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## Systematic review of community infrastructure (place and space) to boost social relations and community wellbeing: Five year refresh

### TECHNICAL SUMMARY REPORT

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Authors: Anne-Marie Bagnall<sup>1</sup>, Kris Southby<sup>1</sup>, Rebecca Jones<sup>1</sup>, Andy Pennington<sup>2</sup>, Jane South<sup>1</sup>, Rhiannon Corcoran<sup>2</sup>

1. Centre for Health Promotion Research, School of Health, Leeds Beckett University
2. Institute for Population Health, University of Liverpool

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## Contents

Abbreviations.....	2
Glossary of terms.....	3
1. Introduction.....	5
2. Methods.....	8
3. Results.....	13
4. Discussion.....	66
5. Conclusions.....	71
References.....	73
Appendix A: Search strategy.....	76
Appendix B: List of included studies.....	83
Appendix C: List of excluded studies.....	87
Appendix D – Comparison table of description of included studies between original review (2018) and update (2022).....	104
Appendix E: Table of characteristics of included studies.....	106
Appendix F: Quantitative outcomes.....	127
Appendix G: Validity assessment table.....	137
Appendix H: Summary of Findings table (whole body of evidence).....	142

## Abbreviations

LQ	Low quality
MME	Mixed methods evaluation
MQ	Moderate quality
GQ	Good quality
QS	Qualitative study

## Glossary of terms

**Alternative use of space:** We defined these as temporary changes to the way that people interact with a space e.g. closure of streets for children to play; a ‘civic game’ that involved collecting items from different places; public art installations; a ‘pop-up park’.

**Community:** Our definition of ‘community’ is that used by the National Institute of Health and Care Excellence (National Institute of Health and Care Excellence, 2016), which covers the three main characteristics of community highlighted in the literature: *“a group of people who have common characteristics or interests. Communities can be defined by: geographical location, race, ethnicity, age, occupation, a shared interest or affinity (such as religion and faith) or other common bonds, such as health need or disadvantage.”*

**Community development:** Community development is defined as ‘a long-term value based process which aims to address imbalances in power and bring about change founded on social justice, equality and inclusion’ (Federation for Community Development Learning, 2009).

**Community hubs:** Community hubs are community centres or community anchor organisations focused on health and wellbeing that can be either locality based or work as a network. Community hubs, such as healthy living centres, typically provide multiple activities and services that address health or the wider determinants of health, most of which are open to the wider community (Public Health England and NHS England, 2015).

**Community wellbeing:** Drawing on a conceptual review of the literature (Atkinson et al., 2017), the Communities Evidence Programme have chosen this broad, working definition to guide our thinking: *“Community wellbeing is the combination of social, economic, environmental, cultural, and political conditions identified by individuals and their communities as essential for them to flourish and fulfil their potential.”* [Wiseman and Brasher, 2008: p358]

**Events:** We defined these as temporary events that took place at a community level, such as festivals, markets, art events, street parties, concerts. Events ranged from a one-off activity to a regular (sometimes weekly) occurrence.

**Green and blue space:** We defined this as any natural green space (e.g. parks, woodland, gardens) or blue space (e.g. rivers, canals, coast).

**Neighbourhood design:** Neighbourhood design refers to the scale, form or function of buildings and open space. Good neighbourhood design can have an important role in promoting community cohesion by providing public spaces that are comfortable and inviting for local people.

**Placemaking:** 'Placemaking' relates to the role of arts, culture and heritage in helping to shape the places where we live (Local Government Association, 2017)

**Social relations:** The concept of 'social relations' underpins many psychological, sociological, and anthropological theories such as social capital, sense of community, community of practice, community of interest and, more generally speaking, social relations is a key concept in human and social science. It is an umbrella term that covers a wide variety of interactions, interconnections, and exchanges between human beings and the physical and social environment. Therefore, it is not easy to cover its complexity through a one-size-fits-all definition (see Reis et al., 2000).

**Urban regeneration:** Defined as the process of improving derelict or dilapidated districts of a city, typically through redevelopment (Oxford English Dictionary, 2018).

# 1. Introduction

## Community infrastructure (places and spaces)

The environments in which people live can play an important role in shaping both individual and community wellbeing (Das 2008; Kearney 2006). Some specific aspects of the built environment have been found to highly impact on community life, that is: physical activity/inactivity, obesity, mental health, and social capital (Kent et al. 2011; Renalds et al. 2010). The latter is of great relevance for this review, in that one of the main components underpinning bonding, bridging and linking social capital is shared networks of formal and informal social relations (Ferlander 2007).

In our earlier systematic review (Bagnall et al., 2018), we argued that improving social relations for community wellbeing means promoting those conditions that bring people together, enable them to participate in community life and feel part of a network of shared meanings. In this light, it has been recommended that one aim of governmental policy should be the creation and promotion of opportunities for socializing (Diener and Seligman 2004).

The way we design and build the physical environment can have a great impact on the formation and/or maintenance of social relations (Eicher and Kawaki 2011). Some places, for instance, seem to be designed with the intention to offer opportunities for individuals and groups to interact hence for social relations to form (Jeffres et al. 2009; Sirgy et al. 2008). For example, 'bumping spaces' are specifically designed for people to meet up in informal settings (Communities Evidence Programme 2015; O'Donnell et al. 2014) and 'third spaces' that is "*places that host the regular, voluntary, informal, and happily anticipated gatherings of individuals beyond the realms of home and work*" (Oldenburg 1999, p. 16). Jeffres et al (2009) identify eighteen types of third space ranging from coffee shops and bars, to churches and libraries, to shops and markets. They group these third spaces into four overlapping categories of 'Eat, drink, talk', organised activity, outside venues, and commercial venues.

These "bumping" or "third" spaces also include public or shared areas of housing, parks, and other public areas, such play spaces for families and children of different ages.

Cresswell (2004) defines place as "*space which people have made meaningful*" (p.7). Cresswell also refers to Tuan (1977): "*What begins as undifferentiated space became place as we get to know it better and endow it with value.... these ideas 'space' and 'place' require each other for definition. From the security and stability of place we are aware of the openness, freedom, and threat of space, and vice versa. Furthermore, if we think of space as that which allows movement, then place is pause; each pause in movement makes it possible for location to be transformed into place.*" If we work with these definitions of place and space, the 'bumping spaces' and 'third spaces' referred to above should be referred to as 'bumping places' and 'third places'.

Missing from this definition are some of those spaces or places that may be considered to be part of the public sector infrastructure. Pothukuchi (2005) lists twelve community resources that contribute to community infrastructure for healthy communities, many of which might interact as in a 'third place'. These include town planning, street design, transport, public health organisations, subsidised housing sites, schools, and bus routes. This broad notion of places also resonates with the concept of community assets (or health assets in communities) which can cover informal social networks and neighbourly relationships through to formal structures and spaces, community-based organisations, local public services and buildings (Foot and Hopkins, 2010).

In contrast with the concept of community places and spaces designed to facilitate social relations, the anthropologist Marc Augé (1995), has proposed the term 'non-places' to indicate all those currently proliferating spaces that '*cannot be defined as relational, historical, and concerned with identity*' (p.77). In Augé's view, motorways, stations, airports, and shopping malls are all examples of spaces that are not designed to bring people together to socialize and take part in the community life, but only as sites for transiting consumers. However, interventions can be set up to create opportunities for sociability in non-places, while still maintaining their service/business-orientated nature. Holding community events and activities within the premises of a shopping mall or transforming a hotel restaurant into a traditional home-like dining room where customers sit all at the same table, are only some examples of strategies to turn 'non-place' into 'place' (Aubert-Gamet and Cova 1999).

For the purposes of our review, and this 5 year refresh, we have defined community infrastructure as:

- Public places and “bumping” places designed for people to meet e.g. streets, squares, parks, play areas, village halls, community centres;
- “Third” places where people meet informally or are used as meeting places in addition to their primary role e.g. cafes, pubs, libraries, shared areas in housing developments, schools, churches;
- Services that can improve access to places to meet e.g. town planning, urban design, landscape architecture and public art, transport, public health organisations, subsidised housing sites, bus routes.

We will focus on interventions operating at the neighbourhood level rather than city or national level, although the focus of the intervention may not be place-based.

We are not including “virtual” spaces such as social media as, although these are important and there is a growing evidence base, we feel that including both real and virtual places (and interactions between the two) in one review would make it too complex and potentially obscure important findings.

### Rationale for the refresh:

The last literature searches for the original systematic review on community infrastructure (places and spaces) interventions to boost social relations and community wellbeing (Bagnall et al., 2018) were carried out in June 2017 and produced 51 included studies. The team that produced the original review have remained active in this research area and were aware that many relevant studies had been published since that time, some of which cite our review (see footnotes for examples<sup>1234</sup>). The purpose of this “refresh” is to review all relevant evidence published since June 2017 in order to update the original review, using a rapid update review process (rapid due to limited time and resources) that replicated the original review methods as closely as possible. In this report the focus is on presenting the evidence base from the last five years, with some reflections on

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<sup>1</sup> Di Napoli et al. (2019) Trust, hope, and identity in disadvantaged urban areas. The role of civic engagement in the Sanità district (Naples). *Community Psychology in Global Perspective*, 5(2), pp.46-62.

<sup>2</sup> Den Broeder, L., et al., (2021). Community engagement in deprived neighbourhoods during the COVID-19 crisis: perspectives for more resilient and healthier communities. *Health Promotion International*, 37(2), daab098.

<sup>3</sup> Glover, T. D., et al., (2021). Skateboarding, gentle activism, and the animation of public space: CITE—A Celebration of Skateboard Arts and Culture at The Bentway. *Leisure Studies*, 40(1), pp.42-56.

<sup>4</sup> Lee, C., et al., (2021). Community-oriented actions by food retailers to support community well-being: a systematic scoping review. *Public health*, 201, pp.115-124.

how this compares to the evidence in the original review. We have also included “case studies” for each intervention category – these are descriptive examples of the intervention, from one study in each category. The studies chosen to feature as “case studies” were selected on the basis of having a rich description of the intervention, and the intervention being representative of that intervention category, rather than on the basis of academic rigour.

For more detail on the evidence base to June 2017, readers are advised to refer to the original report (Bagnall et al., 2018).

For the summary of findings table and evidence statements, we have brought together the evidence from both reviews, to reflect the entire body of evidence, and this will inform academic journal articles.

## Relevance to policy and practice

The ongoing interest in the research area is apparent from the steadily active evidence base and the response to the ‘update’ on green spaces and community hubs that was published with the case study synthesis methodological guidance (South et al., 2021). The value of community infrastructure and public space to communities has been highlighted during the pandemic, and we have seen changes in the ways that both are used, across different population groups (e.g. community hubs have ‘pivoted’ to provide support to socially isolated people and people suffering from food insecurity; people of all ages have been using public space and green space to meet socially). Places and spaces to connect have been identified by the Campaign to End Loneliness as a crucial part of a connected recovery from Covid<sup>5</sup>, and “Pride in Place” and social capital are named as important factors in the UK Government’s “Levelling Up the United Kingdom” White Paper<sup>6</sup>. Updating the review therefore not only provides the latest evidence to government, local authorities, the third sector and to practitioners but it can also be used to support recovery from the COVID-19 pandemic.

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<sup>5</sup> <https://www.campaigntoendloneliness.org/wp-content/uploads/Loneliness-beyond-Covid-19-July-2021.pdf>

<sup>6</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1052046/Executive\\_Summary.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1052046/Executive_Summary.pdf)



## 2. Methods

This systematic review used standard systematic review methodology, as described in the WWCW Methods Guide (Snape et al., 2019), and is reported following PRISMA and PRISMA-Equity guidelines (Moher et al. 2009; Welch et al. 2013). A protocol was registered on PROSPERO in May 2022 [https://www.crd.york.ac.uk/prospero/display\\_record.php?RecordID=316052](https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=316052)

### Aims of the review

The aim of this systematic review update is to synthesise the new available evidence, and describe the quality of that evidence, in relation to interventions that improve or create the community infrastructure that impacts social relations and/ or community wellbeing. For this review, we defined community infrastructure as the physical places and spaces where people can come together, formally or informally, to interact and participate in the social life of the community. We intend to produce an accessible synthesis that will inform practice and future research in the area.

### Review questions

We aimed to find evidence on how interventions operate, and the conditions required for a particular intervention or mechanism to work effectively. To this end, the review has sub-questions which relate to the impact on different sub-populations, and the nature and impact of outcomes.

#### **Review question 1: *How effective are interventions designed to improve community infrastructure (places and spaces) in improving social relations and/ or community wellbeing?***

Sub-questions are:

- What interventions to improve community infrastructure have been evaluated with regard to social relations and/ or community wellbeing?
- In which settings have interventions to improve community infrastructure been evaluated with regard to social relations and/ or community wellbeing?
  - o Is there an association between setting and:
    - type of intervention,
    - population,
    - outcomes measured and
    - direction and size of effect?
- Are there differences in effectiveness across population groups, particularly those at risk of health inequalities?
- Are there differences in effectiveness across different types of interventions?
  - o are there differences across interventions and initiatives that have been explicitly planned by agencies (e.g. play areas), and those that have developed informally (e.g. café as meeting place), sometimes called “third spaces”?
  - o what evidence is there about the effectiveness of interventions within estate regeneration schemes, other neighbourhood or high street renewal schemes, and new housing developments?
- Are there differences in effectiveness across interventions that:
  - o (i) are open to a mix of population groups
  - o (ii) aim to mix population groups (e.g. intergenerational connections; different ethnicities; community cohesion);
  - o (iii) are targeted towards specific population groups (e.g. those at risk of social exclusion and/ or health and wellbeing inequalities)
  - o (iv) are intended to strengthen bonds within a population?

**Review question 2: *What factors (positive and negative) affect the implementation or effectiveness of the interventions?***

**Review question 3: *What are people’s subjective experiences of interventions designed to improve infrastructure?***

- Do these differ across settings, intervention types, population groups?
- How involved are local communities in design, delivery and evaluation of interventions, and does this influence effectiveness?

### Identification of evidence

The search strategy for the original review was developed by the review team in collaboration with highly experienced information specialists. The aim of the search was to identify all relevant evidence on interventions to community infrastructure: places and spaces and their effect on social relations and community wellbeing. The concepts that underpin these dimensions are not always clear and there is overlap between terminologies, therefore we searched for related concepts and synonyms.

After initial scoping searches, we systematically searched the following databases from January 2017 – June 2022, using the search strategy outlined in Appendix 1:

PsycInfo, MEDLINE, CINAHL, Social Policy and Practice (covers Social Care Online and Idox), Social Sciences Citation Index, Academic Search Complete, Hospitality and Tourism Complete.

We also searched for ‘grey’ literature through topic experts (i.e. review advisors, and contacts through the What Works Centre for Wellbeing) and relevant websites (see Appendix A).

A **call for evidence** was issued by the WWC-WB and shared on social media:

<https://whatworkswellbeing.org/blog/call-for-evidence-places-spaces-and-social-connections/>

Reference lists of key systematic reviews and included studies were scanned.

An audit table of the search processes was kept, with date of searches, search terms/strategy, database searched, number of hits, keywords and other comments included, in order that searches are transparent, systematic and replicable as per PRISMA guidelines. The results of the searches were downloaded into Endnote reference management software.

### Study selection

Results of the searches of electronic databases were de-duplicated and uploaded to Rayyan online software to select included studies.

Studies were selected for inclusion through two stages. First, a random 20% of all titles and abstracts were double-screened by all reviewers (KS, RJ, AMB), followed by a ‘calibration’ exercise to ascertain levels of agreement. Once agreement was reached (80% agreement on include/ exclude), the remaining titles and abstracts were screened by a single reviewer (KS or RJ). Any queries were referred to the second reviewer (KS or RJ) or a third reviewer (AMB) and resolved by discussion. Full-text copies of potentially relevant studies were screened for inclusion by a single reviewer (KS or RJ) using the criteria outlined below. Any queries were resolved by discussion with the second reviewer (KS or RJ), with a third reviewer (AMB) and sometimes the wider review team (JS, AP, RC) consulted where necessary. The results of the abstract screening were recorded in Rayyan, while results of the full paper screening were recorded in Rayyan and presented here in Appendix B and C, including the reason for exclusion. The study selection process is presented in a flow chart in Chapter 3.

