There was a consensus on the need to provide evidence-based solutions that can be implemented at local authority level. The main concern for most of the interviewees was ‘how to’ apply the findings from the Resource.

“I suppose as a practitioner, it’s always the case, practically, “what do you want me to do about it”? Of course, it would be hard to find a planning officer these days that doesn’t agree with more or less all the sentiments that are within it, that don’t understand the theory around compact neighbourhoods, around access to green space, good housing and all those sorts of issues and why you should be pushing towards it.”
(Planning professional)

Provide quantifiable data and metrics: Interviewees suggested that to improve the practical application of the Resource, there is a need to collect quantifiable data on specific features of the built environment and its associated outcomes.

“In general terms, it talks about housing. It says that houses should be not overcrowded and have room for people to live in and that sort of thing. What I was being asked for, was okay, we need some proof that small room sizes are bad for health, or worse for health, we want some evidence of actual meters squared, what are we looking at?”
(Public health professional)

Provide opportunities to update the Resource: Both public health and planning professionals recommended that the Resource should be updated regularly with additional case-studies, practical examples and new findings.

“It needs to almost be a living document if you like, being added to, in a way. I think it needs to start adding practical applications.” (Planning professional)

f. Barriers associated with the implementation of health and spatial planning evidence at a local level

Gap between public health and planning professions: Differences in the understanding of the definition and use of the evidence base across both public health and planning disciplines was highlighted as a key barrier to developing collaborative working between public health and planning professionals. Planning professionals emphasised that policy and national standards are the most important sources of evidence, whilst public health professionals acknowledged research evidence as most important. Some public health professionals were of the opinion that health was not equally prioritised across both disciplines.

“I would probably say the biggest barrier, especially at the beginning, was from a planning perspective, trying to understand how public health works and then also engaging development management colleagues in seeing the value in health, and how they can bring it into their Planning applications.” (Public health professional)

“I think sometimes our language is so different, and at times I think that’s the barrier to understanding and a way of working.” (Planning professional)

“With public health, evidence is king, and with planning, policy is king.” (Public health professional)

Economic arguments with developers: Economic arguments about profit and viability were considered to be one of the most important barriers to integrating health into spatial planning.

Some practitioners highlighted that developers would consider the statutory obligations but they are less concerned with intangibles such as health that can impact on their profit margin.

“It’s really hard to get a developer to think of valuation in anything but a monetary value. And, especially when we effectively force them through the process, quite legitimately, through the financial viability appraisals.” (Planning professional)

“What planners face is the viability argument. Developers will say they can’t afford to do it.” (Public health professional)

Political support: Some practitioners expressed concern that a lack of political support at the local level makes it difficult to influence local policies that ensure health is appropriately integrated into spatial planning.

Some practitioners shared their views on how reluctance to make key decisions, that could integrate health into spatial planning, are associated with a lack of political appetite, in part due to concerns about upsetting voters.

“I think some of the outcomes haven’t been as positive as we’d like because people aren’t prepared to make those difficult decisions because they’re worried about losing their seat.” (Public health professional)

“So, from my experience and knowledge of working in a local authority, they are normally subject to what’s called a ‘political decision making process’, not a scientific evidence-based decision making process. So, often political priorities or political pressures may cause action, or not cause it.” (Topic area specialist)

Legislation and policies: Practitioners argued that existing legislation is not strong enough to see substantial improvements in healthy place-making and that stronger policies and legislation, which make explicit reference to health integration in spatial planning, are needed to effectively engage with developers.

“It’s all well and good having a document, but if we’ve got no means of it having traction with discussions with a developer, they’ll just say, ‘Thank you, but no.’ If we haven’t got a legislative ‘hook’ to hang it on, then we just won’t get any traction on it. So, it needs to be enshrined in legislation and in best practice as well.” (Planning professional)

Resource and capacity at local authority levels: Concerns were raised about the impacts of reduced local authority budgets on the availability of resources and on the skillset needed to support collaborative work between public health and planning.

The increased pressure on planning officers to review planning applications was highlighted as a barrier to the holistic integration of health in planning.