## Inclusion and exclusion criteria

<u>Population</u>	<p>We included literature relating to community infrastructure: places and spaces for any community. We focused on evidence for adults (defined as aged between 16 and 65, but with other definitions accepted as presented in studies). If included studies also presented evidence relating to other age groups, we included this where possible, particularly if there was evidence relating to intergenerational relations.</p> <p>We excluded studies that included <b>only</b> older adults or <b>only</b> children (as defined by study authors), as these fall within the remit of two other What Works Centres (the Centre for Ageing Better and the Early Intervention Foundation). We included interventions aimed at families, such as children’s play areas.</p> <p>We included studies which were carried out in the UK and other Organisation for Economic Co-operation and Development (OECD) countries. As research in other OECD countries is likely to have less direct relevance to the UK context, we considered the applicability of the international literature to the UK in analysis and highlight any limitations on applicability of individual studies.</p>
<u>Intervention</u>	<p>We included any interventions (formal or informal) which were designed to improve, or make better or alternative use of, community infrastructure: physical places and spaces (for example, general urban redesign; interventions such as lighting and benches in open public spaces; children’s play places; or funding to host community activities in places such as libraries or faith settings). We focused on interventions that apply at community or neighbourhood level (e.g. a town market), rather than city or national level (e.g. Leeds art gallery). Studies were excluded if they were not related to a specified intervention, or if they examined a virtual (not physical) space.</p>
<u>Comparators</u>	<p>We included quantitative studies which compared different interventions, including those using before and after design and comparing new versus current practice. Qualitative studies without a comparator were also included.</p>
<u>Outcomes</u>	<p>We adopted a broad perspective on the outcomes to be included in the review, including studies which reported any outcome relating to social relations, community wellbeing and related concepts such as social capital and social trust. This includes quantitative (measured), and qualitative (views and perceived) outcomes. While our primary focus is on outcomes at a community level, we also included individual level health and wellbeing outcomes linked to community wellbeing (see Theory of Change, South et al 2016, and Atkinson et al., 2020). As many of the desired outcomes would only be evident in the long term, we also looked for proxy measures along proposed pathways to change.</p>
<u>Study design</u>	<p>We included quantitative and mixed methods studies which either used experimental designs or sought to measure or explore the impact of a place or space intervention or change, and also process evaluations, case studies as a research design, and qualitative studies that relate to the intervention specified above.</p> <p>We excluded observational studies that did not relate to a place or space intervention or change or did not report outcomes at a neighbourhood level, practice-based or descriptive case studies, and other articles which provided only descriptive information or commentary.</p>
<u>Other criteria</u>	<p>For this update, we included literature published or produced since 2017 in English. Publications not in English were excluded. If we identified any key publications prior to this date (i.e. which are extensively referenced by included studies) we considered these for inclusion.</p>

## Data extraction

Data from each included study were extracted into pre-designed and piloted forms. Forms were completed by one reviewer and checked for accuracy by another. Data extracted included: study aims, study design, setting/country, intervention, comparator, population, outcomes measured and main findings in relation to the review questions. Details of the intervention were extracted using an adaptation of the TiDIER framework (Hoffman, 2014). This included an assessment of the level of community engagement or community control, using Arnstein's ladder of participation (Arnstein, 1969).

Periodically throughout the process of data extraction, a random selection was considered independently by 2 people (i.e. double assessed) for at least 20% of the studies.

We considered the transferability and applicability of the international literature to the UK context in analysis, and highlighted any limitations on applicability of individual studies. A judgement of the likely relevance to the UK was made.

Owing to logistical and time constraints, it was not possible to contact study authors for any unclear, missing or additional data.

## Validity assessment

We conducted validity assessment of all studies using the appropriate checklist, following the recommendations of the What Works Centre for Wellbeing methods guide (Snape et al., 2019). Unpublished data from grey literature were assessed using the same criteria as for published data. We included studies judged to be of 'low quality' but explicitly described the implications of including them.

Studies were assessed as "poor" quality (score 0) if they met fewer than half of the validity assessment criteria on the appropriate checklist; "poor to moderate" quality (score 1) if they met between 4 and 5 out of 9 criteria on the qualitative checklist, or between 11 and 14 out of 23 criteria on the quantitative checklist; "moderate to good" (score 2) if they met 6 out of 9 criteria on the qualitative checklist, or between 15 and 19 out of 23 criteria on the quantitative checklist, and "good" (score 3) if they met 7 to 9 out of 9 criteria on the qualitative checklist, or between 20 and 23 out of 23 criteria on the quantitative checklist.

## Data analysis and synthesis

Framework synthesis (Srivastava & Thompson, 2009) using QSR NVivo 12 software was used to combine evidence from included studies, based on the thematic framework developed for the original review. Framework synthesis also allows for new themes to emerge from the new studies. The framework synthesis included both qualitative and quantitative data.

Narrative synthesis (Popay et al, 2006). formed the overall reporting framework for the review findings grouped by review question, setting and by intervention, population or outcome and included:

- Thematic analysis of data based on the review questions.
- Exploration of relationships within and between studies.
- Examination of differential impacts in relation to (e.g.) gender, socioeconomic status, ethnicity, or disability status will be considered.
- Consideration of the strength of evidence based on study design and results of critical appraisal (for each type of design).
- Examination of contradictory findings.

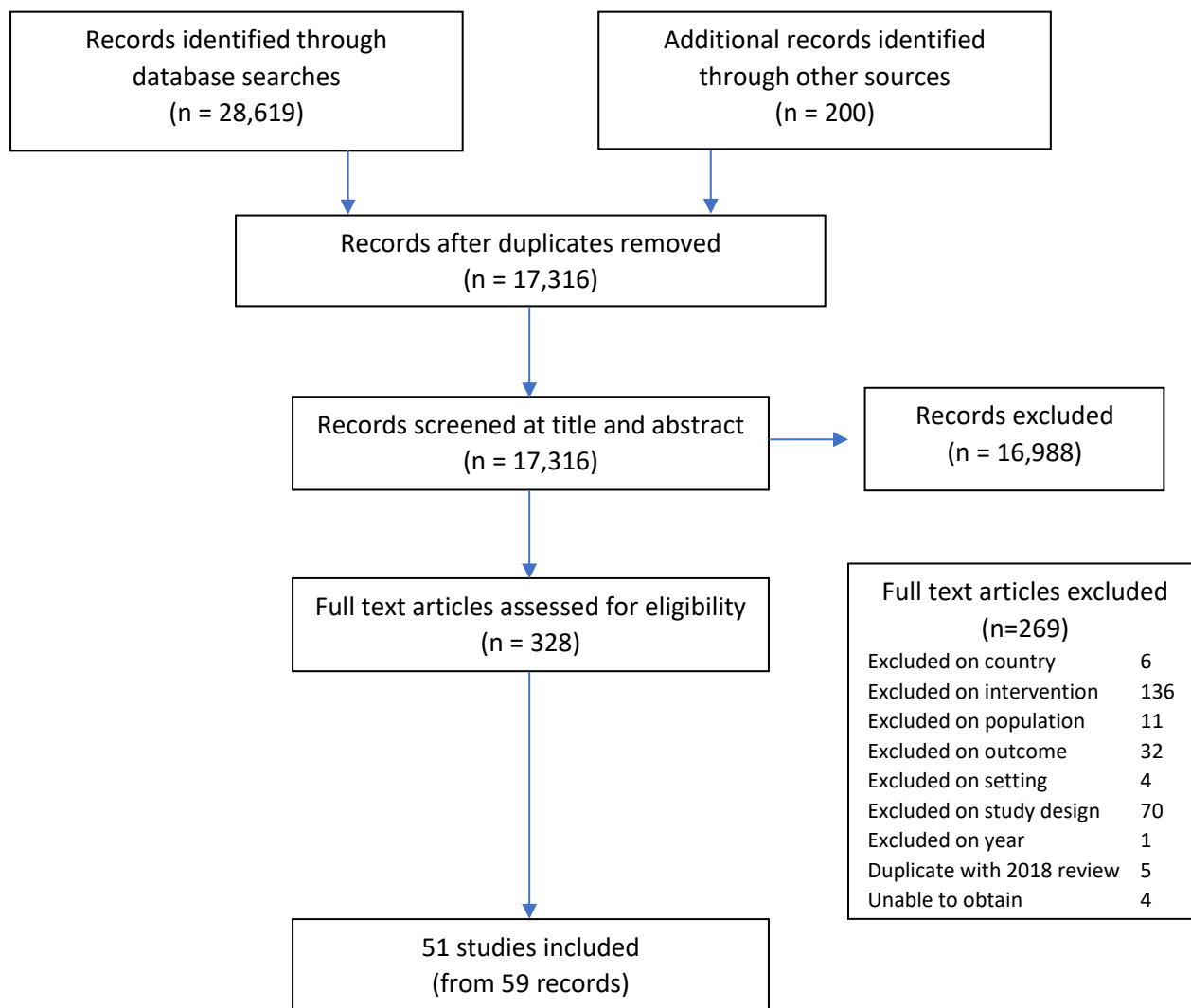
We have adopted the formal rating methodology recommended by the What Works Centre for Wellbeing Methods Guide, to provide a judgement on the overall quality of the evidence for each individual finding in the review, adopting the GRADE rating for social interventions (Montgomery et al., 2019) and the CERQual approaches for qualitative evidence (Lewin et al., 2018). As there is currently no guidance on how to make an overall judgement on the strength of evidence for mixed methods reviews where both qualitative and quantitative studies report the same outcome, we used the results of the validity assessment checklists to judge the methodological limitations associated with each kind of study. If the studies were all rated '2/ good' OR if they were all rated a minimum of 1 (moderate) and more than 1 study was rated 2 (good) and the findings were consistent, then this was summarised as strong evidence. If only one study was rated as good but the findings were consistent, this was summarised as moderate to strong evidence. If no studies were rated as 2 (good) or only one study was rated as good and most of the rest were moderate (1) but the findings were not consistent, this was summarised as moderate strength evidence. If most of the studies were rated as 0 (poor) then this was summarised as weak evidence.

#### Included case studies

We have also included in this report a short case study of each intervention type. No additional analysis has been performed on these. They are included as examples only, chosen to illustrate the type of intervention (and outcomes) included in the body of evidence.

### 3. Results

#### 3.1 Study selection process flow chart



### 3.2 Characteristics of included studies

A table of characteristics of included studies is presented in Appendix E, with quantitative outcomes presented in Appendix F and the results of the validity assessment in Appendix G. The Summary of Findings table, from which the evidence statements are derived, is in Appendix H.

#### Country

Twenty-one interventions were based in the UK, eight in the USA, three in Canada, eight in Australia, eight in other European countries<sup>7</sup>, one from other global countries<sup>8</sup>, and two spread across countries.

The increase in the number of UK based interventions between the original review (n=11) and the update (n=21) is notable. A full comparison is shown in Figure 1, with details in Appendix E.

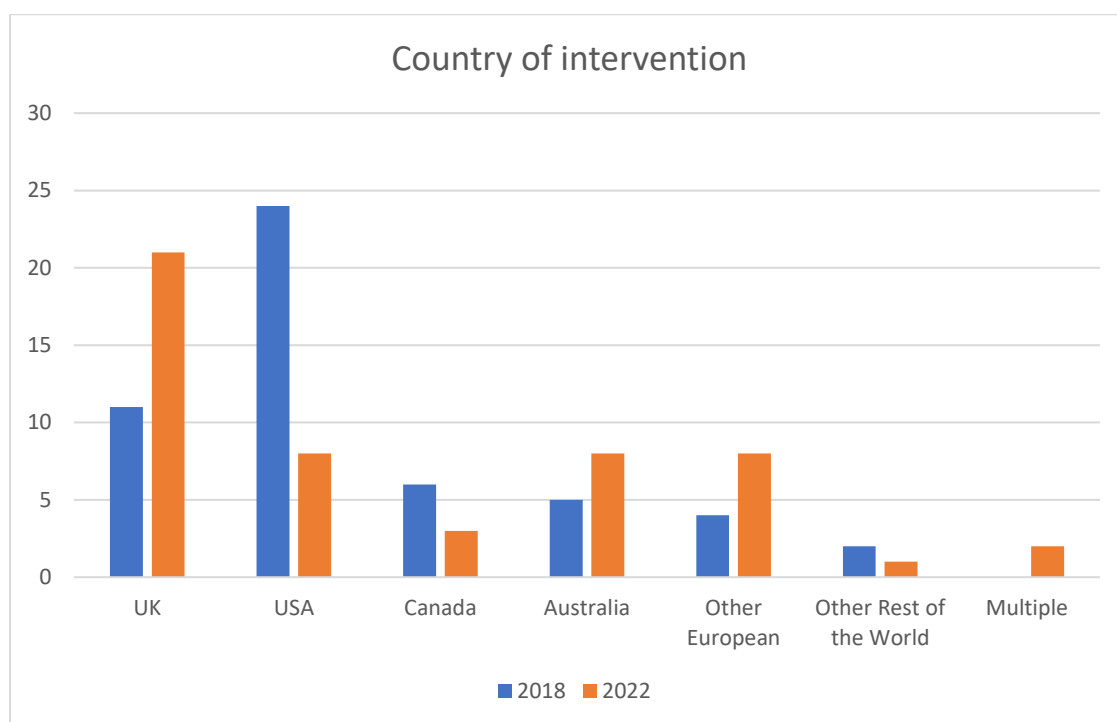


Figure 1 Comparison of country of intervention between original review (2018) and update (2022)

#### Study design

There was some overlap in the assignment of study design codes, particularly for case studies and mixed methods evaluations and case studies and qualitative designs.

Eighteen studies were coded as case studies, sixteen as mixed-methods evaluations, fourteen as qualitative studies, six as ethnographic, five as cross-sectional surveys, five as longitudinal studies, three as observational studies (of changes), two as natural experiments, and one as action research.

Notable changes between the original review and the update are the increase in case studies, qualitative, and ethnographic research. A full comparison is shown in Figure 2.

<sup>7</sup> Other European countries are Spain, Germany, Belgium, Czechia, Italy, Norway, and Slovakia.

<sup>8</sup> Other global countries are New Zealand.

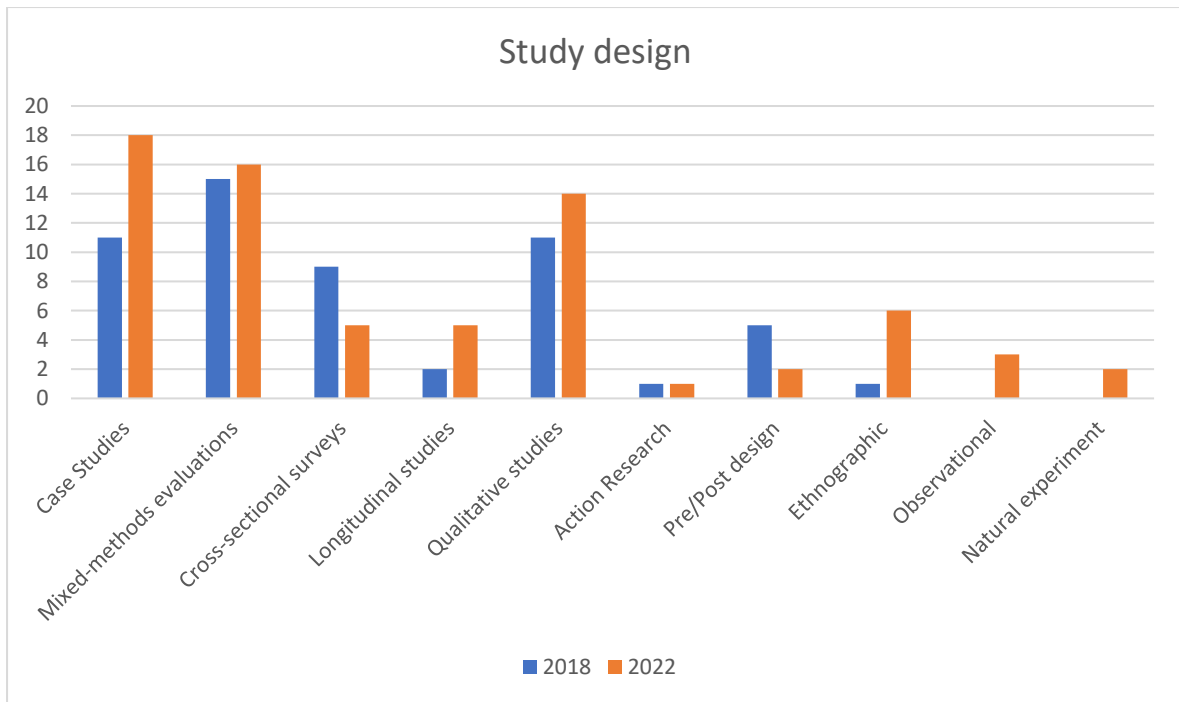


Figure 2 Comparison of study design between original review (2018) and update (2022)

### Setting

Thirty-five interventions took place in urban settings, six in rural settings, and three in suburban settings. Five interventions occurred within mixed settings and the setting was not clear for two interventions.

The increase in the number of interventions in an urban setting from original review (n=23) to this update (n=35) is a notable change. Figure 3 shows a full comparison. As in the original review, the “urban interventions” covered a wide range of situations, including riversides and canals, street space, city centres, housing estates, and commercial or market settings.