“Some local authorities say, ‘We don’t have time for that, we become a very reactive service.’ So, their job is to turn around the planning applications, not to consider prevention. I just don’t think they’ve got the capacity or the ownership to take into consideration some of the really good practice that’s enshrined in this tool.” (Topic area specialist)

g. Opportunities for integrating health and spatial planning evidence at a local level

Building relationships with developers: Some practitioners discussed the importance of building relationships with developers to facilitate better understanding of the importance of healthy place-making. Some examples of where this has been achieved were discussed.

“The other group that we really need to engage with are the developers, the designers of the buildings, the commercial sector organisations that design and build the developments. Some are going to be more challenging, some of the really big ones aren’t that interested. Some are just interested in delivering profit for the shareholders. But there are organisations out there, who people have spoken to, there has been work going on with the developers and designers and architects who actually build the product.” (Topic area specialist)

Articulating the wider benefit for multiple stakeholders: Practitioners want to see toolkits and resources that highlight the wider benefit of integrating health into planning to multiple stakeholders including developers, local authority, the NHS and other sectors. This was identified as an important step to addressing siloed working across various sectors.

“I think one of the difficulties of putting some of this into practice is for example, if I’m looking at the tool that we’re particularly thinking about, the spatial planning for health, it’s very helpful from a public health point of view to have articulated the health outcome, but if I speak to any partners, be they the community, be they our planning colleagues, they’re not interested in the health outcomes. They may have a personal interest, but they have a professional requirement of a different set of outcomes. So, I think what we need to get better at articulating in the research, is how actions that are being proposed will have multiple outcomes so they will be attractive to developers, they will increase environmental sustainability, they will increase the attainment of good health, healthy lifestyles and health outcomes.” (Topic area specialist)

Simplifying the evidence: Both public health and planning professionals identified that simplifying the evidence in terms of the language and accessibility to both fields enables collaborative working.

Integrating health into the design of the local plan: Some practitioners explained the importance of ensuring that health is integrated into the design of the local plan and not considered as an afterthought.

“I think while I’m thinking about it, one of the other problems... not problems, issues that has arisen is that if health isn’t addressed at the beginning stages in terms of at the local plan stage, if there’s no policies in there it’s a lot harder down the line when an application is being determined, to get the health in because there’s no policy hook. So, I think it’s really important that everybody knows when to engage, and that is at the start, not down the line once the local plans have been developed and adopted.” (Planning professional)

h. Recommendations for improving future implementation of health and spatial planning evidence at a local level

Training public health and planning professionals: Training for public health and planning professionals was recommended as a starting point to address some of the cultural and language barriers identified. Some suggestions for delivering training included short courses and seminars as well as delivering lectures on spatial planning across MSc public health and planning programmes.

“I think there’s probably something about, not necessarily producing a document, but offering the opportunity to skill up... Having spatial planning and health included in training, Master’s in Public Health for example. For universities who are looking at specifically getting evidence into action to be offering seminars that simplify the evidence base” (Public health professional)

Funding for in-depth research of practical application: Funding was acknowledged to be an important factor for conducting high quality research with practical application

“Having an overview of that whole breadth of evidence is helpful, but then getting down into specific things that we’re likely to be able to try with our partners, that’s really valuable. And, that’s the sort of thing that I would probably find resource within my own team to do that research or you know, to look at the literature on that. So, that’s an example of things that are particularly helpful.” (Public health professional)

Develop a central repository of good practice: There was consensus on the need to develop a central repository for sharing good practice and locating evidence that can be applied locally. Some practitioners suggested that academic institutions could offer support with the development of a repository that is regularly updated.

“I think it’s one of those things, as planners, we try to plagiarise what we can that’s good practice. We spend an awful lot of time scouring websites from other councils, with tip offs. Actually, to have a central repository like that would be really helpful, as long as it’s kept up to date.” (Planning professional)

Organise events to network, discuss and share good practice: There was strong support for organising events and networking opportunities for public health and planning teams to share examples of good practice.

“If you are being serious about getting evidence into action, producing those opportunities to share the latest and allow people to interact and ask questions, or help to home the areas that are being researched as well. So, there’s more of that interaction with if you like, the front line.” (Topic area specialist)

Part 2: Survey with public health and planning professionals

A total of 175 participants participated in the survey, with 162 of these respondents completing it in full. The breakdown of participant characteristics shows that almost half of the participants were public health professionals (N=77, 48%) while 16% were planning policy planners (N=27). Five of the 25 participants who selected the ‘other’ category indicated that they had a planning role. The majority of respondents (52%) indicated that they held a senior/managerial position.