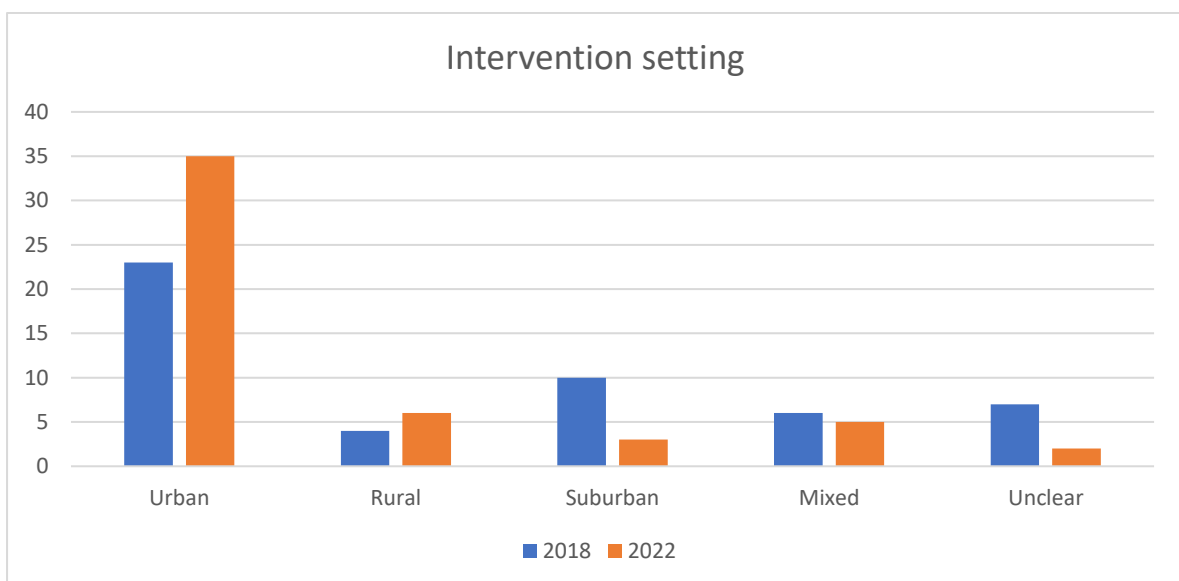


Figure 3 Comparison of intervention setting between original review (2018) and update (2022)



### Aims of intervention

Twenty-four interventions aimed to improve social relations, thirty-five aimed to improve some aspect of community wellbeing, and twenty-seven aimed to do something else. These “other” aims included, for example, bringing vacant properties into ‘meanwhile use’ (Ministry of Housing, Communities and Local Government (MHCLG), 2020) – using a space temporarily while it is empty or awaiting a yet-to-be-decided long term use, showcasing independent craft beer (de Jong & Steadman, 2021), restoring natural outdoor environments (Triguero-Mas et al, 2021), installing a new waste-water pipe (Kingham et al, 2020), and maintaining vacant housing lots (Heinze et al, 2018). In these papers, community wellbeing impacts could be regarded as incidental outcomes, as they were not the main aim of the intervention.

A notable change in the update review from the original is the increase in the total number of different aims; each category has increased. The “other” category has seen the largest increase from the original review (n=19) to the update (n=27). A full comparison is in Figure 4.

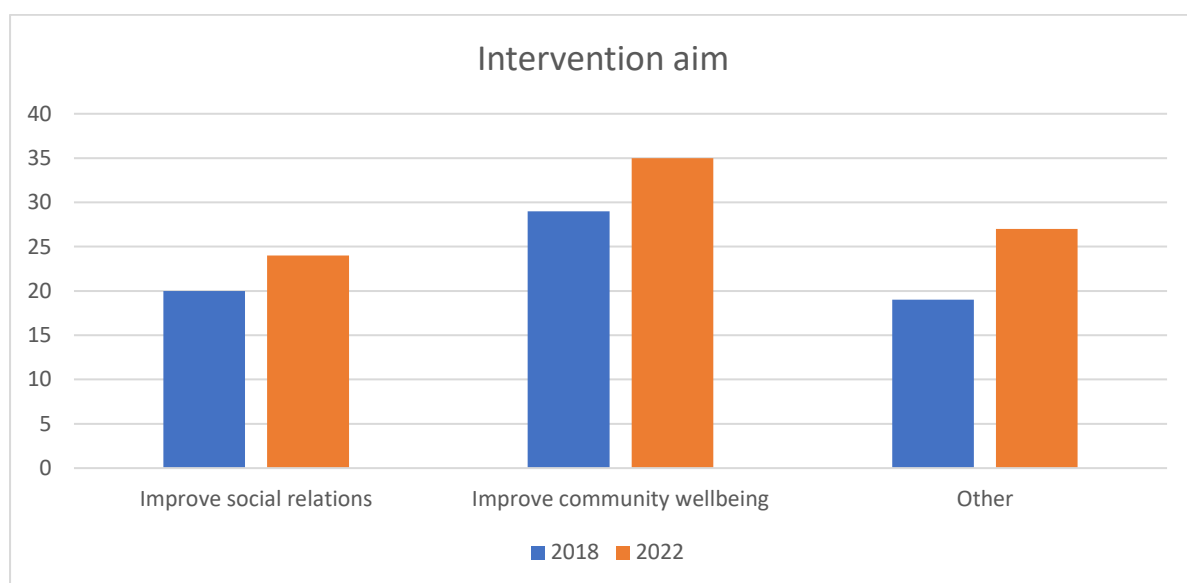


Figure 4 Comparison of the intervention aims between original review (2018) and update (2022)

### Intervention category

Twenty-three interventions were coded as alternative use of space, twenty-two as green and blue space, fifteen as events, eleven as neighbourhood design, eight as urban regeneration, six as community development, five as placemaking, and five as community hubs. As in the original review, interventions could be coded to more than one intervention category.

The increase in alternative use of space interventions from original review (n=11) to update (n=23) is notable. As is the increase in green and blue space (n=14 to n=22). In comparison, there were relatively few papers on community hubs (n=11) and placemaking (n=5) interventions. Figure 5 shows a full comparison.

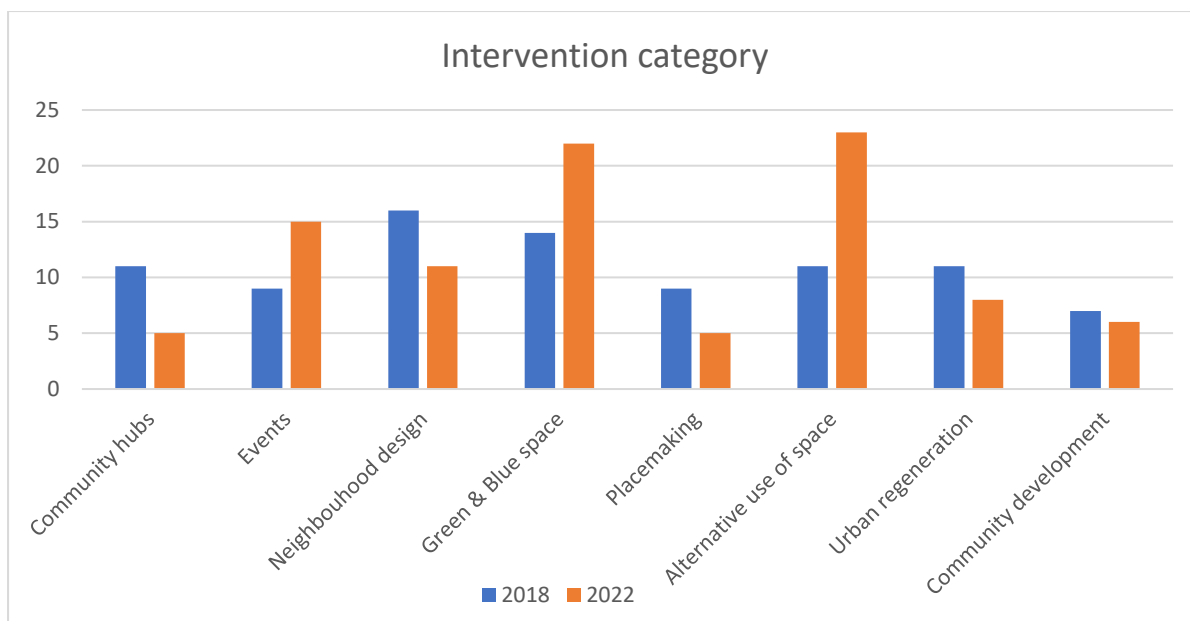


Figure 5 Comparison of intervention categories between original review (2018) and update (2022)

### Populations involved

A diversity of populations were involved in interventions as users or in delivery (e.g. volunteer roles). Like the original review, in the update multiple codes could be applied to each intervention. These were:

- Working age people (n=31)
- Children & adolescents (n=29)
- Older people (n=27)
- Families (n=21)
- Ethnically diverse communities (n=18)
- Economically disadvantaged people/communities (n=10)
- People with disabilities and/or chronic illness (n=14)
- Specific gender groups (male, female, trans) (n=19)
- Unemployed people (n=3)
- Refugees & asylum seekers (n=6)
- Religious or political groups (n=4)

Figure 6 shows a full comparison of the populations involved in the original review (2018) and update (2022). A notable change is the total increase in different populations in the update review. This includes increases in the number of children & adolescents (n=10 to n=29), older people (n=8 to n=27), working age people (n=6 to n=31), families (n=7 to n=21), ethnically diverse communities (n=7 to n=18), people with disabilities and/or chronic illness (n=3 to n=14), specific gender groups (n=3 to n=19), and refugees and asylum seekers (n=1 to n=6). The update review features no homeless people or prisoner & ex-offender populations.

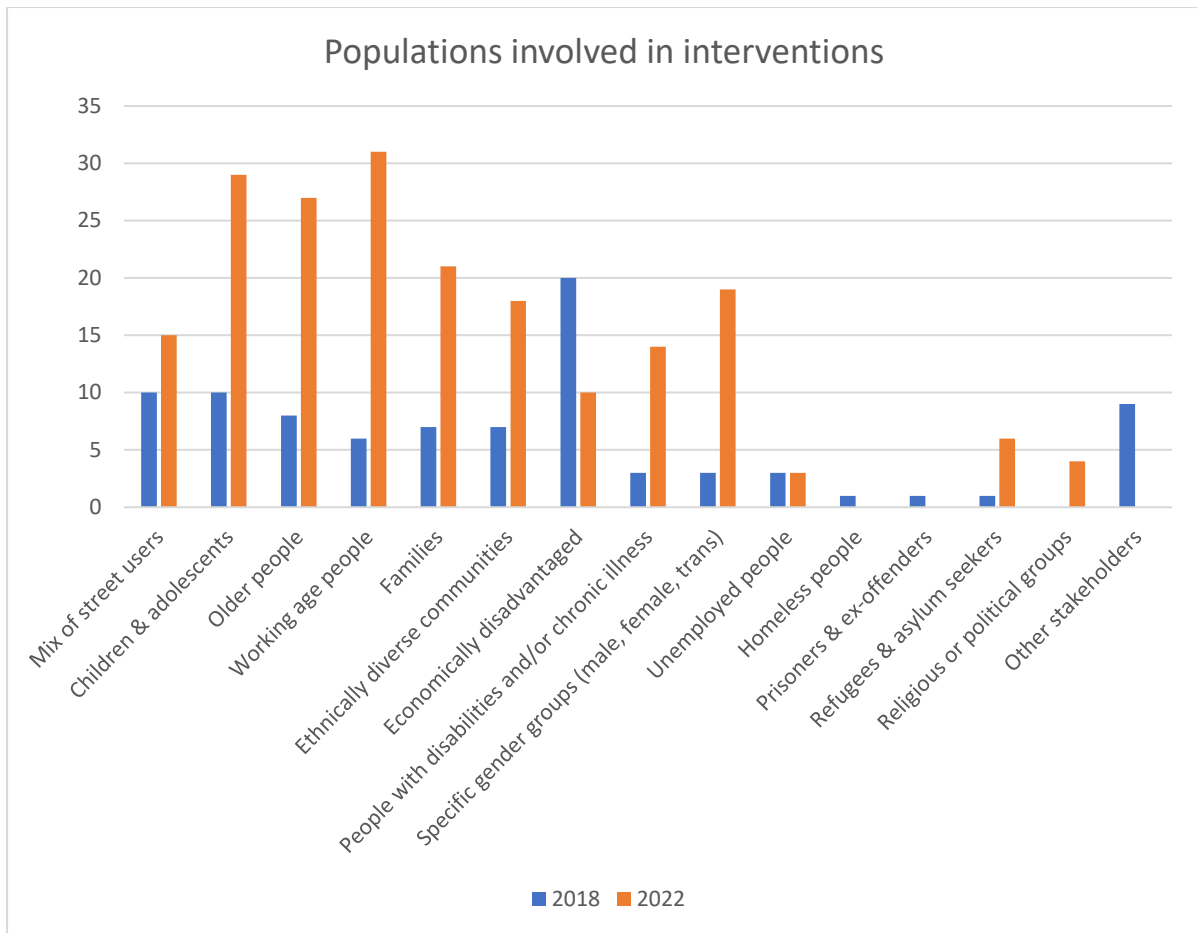


Figure 6 Comparison of the populations involved in interventions between original review (2018) and update (2022)

#### Targeted or universal intervention

Nine interventions were targeted to a specific area (within larger communities) or populations, thirty were universal, ten had both targeted and universal elements, and two were unclear. Eighteen interventions were coded as having a deliberate intention to mix different population groups.

The seeming decline in the number of targeted interventions (n=37 to n=9) set against an increase in universal interventions (n=14 to n=30) is notable. Many more interventions were coded as deliberately mixing population groups in the update (n=6 to n=18). A full comparison is in Figure 7.

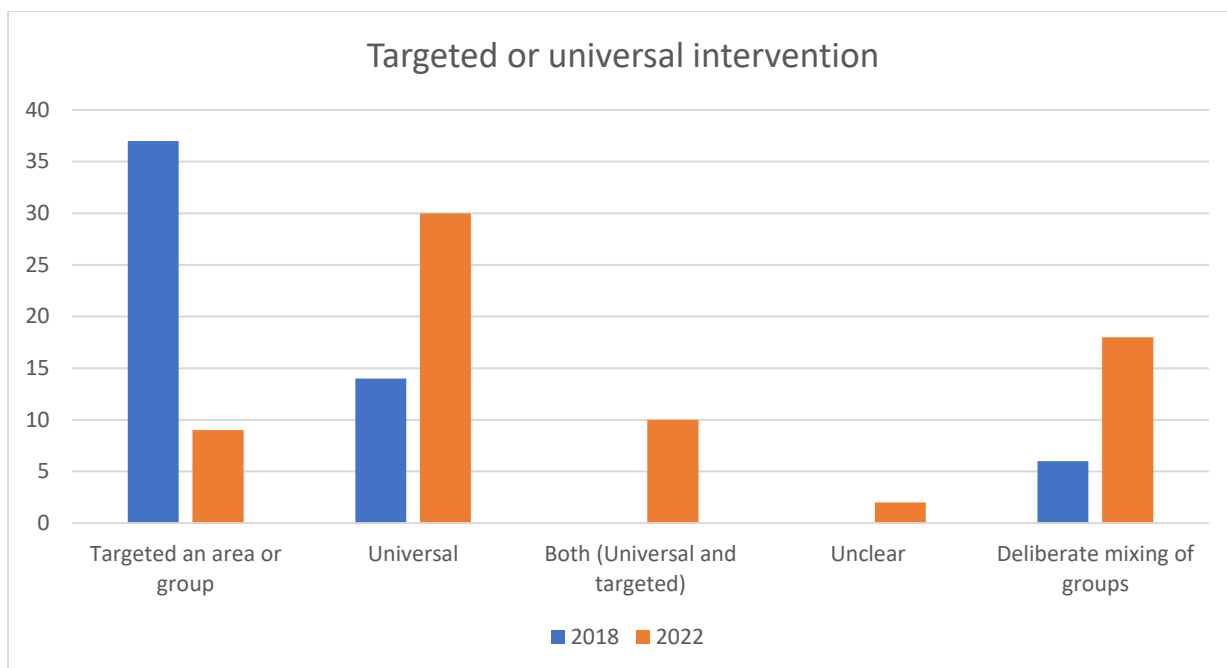


Figure 7 Comparison of whether interventions are targeted or universal and aim to deliberately mix populations between original review (2018) and update (2022)

### 3.3 Findings

Q1. How effective are interventions designed to improve community infrastructure (places and spaces) in improving social relations and/or community wellbeing?

#### Community Hubs

Community hubs are community centres or community anchor organisations focused on health and wellbeing that can be either locality based or work as a network. Community hubs, such as healthy living centres, typically provide multiple activities and services that address health or the wider determinants of health, most of which are open to the wider community (Public Health England and NHS England, 2015).

Five interventions were coded as community hubs. These were *The Happiness Garden* (Abramovic et al, 2019), a MQ case study, *The Grange* (Jackson and Ronzi, 2021), a GQ qualitative study, *Community Gardens in Prague* (Spilková, 2017), a MQ qualitative study, *Space & Place NI* (S3 Solutions, 2018), and *Parks for People* (Eadson et al, 2021), both LQ mixed methods evaluations.

#### Social relations

All five community hub interventions were found to have improved social relations, including social cohesion, social capital, and social networks. Community hubs provided a site for people to come together and interact with both friends and strangers (Abramovic et al, 2019; Jackson and Ronzi, 2021; Spilková, 2017; S3 Solutions, 2018; Eadson et al, 2021). Improvements in social cohesion were found in two community hubs. *Space & Place NI* (S3 Solutions, 2018) included a mix of community buildings and outdoor spaces in both urban and rural locations and was successful bringing together

people of different ages, beliefs, and ethnicities (S3 Solutions, 2018). Similarly, *Parks for People* (Eadson et al, 2021), which revitalised historic parks and cemeteries through improved and new facilities for physical activities, especially sport, such as play equipment, playing fields, skate parks, multi-use games areas, walking routes, changing facilities, and café, supported cohesion with and between people with intellectual disabilities, people with mental health problems, and migrants or refugees (Eadson et al, 2021). There was some evidence of improvements to bonding and bridging social capital occurring in *The Happiness Garden* (Abramovic et al, 2019), a community garden for Burmese refugees in Canberra, Australia, and *Community Gardens in Prague* (Spilková, 2017), a collection of eleven community gardens started on previously vacant land.

### Community wellbeing

A range of positive community wellbeing outcomes were observed across the five community hub interventions. Community hubs frequently created a sense of belonging, both within specific communities of interest, such as refugees, but to wider communities and places (Abramovic et al, 2019; Eadson et al, 2021; Spilková, 2017). Increased community empowerment was a positive community outcome from two community hubs – *Parks for People* (Eadson et al, 2021) and *Community Gardens in Prague* (Spilková, 2017).

*“The journey is the goal...the fact that we started to take interest in how it looks here and to do something with it...when we started to care about the surroundings of the house, we started to pull together and we found out that there are more people who want to change something...and that it is possible... all you need is to say “OK, let’s change it” and to start doing it” (Spilková, 2017, participant)*

*“All our case study parks were within or next to pockets of deprivation<sup>4</sup> and we saw from our research that restoration of parks in deprived areas creates a sense that local people deserve something as good as anywhere else” (Eadson et al, 2021, study authors).*

Improvements in social determinants of health were associated with community hubs, including supporting local businesses and enterprises (Eadson et al, 2021), increasing access to facilities, services (Eadson et al, 2021) and green space (S3 Solutions, 2018), and increasing access to healthy food (Jackson and Ronzi, 2021). For example, The Grange (Jackson and Ronzi, 2021), a community hub and garden in a deprived community in North-west England, facilitated access to healthy food by produced fresh fruit and vegetables for sale in the on-site community shop (see Figure 1).

One study reported an improvement in crime and feelings of safety. There was a reduced fear of crime and anti-social behaviour as a result of the Space & Place NI programmes (S3 Solutions, 2018).

One study reported improvements in heritage or cultural awareness. The Happiness Garden (Abramovic et al, 2019) allowed the participants to connect with their Burmese culture through re-enacting traditional practices (e.g. planting traditional Burmese fruit/vegetables).

One study reported improvements in civic activity as a result of the community hub. *Parks for People* (Eadson et al, 2021) was described as a catalyst for individual community action and supporting a self-sustaining community eco-system. Even where there were existing community groups, *Parks for People* was a focal point for further positive action (Eadson et al, 2021).

One study reported improvements in health inequalities as a result of the community hub. *Parks for People* (Eadson et al, 2021), through improving park facilities and increasing the range of activities taking place in parks, increased the diversity of park users, spreading the benefits of exercise and being in nature to a wider range of people.

## Individual wellbeing

All five community hub interventions were also found to improve various dimensions of individual wellbeing. These benefits occurred for both those visiting community hubs/taking part in activities and involved in delivery (e.g. in volunteer roles). Improvements in mental health and wellbeing were observed (Spilková, 2017; Jackson and Ronzi, 2021; Eadson et al, 2021). Users of Parks for People (Eadson et al, 2021), Community Gardens in Prague (Spilková, 2017) and The Grange (Jackson and Ronzi, 2021) enjoyed relaxing in the green environment. Volunteering in Parks for People (Eadson et al, 2021) was also found to support individual wellbeing.

*It's a really good break. My wife sometimes says "why don't you spend 10 minutes sitting in the park?" and I might sit on the bench where the park goes across to Hilbert, or I might go down to the oast house and sit there for a couple of minutes, just collecting my thoughts"*  
(Eadson et al, 2021:17, participant)

Community hubs were able to support individual empowerment. Although gardening in unfamiliar conditions could undermine users' sense of control, The Happiness Garden (Abramovic et al, 2018) generally gave people a sense of purpose and control, ostensibly over what was grown in the garden but then more generally about their life in a new place. Space & Place NI (S3 Solutions, 2018) enabled community members to take on leadership roles in project development and collaboration with external agencies. Volunteer credits earned at The Grange (Jackson and Ronzi, 2021) were not merely perceived as financial aid but contributing to volunteers feeling of control, choice, and deserving.

Community hubs were also associated with increased skills and knowledge (Spilková, 2017; Abramovic et al, 2019), increased physical activity (Eadson et al, 2021), employability (Eadson et al, 2021), and improved physical health (Eadson et al, 2021).

## Other outcomes

Community hubs also had some positive impacts at an organisation level, improving organisations' evaluation and measurement skills, governance, and capacity for future funding (S3 Solutions, 2018), and increasing collaboration (Eadson et al, 2021).

### **Comparison with original review findings**

- There are fewer community hubs in the update (n=5) compared to the original review (n=11)
- The social relations findings were similar. In both reviews community hubs were found to promote social cohesion and increase social networks. The update review found evidence of both bonding and bridging capital being created, compared to only bonding capital in the original.
- The community wellbeing findings were similar. In both reviews community hubs increased sense of belonging and pride and increased civic activities. Both highlight improvements in different social determinants of health. The original review highlights improvements in family wellbeing, which is not picked up in the update.
- The individual wellbeing findings are similar. Both find community hubs improved various aspects of mental and physical health and wellbeing, increased skills and knowledge, increased employability, and increased physical activity.
- The update also finds organisational-level benefits of community hubs that were not found in the original review.

### Case study: *The Grange* (Jackson and Ronzi, 2021)



The Grange is a community-led, multifaceted, and dynamic intervention incorporating a community hub and garden, that took place in a small area of the North-West of England, characterized by high levels of deprivation and poor health. It involved collaboration between residents, third-sector organisations and the local authority.

The programme redeveloped a previously unused “city learning centre”. Activities include a library, volunteering programs, time banking for shopping credits in the

community shop, community café with weekly free family meals, and adult learning programs". A community garden enables residents to grow fruit and vegetables, which are sold within the community shop.

The Grange was evaluated through photovoice methods to explore residents’ perceptions and experiences of this community-led intervention and any perceived impact on health, well-being, and community inclusion. Results showed reductions in social isolation, created safe space, improved perceived physical and mental health and wellbeing, improved cohesion and belonging, individual and community empowerment, learn new skills, and access to fresh food.

Findings suggest the sense of inclusion and friendships developed within The Grange may be more important factors for health improvement than the practical components of the intervention itself.

Figure 1 Community hub case study, *The Grange*

### **Evidence statements: Community hubs**

Evidence statements relate to the entire updated body of evidence, as it would be potentially misleading to prepare evidence statements based only on the 5 year refresh. Statements in bold represent the strongest evidence.

- **There is strong evidence from 14 studies (2 GQ qualitative, 3 MQ qualitative, 9 LQ (5 quantitative, 4 qualitative)) that community hubs boost social relations**, including
  - promoting social cohesion (moderate evidence: 1 GQ, 1 MQ, 3 LQ),
    - although there is weak evidence from one LQ study of negative as well as positive effects on social cohesion of a church-based hub
  - **increasing social networks (strong evidence: 2 GQ, 3 MQ, 3 LQ)**
  - creating bonding and bridging social capital (moderate evidence: 1 GQ, 4 MQ, 1 LQ).
  
- **There is strong evidence from 12 studies (2GQ qualitative, 3 MQ qualitative, 7 LQ (4 quantitative, 3 qualitative)) that community hubs boost community wellbeing**, creating
  - a sense of belonging within communities of interest and of place (moderate evidence: 3 MQ, 1 LQ)
  - a sense of pride in the wider community (moderate: 2 MQ, 1 LQ)
  - increasing community empowerment (moderate evidence: 1 MQ, 1 LQ)
  - increasing civic participation (moderate evidence: 1 GQ, 1 LQ)
  - and improving social determinants of health (moderate evidence: 1 GQ, 1 MQ, 2 LQ).

- **There is strong evidence from 10 studies (2 GQ qualitative, 4 MQ (3 qualitative, 1 quantitative), 4 LQ (1 qualitative, 3 quantitative)) that community hubs improve individual wellbeing** for those visiting, taking part in activities and for those involved in delivery.
  - There is moderate evidence from two qualitative studies (1GQ, 1 MQ) that community hubs support individual empowerment by fostering a sense of control.
  - **There is strong evidence that community hubs improve mental health and wellbeing (2 GQ, 4 MQ, 2 LQ)**
- There is weak evidence that community hubs have positive impacts at an organisation level, improving organisations' evaluation and measurement skills, governance, capacity for future funding and increasing collaboration (2 LQ qualitative).

### *Events*

We defined these as temporary events that took place at a community level, such as festivals, markets, art events, street parties, concerts. Events ranged from a one-off activity to a regular (often annual) occurrence.

Fifteen interventions were coded as events. These were *Pop-Up Resource Village* (McCunn et al, 2020), a MQ MME, *Multicultural Festivals in Canada* (McClinchey, 2021; 2017), a LQ qualitative study, *Fjuzn Multicultural Festival* (Rapošová, 2019), a LQ qualitative study, *CITE at the Bentway* (Glover et al, 2021), a MQ qualitative study, *New Beginnings Festival* (Hassanli et al, 2021), a MQ qualitative study, *Street Party* (Stevenson, 2019), a LQ case study, *Christmas Lunch* (Collins et al, 2017), a MQ qualitative study, *Indy Man* (de Jong & Steadman, 2021), a MQ case study, *Light Box Exhibitions* (Tischler, 2018), a LQ cross-sectional survey, *Rohingya Little Local* (Bestman et al, 2020), a GQ qualitative study, *The Blue Mountain Music Festival* (Clements, 2018), a GQ qualitative study, *Rural Art Roadshow* (Harris et al, 2018), a MQ MME, *Clunes Booktown Festival* (Mair & Duffy, 2018), a MQ qualitative study, *Cygnets Folk Festival* (Fiedler & Wickham, 2022), a MQ MME, and *The Big Lunch* (Terry et al, 2021), a LQ MME.

### Social relations

Improvements in social relations were a recurring theme from events. Events frequently supported people to come together and expand their social networks. This occurred both before, during, and after events and happened both deliberately and inadvertently. For example, volunteers at the *Cygnets Folk Festival* (Fiedler & Wickham, 2022), a folk and music festival that offers folk, ethno, world, singer-songwriter, roots and acoustic music, dance, poetry, and workshops, gathered for an after-party after the event. Attendees to *Indy Man* (de Jong & Steadman, 2021), an annual craft beer festival held in Manchester, England, began connecting online prior to the event:

*"In the days before the event, Indy Man hashtags were utilized alongside #womeninbeer and #beeryladies, inviting a number of British-based, women-only craft beer groups to come together during the event. Using online networks, attendees were able to connect and plan attendance" (de Jong & Steadman, 2021,p.14, study authors)*

Events supported social cohesion by providing a forum for different populations to come together, including different ethnicities and culture (Hassanli et al, 2021; Rapošová, 2019), different ages (Terry et al, 2021; Collins et al, 2017), and people with mental health difficulties (Harris et al, 2018; Tischler, 2018). For example, *The Big Lunch* (Terry et al, 2021) runs every June in the United Kingdom



and supports communal picnic and other food events as a vehicle to bring people together in their local area. These events were successful at bringing together people from different generations and to connect with people in their area in a different way to how they would normally (Terry et al, 2021). Similarly, *Christmas Lunch* (Collins et al, 2017) was a Christmas lunch hosted by staff and volunteer at the University of Salford for older people who would otherwise be on their own on Christmas day. The event fostered both generational and intergenerational relationships between those involved (Collins et al, 2017).

*"It feels like the entire community's included in it because you've got all your different venues and you've got your school system, you've got your council system, you've got your shop system, you've got your caravan park system, you've got your garages, you've got every part of the community is invited to be part of it, and your sponsors are also part of your community, ... (Respondent: JE)" (Fiedler & Wickham, 2022:20, participant)*

Bringing people together at events was found to challenge various forms of stigma (Hassanli et al, 2021; Glover et al, 2021). This included dominant narratives around mental health during the Rural Art Roadshow (Harris et al, 2018) and Light Box Exhibitions (Tischler, 2018), of skateboarders as antisocial during CITE at The Bentway (Glover et al, 2021), and of migrants as "takers" and "troublemakers" during the New Beginnings Festival (Hassanli et al, 2021).

All three aspects of social capital were, to varying degrees, found to be outcomes from events (Mair & Duffy, 2018; McClinchey, 2021; 2017; Hassanli et al, 2021). For example, *Clunes Booktown Festival* (Mair & Duffy, 2018), an annual book and literature festival in a small, post-industrial town about 60 miles outside Melbourne, Australia, was supported bonding, bridging, and linking capital in the community. *The New Beginnings Festival* (Hassanli et al, 2021), a one-day festival of live music, dance, creative workshops, markets, and world cuisines to celebrate and showcase migrant communities in New South Wales, Australia, supported social relations within ethnic groups (bonding) and connections between different groups (bridging) (see Figure 2).

*"Social capital may be linked with festivals and events...Clunes appears to be having some success in creating all three types of networks...a core group of festival staff (either paid staff or volunteers) work throughout the year to plan and stage a festival and social capital can be, and indeed often is, nurtured and developed in all aspects of festival planning and management" (p.886) (Mair & Duffy, 2018, study authors).*

*"Ethnic community group members as festival exhibitors through their narratives acknowledged bonding rituals of festival preparation, sensuous encounters during festival performances, and opportunities to bridge with other ethnic groups through socio-cultural exchange (McClinchey, 2021, study authors).*

*"Multicultural festivals can provide opportunities for attendees from multiple cultures to bond and bridge ties through the sharing of experiences" (Hassanli et al., 2021, study authors).*

However, events could also be exclusionary, creating new or emphasising existing divisions. particularly when the event is perceived to be for a particular population. The *Indy Man* craft beer festival, despite promoting itself as welcoming to anyone, was seen to be dominated by "mythical masculine, middle class, able bodied" men. While women were present at the event, they were less visible and there were incidences of outright hostility on social media posts associated with the event (de Jong & Steadman, 2021). More longer-term negative impacts on social connectedness

were observed during the *Clunes Town Book Festival* as existing social networks and relationships among longer-term residents were undermined by the arrival of new people (visitors and residents) (Mair & Duffy, 2018). A negative outcome from *Christmas Lunch* for isolated older people (Collins et al, 2017) was that it emphasised the loneliness that many experience in their everyday lives and that they were returning to once the event was over.

### Community wellbeing

Events were frequently reported to positively impact various aspects of community wellbeing. Events supported a sense of belonging (Collins et al, 2017; Clements, 2018; Glover et al, 2021; Hassanli et al, 2021), social identity (de Jong & Steadman, 2021), and community empowerment (Hassanli et al, 2021; Bestman et al, 2020; Clements, 2018).

*“Through involving volunteers in the festival preparations, throwing volunteer parties and people working together during the festival, this sense of community is further nourished. The volunteers form a tight group, contributing their time and knowledge to a range of local festivals, events and community services” (Clements, 2018, participant)*

*“Temporary, impermanent interventions like CITE offer communities effective tactics to create a greater sense of belonging among those who use public spaces, whether skateboarders or otherwise” (Glover et al, 2021:54, study authors)*

These were often both immediate during events and more long-lasting. Events held as part of *Rohingya Little Local* (Bestman et al, 2020), which provided AU\$10,000 to the Rohingya community in Canterbury, Australia, to address perceived health priorities, enabled community empowerment and collective control of funding decisions. The *New Beginnings Festival* (Hassanli et al, 2021) was reported to create moments of power and freedom for attendees, and the Blue Mountain Music Festival (Clements, 2018) – an annual blues, roots, and folk music festival – built local capacity and leadership by involving local community members in the festival organisation and delivery.