Table 10. Characteristics of respondents who participated in the survey

Respondent characteristics	Number of respondents	Percentage
Role		
Architect	2	1%
Planning policy planners	27	17%
Development management	6	4%
Planners in government departments	2	1%
Transport planning professional	6	4%
Urban designer	2	1%
Housing	6	4%
Public health professional	77	48%
Director of public health	3	2%
Private sector consultants	4	3%
Other	25	15%
Professional seniority		
Apprentice/ junior	4	3%
Technical	38	24%
Senior/Manager	84	52%
Director/Deputy director	19	12%
Others	15	9%
Main area of responsibility		
National	20	12%
London	11	7%
South West	45	28%
South East	14	9%
North West	5	3%
North East	6	4%
East Midlands	15	9%
West Midlands	9	6%
Yorkshire and Humber	8	5%
East of England	21	13%
Other, please state	7	4%

a. Awareness of the Resource

The majority of respondents (N=102, 63%) indicated that they were aware of the *Spatial Planning for Health* Resource, while 37% of respondents were unaware (N=60).

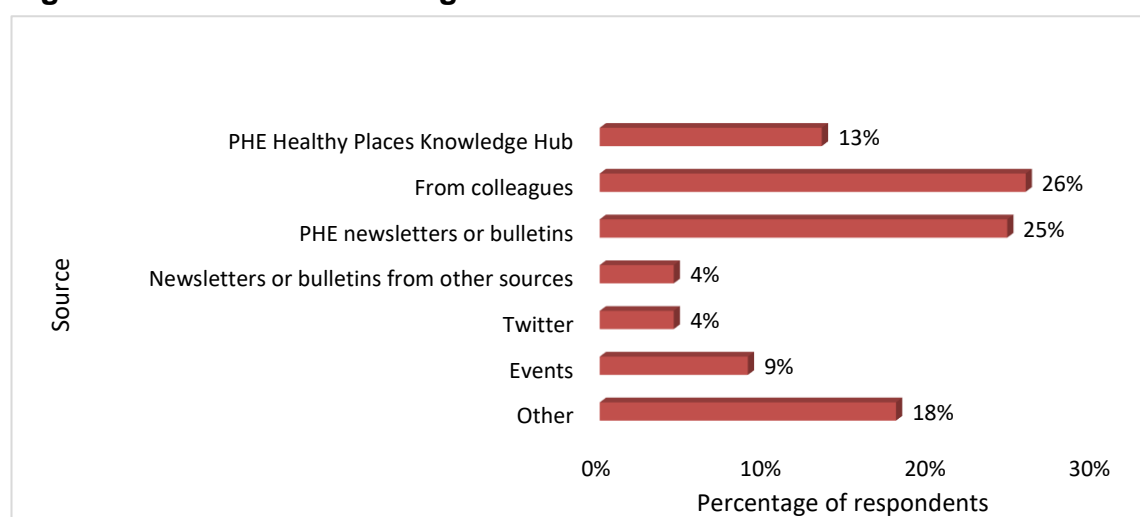
Analysis revealed that 72% of public health professionals had heard of the Resource compared with 56% of planning and built environment professionals (Table 11).

Findings from the survey corroborates interview findings where nearly all public health professionals were aware of the Resource and only a few planning professionals knew of its existence.

Table 11. Cross-tabulation of role of respondents and awareness of the Resource

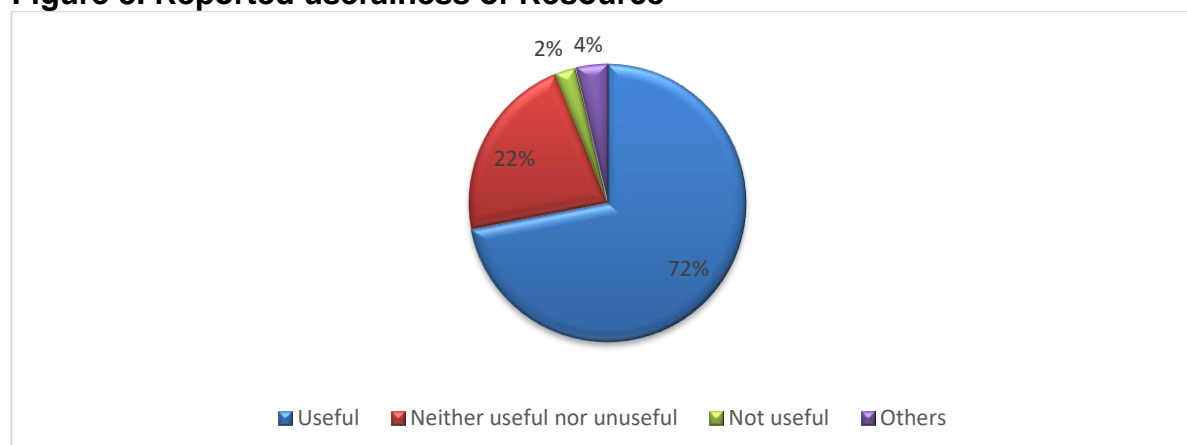
Role of respondents	Before taking part in this study, had you heard of Public Health England's 'Spatial Planning for Health' Resource		
	Yes	No	Total
Public health role	54 72%	21 28%	75 100%
Planning/built environment role	30 56%	24 44%	54 100%
Fisher's Exact Test 1 sided	p=0.041		

Just over one quarter of respondents indicated that they had found out about the *Spatial Planning for Health* Resource from colleagues while a quarter of respondents said they became aware of the Resource via PHE newsletters or bulletins (Figure 7). The high rate of awareness of the Resource among public health professionals could be linked to the promotion and appeal of the Resource to public health professionals

Figure 7. Source of knowledge of the Resource

Over 70% of respondents indicated that they found the Resource to be useful, while fewer than a quarter of respondents (22%) indicated that they found the Resource to be 'neither useful nor un-useful' (Figure 8).

Figure 8. Reported usefulness of Resource



b. Best aspects of the Resource

Respondents were provided with an opportunity to highlight what they considered to be the best aspects of the Resource. Qualitative responses to this question aligned with findings previously discussed in the qualitative synthesis.

- The *Spatial Planning for Health* Resource is a **holistic evidence resource**
 - “The spatial planning for health resource brings together evidence and guidance into one document, which is easy to read with helpful diagrams which link planning issues with health impacts and outcomes”
- The **case-studies** provide added value
 - “It's organised by subject area, includes case studies and provides a list of references which are useful when justifying to planning colleagues the need for applying the health principles to new developments”
- The **infographics** present an accessible way of visualising the evidence
 - “The infographics gives a good summary of each topic, all in one place”
- Layout, language and accessibility
 - “The plain language and layout make it easy to read and understand”
- Clear planning principles
 - “Lays out key principles with evidence, such as improving walkability and connectivity”

c. Ways to improve the Resource

Suggestions for improving the Resource aligned with the findings from qualitative interviews:

- Provide opportunities to update the Resource
 - “Keeping it up to date, e.g. with new evidence”
 - “Update to provide more practical case studies. Also add links to green space and mental health”

- Enhance practical application at local levels
 - “More explicit advice on what to look for in planning proposals”
 - “Make it more applicable to policy and practice decision making”
- Promote the Resource across multiple stakeholder groups
 - “Make more people aware of it”
 - “Find a way to make it available easily to NGOs, community groups”
- Include more practical case-studies
 - “Possibly more case studies, or a companion web resource where they can be added”
 - “More specific case studies that link with the planning process, especially local plan production”
- Simplify the layout of the Resource and improve accessibility
 - “There are too many references. Stick to key ones as the reader is faced with a wall of text which is difficult to digest. Could add hyperlinks to references available online”
 - “Make it little more concise”
- Broaden the scope of the review
 - “The scope of the review is limited e.g. evidence surrounding the wider health benefits of allotments/orchards outside scope”
 - “Two extra areas where we need the evidence 1. First "connectedness" in our digital age - to reduce isolation and loneliness; to improve services; how to plan and build for a digitally connected future? Connected places; inclusive and fast communications infrastructure; we are a very large rural area and this is hugely important - especially with an ageing population. 2. Secondly, creating the right environments for business growth e.g. evidence about encouraging small and medium enterprises being committed to local communities and enhancing skills and employment opportunities; Introducing responsible working practices in the workplace to benefit people and wider area; worker cooperatives - how to build for these? Social enterprises - any evidence around these? Anchor institutions - any evidence around these?”