Events frequently improved various social determinants of health, including the look and feel of neighbourhoods (Glover et al, 2021; Terry et al, 2021; Mair & Duffy, 2018) and brought economic benefits (Mair & Duffy, 2018; McCunn et al, 2020). Other reported community wellbeing outcomes were improved sense of safety (McCunn et al, 2020), heritage and cultural awareness (McClinchley et al, 2021; 2017), and increased civic activity (Mair & Duffy, 2018; Terry et al, 2021). Installation of ‘skateable sculptures’ as part of *CITE at The Bentway* (Glover et al, 2021) helped to beautify the space. A *Big Lunch* event (Terry et al, 2021) improved a local park from “*the black spot to...one of the jewels in the crown*”. *Clunes Town Book Festival* (Mair & Duffy, 2018) was reported to have brought significant change to the ethos, atmosphere, and infrastructure of the town. Changes attributed to the festival included:

*“the opening of new coffee shops and bars, bookshops, art shops, and general stores. Other signs of investment and growth in the town include the installation of the town’s first ATM and the reopening of the railway station as a cultural hub” (Mair & Duffy, 2018:885, study authors).*

However, a negative community outcome of events concerned the potential loss of shared identity. *Clunes Town Book Festival* (Mair & Duffy, 2018), as a result of encouraging visitors and new residents, created a feeling of the town being taken over and losing its original identity.

## Individual wellbeing

A range of individual wellbeing outcomes was found to be associated with events. This was often skills gained through volunteering during events, such as leadership and collaborative working (Clements, 2018; Mair & Duffy, 2018; Terry et al, 2021). Both attendees to events and volunteers also often gained knowledge related to the substantive content of the event, including cultural awareness and mental health. The *New Beginnings Festival* (Hassanli et al, 2021) was an opportunity to understand about the social fabric of Australia and its various cultural groups, while the multicultural festivals described by McClinchey (2021, 2017) enabled attendees to learn and share information about other cultures (e.g. dances, songs, music, and food). Similarly, the *Light Box Exhibitions* (Tischler, 2018), which showcased the work of artists with lived experience of mental health challenges in London, raised awareness of, and facilitated new thoughts about, mental health among attendees.

Improvements in difference aspects of mental health and wellbeing were observed (Hassanli et al, 2021; Terry et al, 2021; Harris et al, 2018). The *New Beginnings Festival* (Hassanli et al, 2021) provided participants with a shared experience of migration with a sense of psychological safety and reassurance knowing that they are not the only ones going through hardships. Volunteering at *Big Lunch* events (Terry et al, 2021) gave people a sense of purpose in their community. *Rural Art Roadshow* (Harris et al, 2018), an exhibition of art works themed around mental health that travelled across four rural towns in Tasmania, Australia, acted as a stimulus for people to engage in more open conversations about mental health. *New Beginnings Festival* (Hassanli et al, 2021) and *Rural Art Roadshow* (Harris et al, 2018) improved participants' sense of fun/enjoyment.

*Blue Mountains Music Festival* (Clements, 2018) supported the employability of volunteers.

*"I've got my job because of this festival. I've got a project management job, and it's because I've done this. It's because I can talk in great detail and confidence about [project management]"*. (participant)

## Other outcomes

Events also had benefits at an organisational level. They helped to build organisational capacity to plan and deliver community-based events and apply for external funding, such as Burmese Rohingya Community Australia that organised *Rohingya Little Local* events (Bestman et al, 2020). From both *Clunes Booktown Festival* (Mair & Duffy, 2018) and *Greek Food Festival* (McClinchey et al, 2021) links and networks were created between local organisations. Events were also useful for promoting public health agendas and issues. For example, at some *Big Lunch* events (Terry et al, 2021) local smoking cessation and other services had stalls to promote their services. However, while *Pop-up Resource Village* (McCunn et al, 2020), which included vendor stations, education opportunities, live music, and local business pop-up shops being centrally located one street in West Oakland, California, intended to increase access to social services, some attendees were found to have little interest in those on offer, possibly questioning attendees willingness to engage with social services at a public event (McCunn et al, 2020).

### Comparison with original review findings

- There are more events in the update – 9 in 2018 compared to 15 in 2022.
- Outcomes related to social relations were similar. Both reviews found that events could improve social networks, social cohesion, social capital, and give people a reason to socialise. Both reviews also found events could produce feelings of exclusion. The update also found reduction in stigma, improvements in linking social capital (not just bonding and bridging), and that events can emphasise feeling of isolation.
- Community wellbeing outcomes were similar. In both reviews sense of belonging, identity, pride, community spirit, civic activity, and connection to culture/heritage were found. Both also found improvements to social determinants of health, although these were wider ranging in the update. The two reviews found different negative outcome - increased traffic/crowds and accelerating gentrification were identified in the original, while loss of shared identity was identified in the update.
- Individual wellbeing outcomes were more common in the update. While the first review found hedonic wellbeing and knowledge/skills improved, the update also found improvements in mental health and wellbeing and improved employability.
- The update also finds organisational-level benefits of events that were not found in the original.

### ***Case study: New Beginnings Festival (Hassanli et al, 2021)***

*New Beginnings* is a one-day festival of live music, dance performance, creative workshops, cultural markets, and food, held in the city centre by a third-sector organisation. The aim of the festival was to celebrate and showcase the creativity of migrant artists, performers and craftspeople living in the region. While focused on refugees and ethnic minority communities, the event was open to everyone.

Figure 2 Event case study, *New Beginnings Festival (Hassanli et al, 2021)*

### **Evidence statements: Events**

Evidence statements relate to the entire updated body of evidence, as it would be potentially misleading to prepare evidence statements based only on the 5 year refresh. Statements in bold represent the strongest evidence.

- **There is strong evidence from 23 studies (3 GQ qualitative, 11 MQ (8 qualitative, 3 quantitative), 9 LQ (3 qualitative, 6 quantitative)) that community events boost social relations.**
  - Moderate to strong evidence that community events can expand social networks (1 GQ, 7 MQ, 5 LQ).
  - Moderate to strong evidence that community events can boost social cohesion by mixing age or ethnic groups (1 GQ, 6 MQ, 4 LQ).
  - Moderate to strong evidence that community events can boost bonding and bridging social capital (1 GQ, 4 MQ, 1 LQ).
  - Moderate to strong evidence (1 GQ, 5 MQ) that community events may also potentially have negative effects on social capital, for example if too great an emphasis was felt to have been placed on attracting people from outside the local community, this could lead to feelings of exclusion within the community

- **There is strong evidence from 22 studies of a positive impact of community events on community wellbeing (4 GQ qualitative, 11 MQ (7 qualitative, 4 quantitative), 7 LQ (2 qualitative, 5 quantitative)), with moderate evidence of some negative impacts**
  - **increase sense of belonging or pride through celebration of a shared identity (strong evidence: 2 GQ, 6 MQ, 2 LQ)**
  - **contribute to community empowerment (strong evidence: 2 GQ, 1 MQ)**
  - contribute to civic participation (moderate to strong evidence: 1 GQ, 3 MQ, 2 LQ)
  - contribute to knowledge and cultural exchange (moderate to strong evidence: 1 GQ, 2 MQ)
  - improving social determinants of health (moderate evidence: 3 MQ, 2 LQ)
  - Negative impacts of community events included potential loss of shared identity, gentrification, and/or physical or perceived exclusion of local residents from events (moderate evidence: 3 MQ, 1 LQ)
  
- There is moderate evidence from 13 studies of positive impacts of community events on individual wellbeing (1GQ qualitative, 7MQ (4 qualitative, 3 quantitative), 5LQ (2 qualitative, 3 quantitative))
  - Improved mental health and wellbeing (moderate evidence: 3 MQ, 1 LQ)
  - Increased skills and knowledge (moderate to strong evidence: 1 GQ, 3 MQ, 2 LQ)
  - Hedonic wellbeing (moderate evidence: 2 MQ)
  - Improved employability through volunteering (moderate evidence: 1 GQ)
  
- There is moderate to strong evidence (1 GQ, 2 MQ) that community events have benefits at an organisational level, helping to build organisations capacity to plan and deliver community-based event, apply for external funding, and improving links between local organisations.

### *Neighbourhood design*

Neighbourhood design refers to the scale, form or function of buildings and open space. Good neighbourhood design can have an important role in promoting community cohesion by providing public spaces that are comfortable and inviting for local people<sup>9</sup>.

Eleven interventions were coded as neighbourhood design. These were *Incredible Edible Todmorden* (Morley et al, 2017), a M,GQ MME, *The Frankfurt Mainkai Riverfront* (Pandit et al, 2021), a GQ before and after study, *Street Reallocation in Oslo* (Hagen & Tennøy, 2021), a MQ natural experiment, *Community Gardens in Prague* (Spilková, 2017), a MQ qualitative study, *Natural Outdoor Environments* (Triguero-Mas et al, 2021), a MQ qualitative study, *Pop-Up Parks* (Winter et al, 2020), a LQ MME, *Acton Gardens Regeneration Programme* (Bacon et al, 2021), a L,MQ MME, *Blue Acupuncture* (Cervera et al, 2021), a LQ case study, *Derwenthorpe* (Quilgars et al, 2019), a MQ qualitative study, *Space & Place NI* (S3 Solutions, 2018), a LQ MME, and *Active by Community Design* (Austin et al, 2021), a LQ case study.

### Social relations

Neighbourhood design interventions had some positive outcomes related to social relations. Studies noted improvements to social networks, interacting, and people's sense of community (Quilgars et

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<sup>9</sup> <http://www.futurecommunities.net/ingredient/41/good-neighbourhood-design>

al, 2019; Winter et al, 2020; Pandit et al, 2021). The *Derwenthorpe* housing development in York, England (Quilgars et al, 2019) included a range of communal spaces that enabled residents to connect both formally and informally. *Pop-up Parks* (Winter et al, 2020), which installed artificial turf, chairs, table, a shade umbrellas in a street in Los Altos, California that was closed to traffic for construction work, provided a free, shared space with opportunities for people to get to know each other.

Improved social cohesion was also a frequently occurring outcome – pleasant places brought people together – including different ages (Morley et al, 2017), housing tenures (Quilgars et al, 2019), and ethnicities and cultures (S3 Solutions, 2018).

*"The majority of interviewees (owners, shared owners and renters) appreciated the mixed tenure and thought it worked well. Renters and shared owners alike appreciated that tenures were 'pepper-potted' and that the houses didn't look any different. " (Quilgars et al, 2019, study authors)*

However, social cohesion did not always occur, with different population sometimes remaining in separate networks. In *Acton Gardens* (Bacon et al, 2021) – a programme to regenerate the South Acton Estate in London that, when finished, will create five parkland neighbourhoods, a new community hub, community and retail facilities, and improved access to the surrounding area – older and newer residents were found to be involved in different social networks, with little mixing apart from in parks and between children and their parents and carers (Bacon et al, 2021). Moreover, only very limited improvements in social capital were found in neighbourhood design interventions. *Community Gardens in Prague* (Spilková, 2017) produced some bonding and bridging effects, such as between mothers who met at the gardens and established babysitting clubs.

### Community wellbeing

Community wellbeing was improved via neighbourhood design interventions in various ways. Improvements to social determinants of health were frequently reported, including access to local amenities (Hagen & Tennøy, 2021; S3 Solutions, 2018), improved housing (Quilgars et al, 2019), improved built environment (Hagen & Tennøy, 2021; Morley et al, 2017; Bacon et al, 2021; Cervera et al, 2021), and local economic benefits (Winter et al, 2020; Morley et al, 2017). *Pop-Up Parks* (Winter et al, 2020) was found to increase downtown foot traffic and increase retail sales for businesses adjacent to parks. Likewise, *Incredible Edible Todmorden* (Morley et al, 2017), which encouraged public food growing in communal spaces in Todmorden, England, produced a social return on investment of £5.51 for every £1 invested (largely through volunteer time and small financial contributions) (see Figure 3). *Incredible Edible Todmorden* (Morley et al, 2017) also produced two successful social enterprises – Incredible Aqua Garden and Incredible Farm – and the increased desirability of the area increased property prices and allowed more local businesses to develop.

*"[Incredible Edible Todmorden] made an immediate and visible impact on the use of space in Todmorden...They have subsequently maintained and developed these areas...IET has also contributed to the improved the appearance of the town in other ways such as facilitating public works of art. A number of examples were given of how the community had reclaimed unused or derelict outdoor spaces in a variety of different contexts..." (Morley et al, 2017, study authors)*

Improved sense of pride, belonging, ownership, and empowerment were observed from neighbourhood design interventions (Morley et al, 2017; Quilgars et al, 2019; Spilková, 2017), as were increased civic activity (Austin et al, 2021; Bacon et al, 2021; Winter et al, 2020) and improved

crime and sense of safety (Morley et al, 2017; S3 Solutions, 2018). The provision of pedestrian, cycling routes, and leisure spaces that were readily accessible created a sense of ownership among residents in *Derwenthorpe* (Quilgars et al, 2019). In *Active by Community Design* (Austin et al, 2021), a project to engage residence in the redesign of two public open spaces in a low-income neighbourhood in Australia, a small group of residents established an informal network that would regularly attend the park to litter-pick and provide a presence to deter vandals. Residents in *Acton Gardens* (Bacon et al, 2021) gradually became more active in organising their own activities and initiatives (e.g. Facebook and mutual aid groups). In *Pop-Up Parks* (Winter et al, 2020) there was a substantial interest from the public to get involved in programming at the parks.

However, there were there were some negative community wellbeing outcomes reported for neighbourhood design interventions, commonly articulated around the idea of gentrification. There were concerns that both *Incredible Edible Todmorden* (Morley et al, 2017) and *The Frankfurt Mainkai Riverfront* (Pandit et al, 2021) – the pedestrianisation of approximately 800m of riverfront in Frankfurt, Germany – were attracting new users/residents and excluding more established community members. In *Acton Gardens* (Bacon et al, 2021) there were concerns that new residents were using the area as ‘dormitories’ for sleeping but leaving for work and leisure, as more prosaic concerns about the growing pressure of facilities and services.

### Individual wellbeing

A range of positive individual wellbeing outcomes were found to result from neighbourhood design interventions. Community members in *Active by Community Design* (Austin et al, 2021), *Incredible Edible Todmorden* (Morley et al, 2017), *The Frankfurt Mainkai Riverfront* (Pandit et al, 2021), and *Derwenthorpe* (Quilgars et al, 2019) all became more physically active.

*“Improved physical and mental health wellbeing for Todmorden, I think so, people feel better. If you get people out doing a little bit of exercise, a bit of walking, a bit of digging, great, why not?” (Morley et al., 2017, participant)*

However, a switch to more active travel did not always happen or resulted in the displacement of traffic. Little change in travel behaviour or what people did in the city centre overall was observed from *Street Reallocation in Oslo* (Hagen & Tennøy, 2021), which involved the removal of approximately 760 on-street parking spaces, the reuse of the spaces for other things (e.g. planting), and a new driving pattern in Oslo, Norway. Also, *The Frankfurt Mainkai Riverfront* (Pandit et al, 2021) was reported to have displaced vehicle traffic from the closed road to other areas as opposed to a reduction in total traffic.

Improvements to skills and knowledge were also observed, although improvements were not always evenly spread between community members. In both *Incredible Edible Todmorden* (Morley et al, 2017) and *Community Gardens in Prague* (Spilková, 2017) users took part in courses about, and gained practical experience of, food (fruit and vegetable) production. This was particularly impactful for children and young people, developing their interest in growing and gardening to know where food comes from and about the environment. However, in *Incredible Edible Todmorden* (Morley et al, 2017) some residents felt they had not, for example, learnt how to identify different foods, know when foods were ready, or that the food was available to anyone to pick.

Improved mental health and wellbeing (Morley et al, 2017; Spilková, 2017) and fun/enjoyment (Hagen & Tennøy, 2021; Winter et al, 2020) were found in neighbourhood design interventions. Changes to road layouts, removal of on-street parking, and reuse of space as part of *Street Reallocation in Oslo* (Hagen & Tennøy, 2021) had improved the walking and cycling experiences in

the city centre. Likewise, *Pop-Up Parks* (Winter et al, 2020) created a vibrant space that was enjoyed by a variety of people in a host of ways. Individual empowerment was improved in *Space & Place NI* (S3 Solutions, 2018) but diminished in *Acton Gardens* (Bacon et al, 2021).