d. Use of the Resource

Over half of respondents (51%) that were aware of the Resource said they had used it. The most common reasons for using it included:

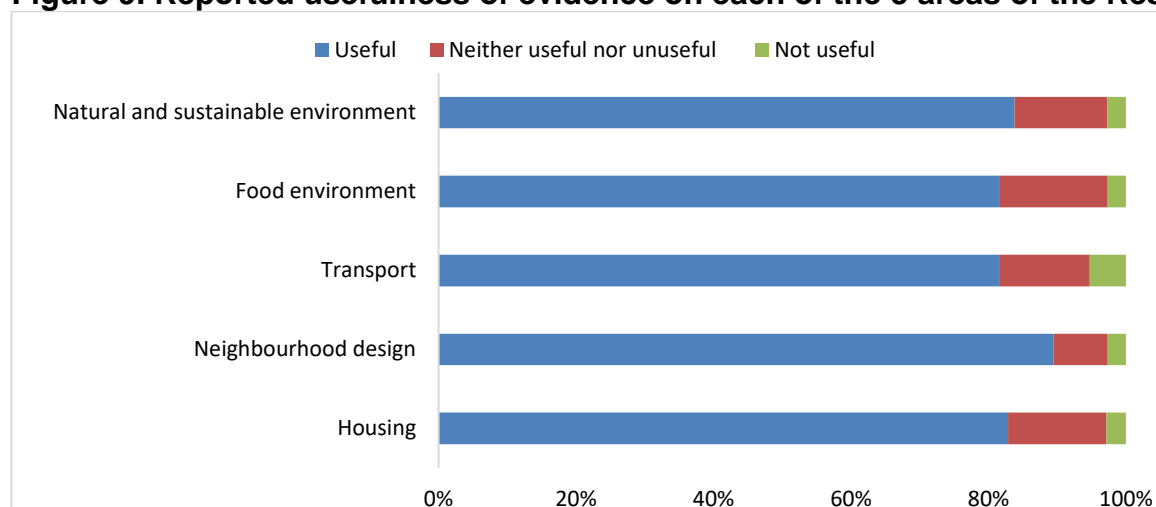
- As a reference document to communicate with planning colleagues
 - “Have used it in presenting to planners so that they can see the range of impacts that planning can have on health”

- Evidence to support Health Impact Assessments
 - “A reference for the evidence base underpinning a health impact assessment on an urban development project”
- Making a case for health integration in local planning
 - “To make the case for including further guidance on walkability, connectivity, compact neighbourhoods etc”
- Developing local plans and protocols
 - “I used this as a resource to direct and inform the process of enquiry involved in the design of a Healthy Weight Plan for the local authority area. It provided examples across different domains including transport, food and the natural environment which provided a more holistic approach to the enquiry and informed the final outcome”
 - “To seek to influence a new local plan”
- Responding to local planning applications
 - “As a resource to respond to local plans and planning applications”
- As a training resource
 - “Training with parish councillors”
 - “Teaching colleagues (public health and planning), referencing in critique of a local plan, referencing in responses to planning applications”

Other uses included being a resource for teaching and presentations.

e. Evidence on each of the 5 areas of the Resource

Respondents were asked to rate how useful they found the content presented for each of the 5 topic areas covered by the Resource. Over 80% of respondents found the evidence presented as useful. 89% of respondents indicated that they found the evidence on the neighbourhood environment useful, while 82% indicated that they found the evidence for transport and the food environment useful (Figure 9).

Figure 9. Reported usefulness of evidence on each of the 5 areas of the Resource

f. Awareness of other spatial planning and health guidance from other organisations

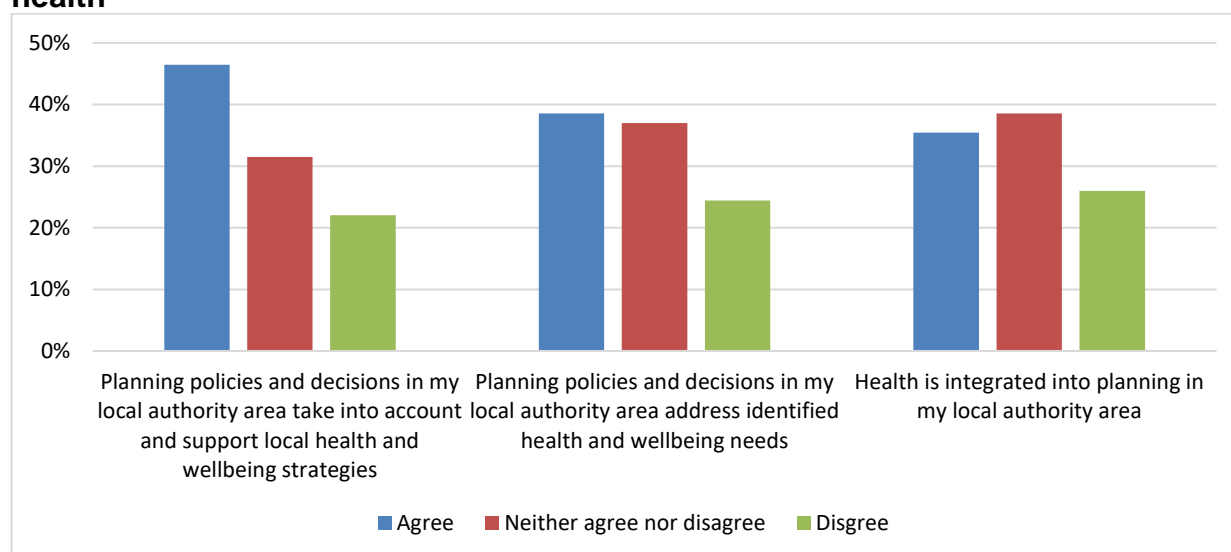
Respondents were asked to indicate their awareness of any additional spatial planning and health resources from a list of relevant organisations. Table 12 shows that guidance from Public Health England recorded the highest number of responses (N=70, 43%) followed by guidance from Town and Country Planning Association (N=61, 38%) and Royal Town Planning Institute (N=49, 30%).

Table 12. Awareness of spatial planning and health guidance from other organisations

List of organisations	Number of respondents	Percentage of respondents
London Healthy Urban Development Unit (HUDU)	41	25%
National Institute for Health and Care Excellence (NICE) guidance	44	27%
Public Health England	70	43%
Royal Institute of British Architects	15	9%
Royal Town Planning Institute	49	30%
Sport England	41	25%
The Food Foundation	6	4%
The Kings Fund	30	19%
Town and Country Planning Association-	61	38%
Transport for London	30	19%
International/other national bodies	16	10%
Design Council	32	20%

g. Experience of planning and health in local authority areas

Respondents were asked a series of questions to assess the extent to which planning decisions in their local authority take health into account. Fewer than half of respondents (46%) agreed that planning policies and decisions in their local authority area support local health and wellbeing strategies. Over a quarter of respondents (26%) disagreed with the statement 'Health is integrated into planning in my local authority area' (Figure 10).

Figure 10. Extent to which respondents agreed with statements about planning and health

Respondents were asked to rank which organisations/decision-making bodies and which professional groups should be responsible for ensuring that health is integrated into spatial planning at the local level (Table 13 and 14). Local authorities were ranked at the top (most responsible) while housing associations were ranked number 8 (least responsible). Planning policy professionals, development management planners, and directors of public health were the top 3 professions that respondents considered should be responsible to ensure health integration into spatial planning at the local level (Table 14).