There were also some negative individual wellbeing outcomes resulting from neighbourhood design interventions. The disruption caused by building works in *Acton Gardens* (Bacon et al, 2021) left many residents feeling unsafe, even though reported crime was less than before the regeneration. Also, in *Acton Gardens* (Bacon et al, 2021) a loss of individual empowerment was observed; fewer residents reported feeling that they could influence decisions affecting the area and fewer people felt it was important to be able to influence local decisions. Issues around inequalities – who had access, who benefitted most – arose in most neighbourhood design interventions. For example, there were concerns that *Incredible Edible Todmorden* (Morley et al, 2017) only had a limited reach with teenagers and young adults, longer-term residents, and marginalised sections of the community. Similarly, in *Derwenthorpe* (Quilgars et al, 2019), shared-owners and renters had less well established friendship networks compared to owner-occupiers.

#### Other outcomes

Neighbourhood design interventions had some impact at an organisational and system level, increasing organisational capacity (S3 Solutions, 2018) and influencing local authority agendas/priorities (Winter et al, 2020).

#### **Comparison with original review findings**

- The social relations outcomes were somewhat similar. Both found improvements in social interaction, social connection(s), and cohesions. Both found that nice places to interact are important. The original review found more evidence of improvements in social capital.
- The community wellbeing outcomes were similar. Improvements to sense of belonging, sense of identity, sense of safety, built environment, and economic benefits were identified in both reviews. The original also found benefits to public health and concerns about space being misused, while the update noted potential issues around gentrification.
- The individual wellbeing outcomes were somewhat similar. Both found neighbourhood design interventions improved knowledge/skills. Individual empowerment was found in the update but not the original. Both reviews found inconsistent evidence about changes to physical activity, although the original contained more evidence in support of behaviour change.
- The update included some evidence of organisational- and system-level changes that were not in the original.



**Case study: Incredible Edible Todmorden (Morley et al, 2017).**



The aim of *Incredible Edible Todmorden* (IET) is to increase access to healthy and sustainable food as a means to promote more inclusive community development, resilience-building and economic regeneration.

In 10 years it has developed from a community group to a formally registered community benefit society -

Incredible Edible Todmorden Ltd. It began with a gardening group, cooking skills, and encouraging businesses to adopt the IET brand. A community herb garden, 'propaganda gardening' in collaboration with public organisations, and branding then followed. Finally, spin-off social enterprises - Incredible AquaGarden and Incredible Farm – have developed. Examples of places used for growing food include: the police station, health centre, train station, Pollination Street (previous derelict land near the town market) - all connected by a walking route the 'Incredible Edible Way'.

A mixed method evaluation has been conducted, involving a literature review, Theory of Change development, survey, interviews and focus groups, and a social return on investment (SROI) analysis.

*Incredible Edible Todmorden* has increased physical activity and access to green space, increased skills and knowledge (particularly of children and young people), created a greater sense of community and pride and ownership, and been a boost to the local economy. For every £1 invested, largely through volunteer time and small financial contributions, £5.51 was returned to the Todmorden community.

*Figure 3 Neighbourhood design case study, Incredible Edible Todmorden (Morley et al, 2017)*

**Evidence statements: Neighbourhood design**

Evidence statements relate to the entire updated body of evidence, as it would be potentially misleading to prepare evidence statements based only on the 5-year refresh. Statements in bold represent the strongest evidence.

- **There is strong evidence from 21 studies (2 GQ (1 qualitative, 1 quantitative), 7 MQ (3 qualitative, 4 quantitative), 12 LQ (8 qualitative, 4 quantitative)) that neighbourhood design interventions can boost social relations.**
  - **Improved social networks (strong evidence: 2 GQ, 2 MQ, 5 LQ)**
  - mixed impact on social cohesion (moderate evidence of positive impact 2 MQ, 3 LQ; weak evidence of no effect 1 MQ)
  - some impact on social capital (moderate to weak evidence: 1 MQ, 4 LQ)
  
- **There is strong but mixed evidence from 23 studies (2 GQ (1 qualitative, 1 quantitative), 6 MQ (2 qualitative, 4 quantitative), 15 LQ (4 qualitative, 11 quantitative)) of the impact of neighbourhood design interventions on community wellbeing**
  - Sense of pride, belonging, ownership and empowerment (moderate to strong evidence: 1 GQ, 3 MQ, 10 LQ)
  - Improved social determinants of health (moderate to strong evidence: 1 GQ, 4 MQ, 8 LQ)
  - Increased civic participation (moderate evidence: 2 MQ, 3 LQ)

- Mixed impacts on sense of safety (weak to moderate evidence of positive impact - 1 MQ, 1 LQ; weak evidence of no effect 1 LQ; weak evidence of negative effect 1 MQ)
  - Negative issues with gentrification (moderate to strong evidence: 1 GQ, 2 MQ, 4 LQ)
  - **Negative perceptions of transfer of ‘problem’ to other areas (strong evidence: 2 GQ, 2 LQ)**
- **There is strong evidence from 11 studies (2 GQ (1 qualitative, 1 quantitative), 5 MQ (1 qualitative, 4 quantitative), 4 LQ (1 qualitative, 3 quantitative)) that neighbourhood design interventions can boost individual wellbeing.**
    - Mental health and wellbeing (moderate to strong evidence of positive impact: 1GQ, 1 MQ, 3LQ; weak evidence of negative impact: 1MQ)
    - **Physical health or physical activity (strong evidence: 2 GQ, 4MQ, 2LQ)**
    - Skills and knowledge (moderate evidence: 2MQ)
    - Social connections (moderate evidence: 3MQ)
    - Sense of belonging (moderate evidence: 2MQ)

### *Green and blue spaces*

We defined this as any natural green space (e.g. parks, woodland, gardens) or blue space (e.g. rivers, canals, coast).

Twenty-two interventions were coded as green and blue spaces. These were *The Happiness Garden* (Abramovic et al, 2019), a MQ qualitative study, *Incredible Edible Todmorden* (Morley et al, 2017), a GQ MME, *Woods in and Around Town* (Ward Thompson et al, 2019), a MQ MME, *The Green Prosperity Project (Community Garden)* (Ramsden, 2021), a MQ qualitative study, *Community Greenway* (Hunter et al, 2021), a GQ MME, *The Grange* (Jackson and Ronzi, 2021), a GQ qualitative study, *Community Gardens in Prague* (Spilková, 2017), a MQ qualitative study, *Medlock River* (de Bell et al, 2020), a GQ qualitative study, *Natural Outdoor Environments* (Triguero-Mas et al, 2021), a MQ qualitative study, *Cherry Hill Community Garden* (Brace et al, 2017), a MQ process evaluation, *Active Neighbourhoods* (Active Neighbourhoods, 2020), a LQ MME, *Phat Beets* (Alkon & Cadji 2020), a MQ qualitative study, *Canal Improvements* (Benton et al, 2021), a GQ natural experiment, *Blue Acupuncture* (Cervera, 2021), a LQ case study, *Clean & Green* (Heinze et al, 2018), a GQ observational study, *El Parque Fluvial* (Durán Vian et al, 2018), a LQ survey, *Connecting Children in Nature* (Castle, 2018), a GQ qualitative study, *Space & Place NI* (S3 Solutions, 2018), a LQ MME, *Parks for People* (Eadson et al, 2021), a LQ MME, *INHERIT* (Bell et al, 2019), a L,MQ MME, *Campus-Community Garden* (Jakubec et al, 2021), a GQ qualitative study, and *Active by Community Design* (Austin et al, 2021), a LQ case study.

### Social relations

Green and blue spaces consistently improved social networks, including meeting new people and connecting with family and friends. This included socialising during both formal and informal activities/events.

*"This extension of one's ecological community served to grow healthy, healing, and complex interdependent relations with self, others, and the environment" (Jakubec et al, 2021:5, study authors)*

There was some evidence of social capital being enhanced through green and blue space interventions, particularly bonding and bridging capital (but not linking social capital). Both bonding and bridging capital were enhanced in *Community Gardens in Prague* (Spilková, 2017). Both *The Happiness Garden* (Abramovic et al, 2019) and *Active Neighbourhoods* (Active Neighbourhoods, 2020) – community led stakeholder groups that work to improve infrastructure and create and protect wildlife spaces – supported bonding social capital through, for example, opportunities for families to come together. However, not all interventions effected social capital. *The Malvick Path* (Bell et al, 2019), which saw no change in neighbourhood social capital. Improvements in social cohesion were frequently reported (Eadson et al, 2021, Jakubec et al, 2021, Abramovic et al, 2019; Morley et al, 2017). Eadson et al (2021), in relation to *Parks for People*, found that changes in the fabric of parks could make them more inclusive. Similarly, *Community Campus Garden* (Jakubec et al, 2021), a community garden situated directly outside the doors of the university campus in Canada in which students and residents worked side-by-side, helped dissolve labels of age, role, or authority as people worked together just as community gardeners. Specific instances of improved cohesion occurred between people with different ethnicities in *The Community Happiness Garden* (Abramovic et al, 2019), different age groups in *Incredible Edible Todmorden* (Morley et al, 2017) and *Connecting Children in Nature* (Castle, 2018), people with and without disabilities in *Parks for People* (Eadson et al, 2021), and between longer-term and newer residents also in *Parks for People* (Eadson et al, 2021) (see figure 4).

However, there were instances of declining social connectivity (Hunter et al 2021) or connectivity only within certain populations – bonding but no bridging (Abramovic et al, 2019; Ward-Thompson et al, 2019). There was a small decline in the social networks of local residents following the *Connswater Community Greenway* (Hunter et al, 2021), a 9km urban greenway along the course of three rivers, featuring new paths, a civic square, tourism/heritage trails, new or improved crossing points, public art, and games and toilet facilities. Also, in *Woods In and Around Towns* (Ward-Thompson et al, 2019), in which three woodlands near areas of deprivation in Scotland were underwent physical (e.g. new paths, signage, changes to entrances, seating) and social (e.g. health walks, photography workshops, school/nursery sessions) interventions, opportunities for social engagement were generally limited to regular users.

### Community wellbeing

Green and blue spaces resulted in a broad range of positive community wellbeing outcomes. These interventions very often increased feelings of belonging and sense of place (Castle, 2018; Morley et al, 2017; Eadson et al, 2021) both within specific populations and to wider communities (Abramovic et al, 2019; Spilková, 2017). Significantly, *The Happiness Garden* (Abramovic et al, 2019) and *Community Gardens in Prague* (Spilková, 2017) enabled people to feel both a sense of belonging to their fellow refugees involved and immediate neighbours respectively and to the wider public. Green and blue spaces also very often resulted in increased feelings of community pride, ownership, and empowerment (Active Neighbourhoods, 2020; Morley et al, 2017; Castle, 2018; Eadson et al, 2021; Spilková, 2017). 88% of people involved in *Active Neighbourhoods* (Active Neighbourhoods, 2020) said that feel more pride in their neighbourhood after intervention. Similarly, in *Incredible Edible Todmorden* (Morley et al, 2017), those interviewed said the intervention had generated pride in the town at a time when the common narrative was of a place in decline. Three interventions – *Parks for People* (Eadson et al, 2021), *Incredible Edible Todmorden* (Morley et al, 2017), *Community Gardens in Prague* (Spilková, 2017) – supported collective empowerment. This occurred by changing the communities' world-view about, for example what a 'good', restored park is or giving out information about 'healthy' food, leading to a collective desire to take action.

Wider social determinants of health improved by green and blue spaces. Most commonly this was to improvements to the look and feel of areas and neighbourhoods (Active Neighbourhoods, 2020; de Bell et al, 2020; Hunter et al, 2021; Morley et al, 2017). In relation to *Connswater Community Greenway*, Hunter et al (2021) wrote:

*"The environmental aesthetics of the area were improved through the provision of landscaping involving the planting of trees and shrubs, public art and remediation of water courses to improve the biodiversity of the area" (p.4) (Hunter et al, 2021, study authors)*

There were economic benefits from green and blue space interventions. One trainee park ranger gained employment in nature conservation through *Active Neighbourhood* (Active Neighbourhood, 2020), which involved community-led stakeholder groups improving the infrastructure of local green spaces and creating and protecting more wildlife rich spaces. Local house prices increased in both *Incredible Edible Todmorden* (Morley et al, 2017) and *Thinking Fadura* (Bell et al, 2019), which provided free access to an area of green space in the town of Getxo, Spain and opened up a way to cross and connect the town. Financial analysis of *Thinking Fadura* (Bell et al, 2019) and *Incredible Edible Todmorden* (Morley et al, 2017) both also showed a positive return on investment. *Clean & Green* (Heinze et al, 2018), in which community groups took over routine maintenance and landscaping (e.g. mowing, weeding, rubbish collecting, planting) of vacant lots in Genesee County, Michigan, was also found to have produced considerable cost savings for the local authority via ~\$5.5million worth of mowing and rubbish removal by volunteer groups.

Other benefits to social determinants of health were increased connectivity to green space, as seen in *Medlock River* (de Bell et al, 2020), which involved the restoration of a stretch of canal in Manchester, England, and *Place and Space NI* (S3 Solutions, 2018), and promotion of other public health messages (e.g. smoking cessation) in *Connecting Children in Nature* (Castle, 2018). However, these outcomes were not universal. For example, while *Malvik Path* (Bell et al, 2019), a 3KM long path built on the coast alongside a disused railway track outside Trondheim, Norway, was found to have increased local satisfaction with sports facilities and walking/cycling paths, there was a reduction in satisfaction with the availability and quality of contact with nature.

Improvements in crime and perceived community safety were outcomes from some green and blue space interventions. *Clean & Green* (Heinze et al, 2018), which involved local neighbourhood groups tending vacant housing lots, resulted in a nearly 40% reduction in assaults and total violent crime. *Incredible Edible Todmorden* (Morley et al, 2017), *Place & Space NI* (S3 Solutions, 2018), *Connswater Community Greenway* (Hunter et al, 2021), and *Active Neighbourhoods* (Active Neighbourhoods, 2020) all improved fear of crime/antisocial behaviour and/or feelings of safety. In *Connswater Community Greenway* (Hunter et al, 2021) this was attributed to new 24 hour-a-day lighting, CCTV, and volunteer park wardens.

Three interventions improved awareness of local heritage and culture within communities. *The Happiness Garden* (Abramovic et al, 2019) connected people to their Burmese culture that they had left behind migrating to a new home. *Phat Beats* (Alkon & Cadji, 2020), a multifaceted intervention run by a food justice organisation in Oakland, California that included farmer's market, community garden/urban farm, backyard gardens, and education programmes, also included a memorial garden that connected residents to friends and family that had passed away or been killed. Finally, *Incredible Edible Todmorden* (Morley et al, 2017) enhanced the local distinctiveness of the town.

Two interventions were found to have increased civic activity. In *Active by Community Design* (Austin et al, 2021), a small group of residents established an informal social network who would regularly

attend the park to clean up rubbish and provide a visible community presence to deter vandals. Similarly, *Parks for People* (Eadson et al, 2021) was found to be a catalyst and focal point for community action beyond community groups and activities already taking place.

Only one study specifically highlighted the benefits of changes to green and blue spaces to reducing inequalities. Park improvements made in *Parks for People* (Eadson et al, 2021), including improving sports facilities, paths, and entrances, spread the benefits of physical activity to a wider range of people.

However, there were some negative community wellbeing outcomes reported. In both *Thinking Fadura* (Bell et al, 2019) and *Woods In and Around Towns* (Ward Thompson et al, 2019), there was some concern that enabling more people to use green spaces would create more anti-social behaviour, such as noise, conflict between users, vandalism, uncontrolled dogs, and dog faeces. There was some concern in *Incredible Edible Todmorden* (Morley et al, 2017) that the interventions had negatively affected the appearance of the town. In *Medlock River* (de Bell et al, 2020) there was some criticism that the river restoration had not sufficiently taken account of local heritage. Finally, in *Phat Beets* (Alkon & Cadji, 2020), *Incredible Edible Todmorden* (Morley et al, 2017), and *Natural Outdoor Environments* (Triguero-Mas et al, 2021) there were concerns about newer residents benefiting from at the expense of longer-term residents (gentrification) and divisions between newer and longer-term residents.

*"...often times the groups of people that did end up going to our farmers' market were new white residents of Oakland, which is totally great, but the problem is that the work we are trying to do is trying to support healthy food access for the historic community. When our work becomes implicated in the gentrification process because of the way so many people see our farmers' market, they see our healthy food, they see our community gatherings, those are going to drive up the cost of the neighborhood because it is going to be an amenity, a resource that realtors can use in order to market the neighborhood" (Alkon & Cadji, 2020, participant).*

### Individual wellbeing

Green and blue spaces had a broad range of individual wellbeing benefits. Increasing physical activity, to a lesser or greater extent, was consistently reported (Bell et al, 2019; Austin et al, 2021; Benton et al, 2021; Ramsden, 2021; Castle, 2018; Eadson et al, 2021; Morley et al, 2017). This occurred via both informal (e.g. walking) and formal activities (e.g. volunteering). For example, in *Canal Improvements* (Benton et al, 2021), in which footpaths, a nature park and village green were enhanced, encroaching vegetation removed, and new benches and signage installed along an urban canal in Salford, England, walking behaviour and vigorous physical activity increased compared to the control site.