Table 13. Rank of organisations/decision-making bodies perceived to have responsibility for integrating health into spatial planning at the local level

Rank	Organisations/decision-making bodies
1	Local authorities
2	Planning committees
3	Health and Wellbeing Boards
4	Public Health England
5	Combined Authorities (where present)
6	Planning Inspectorate
7	Department of Health and Social Care
8	Housing associations

Note. 1 = most responsible, 8 = least responsible

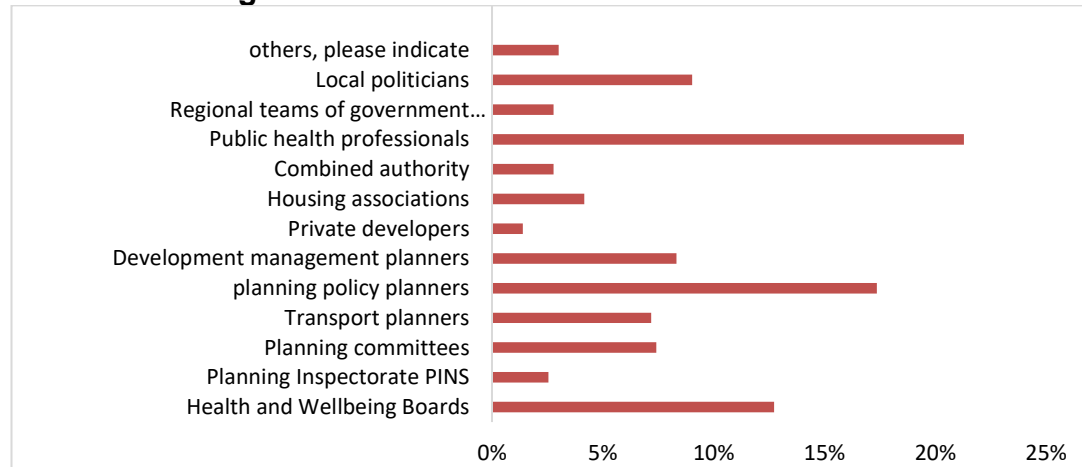
Table 14. Rank of professions perceived to have responsibility for integrating health into spatial planning at the local level

Rank	Professions
1	Planning policy planners
2	Development management planners
3	Directors of public health
4	Public health professionals
5	Transport planning professionals
6	Planners in government departments
7	Elected members
8	Private developers
9	Urban designers
10	Architects
11	Private sector consultants
12	Landscape architects

Note. 1 = most responsible, 12 = least responsible

h. Opportunities for integrating health and spatial planning evidence at a local level

Public health professionals, planning policy planners and Health and Wellbeing Boards were identified as the top 3 organisations/professionals perceived to facilitate spatial planning and health integration at the local level (Figure 11).

Figure 11. Organisations/professionals that are perceived to facilitate spatial planning and health integration

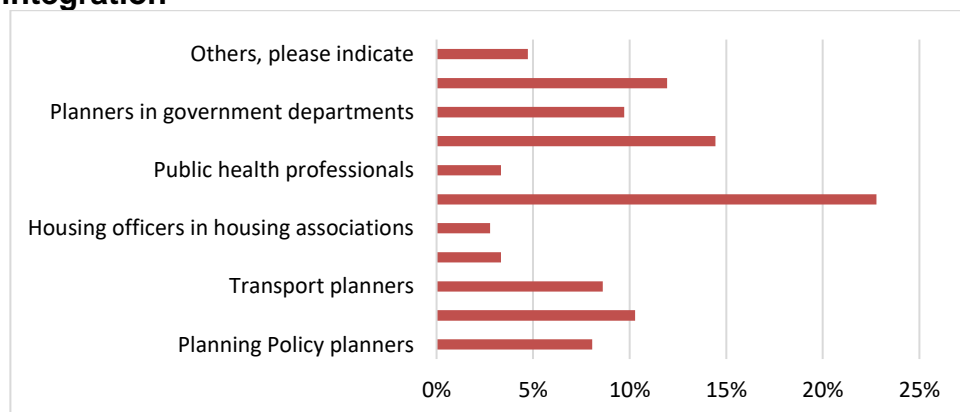
Nearly all respondents (96%) agreed that integrating health into the local plan facilitates better consideration of health in spatial planning. Table 15 shows respondents' assessment of some potential facilitators and their level of importance.

Table 15. Potential facilitators to implementing research on healthy planning into practice at the local level

Potential facilitators	Important (%)	Neither important nor unimportant (%)	Not important (%)
Integrating health into the local plan	96%	3%	1%
Shared vision of delivery by those involved in spatial planning decisions	95%	4%	1%
Simplifying the evidence on planning and health to aid communication between public health and planners	86%	9%	4%
Building relationships with developers to improve health awareness	84%	10%	6%
Community engagement through consultations with local communities	82%	9%	8%
Developing good partnership with developers/ private sector that take a long-term view	81%	13%	5%
Forward funding of transport infrastructures	79%	15%	6%
Engaging housing association in place making and health	74%	17%	8%
Improved synergy between public health and resilience planning	73%	16%	11%
Joined up collaborations with multiple stakeholders including academics	69%	23%	8%
Incentivising developers	68%	24%	8%
Streamlining the process for developers through the use of checklists	63%	26%	11%

i. Barriers associated with the implementation of health and spatial planning evidence base at a local level

Private developers, private sector consultants and consultants and planners in Planning Inspectorates (PINS) were perceived as the top 3 organisations/professionals that impede spatial planning and health integration at the local level (Figure 12). Responses included within the 'others' category included elected members, government and politicians.

Figure 12. Organisations/professionals perceived to impede spatial planning and health integration

As shown in Table 16, 9 out of every ten respondents agreed that a lack of evidence that can be translated to practice at the local level is a barrier to health integration into spatial planning at the local level, 89% of respondents considered limited capacity to be a major barrier.

Table 16. Barriers to implementing research on healthy planning into practice at the local level

Barriers	Important (% of responders)	Neither important nor unimportant (% of responders)	Unimportant (% of responders)
Existing evidence is not translatable to practice at the local level	91%	19%	3%
Lack of resource and capacity at local authority level	89%	6%	5%
Quality versus quantity: prioritising the number of houses over the impact on health	89%	6%	5%
Communication and cultural gap between planners and public health professionals	85%	19%	5%
Lack of monitoring and evaluation of planning decisions	81%	15%	5%
Disconnect between government agencies responsible for providing leadership on spatial planning and health	79%	20%	6%
Lack of a designated funding stream for green infrastructure	78%	14%	2%
Political priorities and buy-in from local politicians	78%	9%	2%
Lack of robust planning guidance or regulation	72%	6%	6%
Lack of partnership structure required to deliver healthy places	71%	22%	9%
Lack of understanding/engagement with local public health priorities and needs	70%	20%	11%
Evidence exists, but very often planners and stakeholders aren't aware	70%	20%	11%
Planning inspectors not supporting decisions	67%	20%	13%

j. Recommendations for improving future implementation of health and spatial planning evidence at a local level

Respondents were asked to rank a list of recommendations identified during the interview stage for the future development and implementation of health and spatial planning evidence. Improving national guidance and having stronger policies for place-making and health were ranked as the most important recommendations, while organising networking events was ranked as the least important recommendation (Table 17).

Table 17. Rank of future recommendations for improving implementation of research into practice in spatial planning for health

Rank	Future recommendations
1	Improved national guidance and stronger policies for place making and health
2	Engaging politicians with healthy spatial planning
3	Taking a holistic view of health and place
4	Articulating the wider benefits to multiple stakeholders
5	Strategic partnerships between public health and planning agencies at national level
6	Funding high-quality research with practical application at the local level
7	Research on cost-benefit of healthy places for various sectors
8	Creating a central repository of good practice
9	Joint Continuing Professional Development (CPD) events/training for public health and built environment professionals
10	Recruiting strong champions and advocates for spatial planning and health
11	Organising networking and knowledge exchange events

Limitations

Due to time and resource constraints, UWE were unable to conduct joint interviews between public health and planning professionals in 2 regions, so interviews were conducted only with public health professionals in these regions. Time and resource constraints also meant that it was not possible to interview a public health and planning professional in the North East region. While the small sample size is a limitation of this study, the geographical representation of participants included in this study provides a rich and robust account of the views of the barriers and opportunities that planners and public health professionals experience in integrating research on spatial planning and into practice at local levels. The findings from all the interviews conducted were consistent, and furthermore, the findings generated from the qualitative interviews were corroborated by those from quantitative phase of the research, suggesting that the key barriers and facilitators associated with integrating evidence-based healthy design principles into planning have been identified.