Individual empowerment was frequently found to have increased in green and blue space interventions. This included giving residents a greater sense of ownership (Castle, 2018), greater feelings of responsibility to look after the newly restored environment (Active Neighbourhoods, 2020), opportunity to assume community leadership roles (S3 Solutions, 2018), and redistributing power through co-production (Jakubec et al, 2021).

One intervention was found to improve fun/enjoyment. In *Active Neighbourhoods* (Active Neighbourhoods, 2020), 98% of residents agreed that the nature reserve was now a more enjoyable place to visit.

*"For me to be able to socialise whilst participating in nature activities is so important. I never thought that after my stroke, I would be able to do anything like this, but because the staff and participants are so friendly and helpful it makes the whole experience enjoyable and I do not feel like a burden" (Active Neighbourhoods, 2020, participant).*

Improvements in individual mental health and wellbeing were frequently reported. This included benefits from opportunities to just be in a natural, calming environment, as in *Thinking Fadura* (Bell et al, 2019), *Medlock River* (De Bell et al, 2020), *Parks for People* (Eadson et al, 2021), and *Woods In and Around Towns* (Ward-Thompson et al, 2019). There were also mental health and wellbeing benefits from opportunities to be more active in nature, such as volunteering in *Parks for People* (Eadson et al, 2021), and gardening in *Incredible Edible Todmorden* (Morley et al, 2017), *The Green Prosperity Project* (Ramsden, 2021), and *Community Gardens in Prague* (Spilková, 2017). For example, in *The Green Prosperity Project* (Ramsden, 2021), that established a community garden at a community farm in a deprived area of Hull, England, had considerable therapeutic benefit for participants, helping to deal with bereavement and mental and physical health issues. Both *Parks for People* (Eadson et al, 2021) and *Active Neighbourhoods* (Active Neighbourhoods, 2020), although measured in different ways, were found to improve the quality of life of users. However, there was no change in mental wellbeing, measured via the WEMWBS tool, in *Connswater Community Greenway* (Hunter et al, 2021).

Another reoccurring individual wellbeing outcome from green and blue space interventions was improvements in individual skills and knowledge. This included gardening skills (Abramovic et al, 2019; Ramsden, 2021), knowledge of the environment (Active Neighbourhoods, 2020), knowledge of local amenities (e.g. walking trails) (Castle, 2018; Ward-Thompson et al, 2019), and of food production and cooking (Morley et al, 2017; Spilková, 2017). *Community-Campus Garden* (Jakubec et al, 2021) also enhanced student learning, enabling students to understand more about inclusion and reframe their understanding of 'nursing' as a not just solely institution-based activity. However, a challenge was that new knowledge was often unevenly distributed. For example, in *Incredible Edible Todmorden* (Morley et al, 2017), children seemed especially receptive to new information, but other residents (e.g. teenagers and young adults, older people) less so.

#### Other outcomes

Positive environmental impacts and improvements to biodiversity were seen from green and blue space interventions (Active Neighbourhoods, 2020; de Bell et al, 2021; Ward-Thompson et al, 2019). However, a concern with spoiling nature was also found in *Thinking Fadura* (Bell et al, 2019). Some instances of increased collaboration between organisations (Alkon & Cadji, 2020; Eadson et al, 2021; S3 Solutions, 2018) and increased organisational capacity (S3 Solutions, 2018) were also found to have resulted from green and blue space interventions.

### Comparison with original review findings

- There are more green and blue space interventions in the update – 14 in 2018 compared to 22 in 2022.
- Social relations outcomes are similar in both reviews. Both found improvements in social interaction (with friends and strangers), cohesion, and bonding and bridging capital. The original review also found benefits for conflict resolution. Both reviews highlighted the potential for exclusionary practices in green and blue spaces.
- Community wellbeing outcomes are similar in both reviews. Increased pride and ownership, quality of built environment, civic activity, and reduced crime/improved sense of safety were found in both. Many more benefits to social determinants of health were found in the update. Both highlight the risk of inappropriate or contested use of spaces, while the update also highlights risk of fuelling gentrification and division within communities.
- Individual wellbeing outcomes are similar. Both reviews found increases in skills and knowledge, physical activity, access to healthy food, and improved mental health and wellbeing. Individual empowerment and ownership is identified in the update.
- The update included some evidence of organisational- and system-level changes that were not in the original. The update finds more environment benefits of green and blue spaces, while both highlight environmental risks.

### ***Case study: Parks for People (Eadson et al, 2021).***

*Parks for People* was a national programme in the UK run by the National Lottery Heritage Fund to revitalise historic parks and cemeteries. Funding was provided to improve or create new facilities for physical activities, especially sport, such as play equipment, playing fields, skate parks, multi-use games areas, walking routes, changing facilities, and cafe. The development of formal wellbeing activities through *Parks for People* was common.

Figure 4 Green and blue space case study, *Parks for People* (Eadson et al, 2021)

### **Evidence statements: Green and blue spaces**

Evidence statements relate to the entire updated body of evidence, as it would be potentially misleading to prepare evidence statements based only on the 5 year refresh. Statements in bold represent the strongest evidence.

**There is strong but mixed evidence from 22 studies (3GQ (2 qualitative, 1 quantitative), 5MQ (2 qualitative, 3 quantitative), 14 LQ (5 qualitative, 9 quantitative)) of the impact of green and blue space interventions on social relations.**

- Moderate to strong evidence of positive impact on social interactions (1GQ, 1 MQ, 2 LQ); Moderate to strong evidence of negative impact on social interactions 1 GQ, 1 MQ)
- **Strong evidence on social cohesion (2GQ, 2MQ, 4LQ)**
- Moderate to strong evidence on social capital (1GQ, 2MQ, 5LQ)
- Moderate to strong evidence on negative impact due to perceived exclusion (1GQ, 1MQ)

**There is strong but mixed evidence from 26 studies (5GQ (3 qualitative, 2 quantitative), 7MQ (4 qualitative, 3 quantitative), 14LQ (2 qualitative, 12 quantitative)) of the impact of green and blue space interventions on community wellbeing.**

- **Strong evidence on sense of belonging and pride (2GQ, 3MQ, 6LQ)**
- Moderate to strong evidence on empowerment (1GQ, 2MQ, 2LQ)
- Mixed evidence on **social determinants of health**
  - **Strong evidence of positive impacts (3GQ, 3LQ)**
  - Moderate to strong evidence of negative impacts (1GQ, 1MQ, 1LQ)
- Weak evidence on civic participation (4LQ)
- Moderate to strong evidence on negative impacts: gentrification and contested use of space (1GQ, 4MQ, 1LQ)

**There is strong evidence from 21 studies (5GQ (4 qualitative, 1 quantitative), 6MQ (2 qualitative, 4 quantitative), 10LQ (2 qualitative, 8 quantitative)) that green and blue space interventions can improve individual wellbeing.**

- **Strong evidence for physical activity (3GQ, 3MQ, 5LQ)**
- Weak evidence for connection to nature (2LQ)
- Moderate to strong evidence for mental wellbeing (1GQ, 5MQ, 4LQ)
- **Strong evidence for empowerment (2GQ, 2LQ)**
- **Strong evidence for improved skills and knowledge (3GQ, 5MQ, 5LQ)**
- Moderate evidence for benefits being unequally distributed (2MQ)

### *Placemaking*

'Placemaking' relates to shaping the places where we live to maximise share value and strengthen connections between people and the places they share (Local Government Association, 2017). More than just better urban design, placemaking is very often collaborative, utilising arts, culture and heritage.

Five interventions were coded as placemaking. They were *CITE at the Bentway* (Glover et al, 2021), a MQ qualitative study, *Street Party* (Stevenson, 2019), a LQ qualitative study, *Muri Liberi and Or.Me* (Tartari et al, 2022), a LQ qualitative study, *Derwenthorpe* (Quilgars et al, 2019), a MQ qualitative study, and *Space & Place NI* (S3 Solutions, 2018), a LQ MME.

### Social relations

Placemaking interventions had some positive effects on social relations (Glover et al, 2021; Quilgars et al, 2019; S3 Solutions, 2018). In *CITE at the Bentway* (Glover et al, 2021), *Derwenthorpe* (Quilgars et al, 2019), *Street Party* (Stevenson (2019)), and *Place & Space NI* (S3 Solutions, 2018), people were able to connect with each other formally and informally.

*"Cooking for the party drew together extended families and friends, providing opportunities to communicate cultural difference and traditions."* (Stevenson, 2019:310, study authors)

Placemaking successfully brought together different groups to increase cohesion (Glover et al, 2021; Quilgars et al, 2019; S3 Solutions, 2018; Tartari et al, 2022). For example, *Street Party* (Stevenson, 2019), which temporarily closed a residential street in north London, England to host a street party for residents, including a badminton court, football, arts activities, street museum, face painting, storytelling, chill-out zone, music, and dancing, drew together extended family and friends and provided opportunities to communicate cultural difference and traditions. *CITE at the Bentway* (Glover et al, 2021) was said to have successfully brought different communities together. It also had the positive effect of reducing stigma associated with skateboarders and skateboarding (Glover et al, 2021). *Derwenthorpe* (Quilgars et al, 2019) was able to bring together people with different housing



tenures (owner-occupiers, renters) because the houses all looked the same and were mixed amongst each other. Green spaces within the development, such as the play park, also provided opportunities for different people to meet (Quilgars et al, 2019). *Place and Space NI* (S3 Solutions, 2018) improved relationships between people of different ages and different ethnicities through having multi-use facilities. Finally, community cohesions arose in *Or.Me* (Tartari et al, 2022), a series of street art projects between local artists and residents Milan, Italy, from the organised social events and community design meetings.

However, placemaking also had the potential to create a sense of exclusion if local culture and taste was not considered. For example, *NoLo* (Tartari et al, 2022) created feelings of exclusion among longer term residents. The intervention, which involved various public art works in Milan, Italy, was found to be extraneous to their experience of the neighbourhood and the meaning attached to the social environment. Moreover, the intervention was seen to be taking away resources (e.g. public wall space) that had previously been freely used by local artists (Tartari et al, 2022).

### Community wellbeing

There were some positive community wellbeing outcomes associated with placemaking interventions. The most frequently occurring were improvements to social determinants of health and wellbeing, including access to green space (S3 Solutions, 2018), and improvements to the look and feel of the built environment (Glover et al, 2021; Quilgars et al, 2019). However, such positive outcomes were not always universal. In *NoLo* (Tartari et al, 2022) whilst new residents appreciated the new street art and interpreted it as a sign of aspiration and development, to longer-term residents the new art signalled gentrification.

*"The most recurrent comment is that old businesses and small shops and groceries serving residents are slowly vanishing, and that, to a large extent, this is what contributed to create a loss of sense of place and of belonging by original, low-income residents. In the new situation, the latter find there are fewer places for them to go out to, adding to the loss of social contact that already came with the sense of exclusion from the places undergoing artistic and cultural re-symbolization." (Tartari et al, 2022:654, study authors)*

Sense of belonging, pride and ownership were found to be enhanced in three interventions. *CITE at the Bentway* (Glover et al, 2021), via its temporary and permanent interventions, created a sense of belonging among those who used public spaces, whether skateboarders or otherwise. Similarly, in *Or.Me* (Tartari et al, 2022), local murals all featured characters or events that reflect local identity and culture, thus creating a sense of belonging among residents. Finally, in *Derwenthorpe* (Quilgars et al, 2018) the accessibility of green space around the housing, including paths, cycling routes, and leisure spaces, enabled residents to feel a sense of ownership over the whole development. One intervention was found to have reduced fear of crime (S3 Solutions, 2018), and in another increased civic activities (Tartari et al, 2022).

### Individual wellbeing

There were very few positive individual wellbeing outcomes related to placemaking interventions. Some residents in *Derwenthorpe* (Quilgars et al, 2019) felt they led a healthier lifestyle, walking more than before they moved in. One intervention – *Place & Space NI* (S3 Solutions, 2018) – was found to support individual empowerment by providing opportunities for residents to assume community leadership roles within project development and collaboration with external agencies. . One intervention – *Street Party* (Stevenson, 2019) – was found to increase fun/enjoyment. One intervention – *Or.Me* (Tartari et al, 2022) – was found to have increased residents' interest in local

artistic events. This intervention was also found to benefit some residents economically as they had begun renting their homes to tourist drawn to the area by the developing art scene (Tartari et al, 2022).

However, there was an inequalities issue present within the placemaking interventions; in all cases some people/residents were more likely to benefit than others. For example, in *Derwenthorpe* (Quilgars et al, 2019) there were issues around the accessibility and safety of green spaces for young children and those with disabilities. The position of the homes also appeared to play a role in how well-connected residents feel, with those in Phase 1 having more social relationships than those in phases 2 and 3. Also, in *NoLo* (Tartari et al, 2022), there was an inequality between newer and longer-term residents, with longer-term residents reported to be less aware of/interested in accessing the new local galleries and art events.

### Other outcomes

There were limited organisational level outcomes from placemaking interventions. There were limited evidence of multi-agency and collaborative working increasing, and increased organisational capacity (S3 Solutions, 2018).

#### **Comparison with original review findings**

- Social relations outcomes were similar. Both reviews found evidence of improved social relations and cohesion. Both also found evidence of exclusionary practices. However, the original review also found evidence of increased social capital.
- Community wellbeing outcomes were also similar. Both reviews found evidence of increased sense of belonging, identity, and pride, increased civic activity, and an improved built environment. The original review also found evidence for changes to community norms and increased community resilience, while the update found evidence of reduce fear of crime and improved access to green space. Both found evidence of gentrification and the perceived marginalisation of longer-term residents.
- The individual wellbeing outcomes were somewhat different. The two reviews found evidence of different, although not contradictory, outcomes. The original review found evidence of increased physical activity, knowledge and skills, and mental wellbeing. The update found evidence of enhanced individual empowerment, interest in art, and individual economic benefits. Both found evidence of hedonic wellbeing and risks of unequal access to beneficial outcomes among population groups.
- The update also found some evidence of improved organisations collaboration and capacity. This was not found in the original review.

#### **Case study: CITE at the Bentway (Glover et al, 2021)**



The Bentway is a public space under the Gardiner Expressway in Toronto, Canada. CITE – a Celebration of Skateboard Arts and Culture – took over the Bentway in the summer of 2018 to model better integration of skateparks in the future development of cities. It featured an art installation, pop-up skatepark, and interdisciplinary programme of workshops, performances, marketplace, and speaker series.

A qualitative case study approach was used for the research, involving collecting and analysing a variety of qualitative materials.

*CITE at The Bentway* demonstrates an effective tactic to create a greater sense of belonging among those who use public spaces, whether skateboarders or otherwise. Temporary sculptures – that were also ‘skateable’ – helped beautify the environment. Programming and synergy with the place created opportunities for different people to interact.

Figure 5 Placemaking case study, *CITE at the Bentway* (Glover et al, 2021)

### **Evidence statements: Placemaking**

Evidence statements relate to the entire updated body of evidence, as it would be potentially misleading to prepare evidence statements based only on the 5 year refresh. Statements in bold represent the strongest evidence.

There is moderate evidence from 10 studies (3MQ (1 qualitative, 2 quantitative), 7 LQ (2 qualitative, 5 quantitative)) that placemaking interventions can improve social relations.

- Moderate evidence for social interaction (3MQ, 2LQ)
- Mixed evidence for social cohesion (moderate evidence of positive impact: 3MQ, 3LQ; Weak evidence of negative impact: 1 LQ)
- Weak evidence for social capital (3LQ)

There is moderate evidence from 9 studies (2MQ (1 qualitative, 1 quantitative), 7LQ (3 qualitative, 4 quantitative)) that placemaking interventions can improve community wellbeing.

- Moderate evidence for sense of belonging and pride (2MQ, 4LQ)
- Moderate evidence for social determinants of health (2MQ, 1LQ)
- Weak evidence for civic participation (3LQ)
- Weak evidence for a negative impact via gentrification (1LQ)

There is weak evidence from 8 studies (1MQ quantitative, 7LQ (4 qualitative, 3 quantitative)) that placemaking interventions can boost individual wellbeing with regard to physical activity (1MQ, 3LQ), empowerment (1LQ), knowledge and skills (1LQ) and economic outcomes (1LQ).

There is weak evidence from 2 studies (1MQ, 1LQ) that benefits from placemaking interventions to individual wellbeing are unequally distributed.

### *Alternative use of space*

We defined these as temporary changes to the way that people interact with a space e.g. closure of streets for children to play; a ‘civic game’ that involved collecting items from different places; public art installations; a ‘pop-up park’. While there is a cross-over between alternative use of space interventions and events, events are more characterised by an activity, or series of activities, at their focal point.

Twenty-three interventions were coded as alternative use of space. These were *Incredible Edible Todmorden* (Morley et al, 2017), a M,GQ MME, *Multicultural Festivals in Canada* (McClinchey, 2021; 2017), a LQ qualitative study, *Pop-up Resource Village* (McCunn et al, 2020), a MQ case study, *Open Doors Pilot Programme* (MHCLG, 2020), a M,GQ MME, *The Frankfurt Mainkai Riverfront* (Pandit et al, 2021), a GQ natural experiment, *CITE at the Bentway* (Glover et al, 2021), a MQ qualitative study, *Street Reallocation in Oslo* (Hagen & Tennøy, 2021), a MQ natural experiment, *Community Gardens in Prague* (Spilková, 2017), a MQ qualitative study, *Street Party* (Stevenson, 2019), a LQ qualitative study, *Christmas Lunch* (Collins et al, 2017), a MQ qualitative study, *Indy Man* (de Jong & Steadman,

2021), a MQ qualitative study, *Community reclamation of space after Grenfell* (Waine & Chapman, 2022), a MQ qualitative study, *Light Box Exhibitions* (Tischler, 2018), a LQ survey, *Pop-up Parks* (Winter et al, 2020), a L,MQ MME, *Play Streets* (Adhikari et al, 2021, a LQ survey; Umstadd Meyer, 2021, a GQ qualitative study; Stenning, 2020, a L,MQ MME), *Fisher Avenue Road Closure* (Kingham et al, 2020), a MQ qualitative study, *The Abattoir/Cultureghem* (Alexander, 2021), a LQ qualitative study, *Cygnets Folk Festival* (Fiedler & Wickham, 2022), a L,MQ MME, *The Big Lunch* (Terry et al, 2021), a LQ MME, *Space & Place NI* (S3 Solutions, 2018), a LQ MME, and *Parks for People* (Eadson et al, 2021), a LQ MME.

### Social relations

Alternative use of space interventions produced a large number of positive outcomes about social relations. Increases in social connections and social networks were repeatedly reported (McCunn et al, 2020; Stenning, 2020; Terry et al, 2021; Eadson et al, 2021; Alexander, 2021; Kingham et al, 2020; Glover et al, 2021). For example, *Play Streets* (Stenning, 2020; Umstadd Meyer, 2021; Adhikari et al, 2021), a resident-led intervention that involves the temporary closure to vehicle traffic of a residential street for 2-3 hours to allow children to play out in their neighbourhoods, both created new and important social connections between neighbours of all ages and strengthened existing relationships. Similarly, *Fisher Avenue Road Closure* (Kingham et al, 2020) involved self-organised street activities – a street party, games of cricket, basketball, football – among residents of a suburban street in Christchurch, New Zealand, that was closed to through traffic (vehicles) for 14 weeks as part installing a new wastewater pipe in an adjoining road. While the street was closed, residents talked to each other more and they were able to meet without having to go into each other's homes; being social without being too personal was valued (Kingham et al, 2020).

*"just once you get to know a couple of stories about that person suddenly they become a real person that you care about ... just the second you know your neighbour's name they become a person, don't they?... We share lawnmowers, walk each other's dogs, put out each other's bins when away, check up on older residents if they haven't been seen for a while, unscrew each other's jam jars, lend each other tools, take in postal deliveries for each other, hand down toys and bicycles to younger children in the neighbourhood ... go down into neighbours' basements to look at fuse boxes when they are too frightened to..." (Stenning, 2021, participant)*

Improvements in social relations for particular groups were also noted. This included for children and young people during *Play Streets* (Adhikari et al, 2021; Umstadd Meyer et al, 2021), single parents (especially fathers) also during *Play Streets* (Stenning, 2021), and women during *Indy Man* (de Jong & Steadman, 2021).

Opportunities for improvements in social relations were reported to come from participating in events/activities and also from taking on volunteer roles. In both *Parks for People* (Eadson et al, 2021) and *Cygnets Folk Festival* (Fiedler & Wickham, 2022), volunteering allowed people to meet new people and make friends. Another reported mechanism to support social relations was collaboration and co-production between different organisations. During the *Cygnets Folk Festival* stakeholders were able to engage their 'community' to get involved (e.g. schools, businesses, etc.), thus creating a bigger, more diverse pool of participants.

Many alternative use of space interventions had positive outcomes for social cohesion. This included bringing together people of different social class/status (Alexander et al, 2021), people with and without disabilities (Eadson et al, 2021), established and newer residents (Eadson et al, 2021),

people of different ethnicities (McClinchey, 2021; 2017; S3 Solutions, 2018), people with and without mental health challenges (Tischler et al, 2018; MHCLG, 2020), and, most frequently, different ages/generations (Morley et al, 2017; Stenning, 2020; Terry et al 2021; Kingham et al, 2020).

*“The teenage ones, they don’t come out all the time but they do appear now and again if it’s a particular sort of sunny day they’re out there and they’re like 15, 16. With, like, mixing with the little kids, it’s brilliant, they’ll go for the little tiny ones, it’s funny how you watch sort of like the dynamics of it all and they’ll, they’ll go to like kick a ball with the little, little ones it’s brilliant” (Stenning, 2020, participant)*

There was also consistent evidence of improved social capital. They improved feelings of trust and built shared values within and between groups (Umstadd Meyer et al, 2021; Terry et al, 2021; Stenning, 2020). Interventions commonly reported improvements in more than one type of social capital (e.g. Fiedler & Wickham, 2022; McClinchey, 2021; 2017; Spilkover, 2017). Bonding social capital was enhanced, for example, between members of the craft beer scene in *Indy Man* (de Jong & Steadman, 2021) and local residents within the town hosting the *Cygnets Folk Festival* (Fiedler & Wickham, 2022). Bridging capital was built between members of different cultural groups during the three multicultural festivals studied by McClinchey (2021; 2017). Linking capital was generated between different event stakeholders, including residents, planning the *Cygnets Folk Festival* (Fiedler & Steadman, 2022).

However, there was some evidence of exclusionary practices occurring within the *Indy Man* craft beer festival in Manchester, England (de Jong & Steadman, 2021). There was ‘territorialising’ or dominance of the space by middle-class, middle-aged, white men. People outside of this dominant group, such as women, while still present at the event, became marginalised. This exclusion happened both inadvertently and deliberately.

*“the presence of women, although not uncommon, seemed somewhat less visible. A level of hostility was also present in some social media posts, whereby a number of instances were shared regarding exclusionary acts towards women” (de Jong & Steadman, 2021:1, study authors2)*

### Community wellbeing

Alternative use of space interventions had multiple positive impacts on community wellbeing. An improved sense of community was reported from *The Abattoir/Cultureghem* (Alexander, 2021), which included activities for children (playground, basketball, hip-hop dancing), a zero-waste pop-up restaurant, and food bank in an historic market in a deprived area of Brussels, Belgium. As the author states: “...messy assemblages of people and food in an urban marketplace can create community” (Alexander, 2021: 238). Similar senses of community building were reported in *Play Streets* (Adhikhari et al, 2021), *Open Doors Pilot Programme* (MHCLG, 2020), and *Parks for People* (Eadson et al, 2021). Both *Pop-Up Resource Village* (McCunn et al, 2020) and *The Big Lunch* (Terry et al, 2021) reportedly improved participants’ place attachment. In *Open Doors Pilot Programme* (MHCLG, 2020), in which high street properties in five pilot sites in England (Slough, Stoke-on-Trent, Kettering, Bradford, Rochford) that would otherwise remain vacant were brought into ‘meanwhile use’ for up to 12 months by community groups needed premises for their activities, this feeling was particularly beneficial for people experiencing isolation or who were vulnerable. Also, an improved sense of belonging was reported from *Indy Man* (de Jong & Steadman, 2021), *Cygnets Folk Festival* (Fiedler & Wickham, 2022), *CITE at the Bentway* (Glover et al, 2021), *Incredible Edible Todmorden*

(Morley et al, 2017), Play Streets (Stenning, 2020), and *Community Reclamation after Grenfell* (Waine & Chapman, 2022). Community Reclamation after Grenfell (Waine & Chapman, 2022) involved local buildings and open spaces were taken over by community and voluntary organisations as part of a grassroots mobilisation to help the community in the aftermath of the fire at Grenfell Tower in London, England, in 2017, and then later for other community use.

For ethnic minority communities, belonging to both their ethnic/historical community and to their 'new' community was observed in multiple alternative use of space interventions. In relation to three cultural festivals in Canada (McClinchey et al, 2021; 2017), for example, traditional food, music, dancing, and entertainment enabled migrants to feel a stronger sense of belonging with their ethnic group which then supported a sense of place identity. Similarly, *The Abattoir/Cultureghem* (Alexander, 2021) provided refugee communities with a connection to their homeland through food.

Connected to belonging, two studies referred directly to a shared identity being developed through alternative use of space interventions. Firstly, *Indy Man* (de Jong & Steadman, 2021) created and supported an identity of 'craft beer enthusiast' among attendees. Secondly, *Community Reclamation after Grenfell* (Waine & Chapman, 2022) developed a new sense of identity among residents.

Improved sense of pride, ownership, and empowerment were also commonly reported outcomes from alternative use of space interventions. Improvement in sense of pride were seen in the *Cygnets Folk Festival* (2022) and *Incredible Edible Todmorden* (Morley et al, 2017). Improvement in sense of ownership were also observed in *Incredible Edible Todmorden* (Morley et al, 2017) as residents changed their perception of their locality and relationship to their local environment. Improvement in sense of empowerment were observed in *Parks for People* (Eadson et al, 2021), *Community Gardens in Prague* (Spilková, 2017), *The Big Lunch* (Terry et al, 2021), *Play Streets* (Stenning, 2020; Adhikari et al, 2021) and *Community Reclamation after Grenfell* (Waine & Chapman, 2022). In the latter, for example, through their actions and responses to the fire, local people developed a greater sense of agency and became empowered to change their relationship with power structures (Waine & Chapman, 2022)

Alternative use of space interventions were consistently reported to improve social determinants of health and wellbeing. *Incredible Edible Todmorden* (Morley et al, 2017) and *The Abattoir/Cultureghem* (Alexander, 2021) both improved access to fresh food. Positive economic impacts were observed in several interventions, including *The Abattoir/Cultureghem* (Alexander, 2021) helping to revive an historic marketplace, *Pop-up Resource Village* (McCunn et al, 2020) and *Pop-up Parks* (Winter et al, 2020) providing opportunities for local entrepreneurs and businesses, increasing local property prices in *Incredible Edible Todmorden* (Morley et al, 2017), and employment opportunities in *Parks for People* (Eadson et al, 2021). However, there was little evidence that *Open Doors Pilot Programme* (MHCLG, 2020) had resulted in economically stronger communities. Improvements to the built environment, including the look and usability of public spaces, were observed in *CITE at the Bentway* (Glover et al, 2021), *Fisher Avenue Road Closure* (Kingham et al, 2020), *Incredible Edible Todmorden* (Morley et al, 2017), *Street Reallocation in Oslo* (Hagen & Tennøy, 2021), and *The Big Lunch* (Terry et al, 2021). Also, access to local amenities, such as the city centre and local green space, were seen in *Street Reallocation in Oslo* (Hagen & Tennøy, 2021) and *Place & Space NI* (S3 Solutions, 2018) respectively, and access to social services in *Open Doors Pilot Programme* (MHCLG, 2020). Finally, *Pop-up Resource Village* (McCunn et al, 2020) provided easy access to social services, although there was not as much interest among residents to access these in a public space as expected.

Improvements in crime and sense of safety were observed in a number of studies. *Play Streets* were consistently found to make neighbourhoods feel safer (Umstattd Meyer et al, 2021; Stenning, 2020; Adhikhari et al, 2021). Other interventions reported to improve sense of safety were *Incredible Edible Todmorden* (Morley et al, 2017), *Place & Space NI* (S3 Solutions, 2018), and *Pop-up Resource Village* (McCunn et al, 2020). These interventions were all generally thought to support safety and crime reduction by allowing residents to 'reclaim' community spaces from perceived perpetrators of anti-social behaviour.

A number of alternative use of space interventions were found to improve civic activity. *Parks for People* (Eadson et al, 2021) catalysed community action, *Play Streets* (Stenning, 2020) led to other community activities like litter picks, *The Big Lunch* (Terry et al, 2021) led to more people being involved in community activities and volunteering, and *Pop-Up Parks* (Winter et al, 2020) increased interest in helping community programmes.

One intervention improved family wellbeing. *Play Streets* (Umstattd Meyer et al, 2021) was found to improve connections and interactions between parents and children.

Only one study referred specifically to a reduction in inequalities because of the alternative use of space interventions. *Parks for People* (Eadson et al, 2021) increased the diversity of park users, thus bringing the benefits of physical activity and access to green space, to a wider group of people. This was achieved through physical improvements to parks (e.g. new paths and entrances, new facilities) and a broader range of activities taking place in parks.

However, there were also a small number of negative community wellbeing outcomes associated with alternative use of space interventions, such as adversely changing the appearance of places, fuelling division between established and newer residents, and discouraging people from venturing to new places. Some residents felt *Incredible Edible Todmorden* (Morley et al, 2017) had adversely affected the appearance of the town. Also, in *Incredible Edible Todmorden* (Morley et al, 2017), there were some divisions between longer-term and newer residents. Finally, there was a concern that *Play Streets* (Stenning 2020) had limited some young people by paradoxically making their own neighbourhoods so attractive that they did not want to go elsewhere to play or socialise.

### Individual wellbeing

Alternative use of space interventions also produced a range of individual wellbeing outcomes, which were achieved both by informal participation/attendance and more formal activities (e.g. volunteer roles). New skills and knowledge was the most frequently cited (Alexander, 2021; Morley et al, 2017; Spilková, 2017; McClinchey, 2021; 2017; Tischler, 2018). This included skills and knowledge about food, cooking and healthy eating (Alexander, 2021; Morley et al, 2017; Spilková, 2017), different cultures (McClinchey, 2021; 2017), and mental health (Tischler, 2018). Skills and knowledge were most frequently gained by people attending or taking part in activities but were also learnt through volunteer roles as part of intervention. For example, in *The Big Lunch* (Terry et al, 2021), residents benefitted from volunteering, community leadership and collaborative working. In *Incredible Edible Todmorden* (Morley et al, 2017) children were thought to learn the most during the intervention.

Improvement in physical activity levels was also a common individual wellbeing outcome. *Play Streets* (Adhikhari et al, 2021; Umstattd Meyer et al, 2021), *Fisher Avenue Road Closure* (Kingham et al, 2020), *Parks for People* (Eadson et al, 2021), *Incredible Edible Todmorden* (Morley et al, 2017), and *Pop-Up Parks* (Winter et al, 2020) all were associated with improvements in physical activity

among residents/users. Again, this outcome was achieved from both attending interventions/activities and through volunteer roles.

Improvements in mental wellbeing and mental health were regularly reported outcomes from alternative use of space interventions, including *Community gardens in Prague* (Spilková, 2017), *Parks for people* (Eadson et al, 2021), *Incredible Edible Todmorden* (Morley et al, 2017), and *Play Streets* (Umstatted Meyer et al, 2021). Improved in mental health and wellbeing appeared to happen in different ways. Just participating could be relaxing and fun. Connecting with people provided emotional support (Umstatted Meyer et al, 2021). Volunteer roles gave a sense of purpose and a role within the community (Terry et al, 2021; Eadson et al, 2021).

One intervention – *Place & Space NI* (S3 Solutions, 2018) – supported individual empowerment by providing opportunities for residents to take on community leadership roles in project development and collaboration with stakeholders.

There were some reported improvements to fun/enjoyment through alternative use of space interventions, including *The Abattoir/ Cultureghem* (Alexander, 2021), *Street Reallocation in Oslo* (Hagen & Tennøy, 2021), and *Pop-Up Parks* (Winter et al, 2020).

*“I have seen Barratoir meals transform many people in positive ways—the volunteers who arrive grumpy but end up humming reggae and chiding each other in good fun, the guests who arrive from nearby offices looking flustered who sit down and visibly show signs of taking a load off from their desks” (Alexander, 2021, study authors).*

However, there was a general theme that individual wellbeing benefits may not be equally spread among residents/community members. For example, some residents in *Incredible Edible Todmorden* (Morley et al, 2017) felt that participating was not for them, while others did not have all their concerns addressed (e.g. about pollution affecting commonly grown food). As above, the learning benefits of *Incredible Edible Todmorden* (Morley et al, 2017) were experienced most by children. *Play Streets* were most beneficial for those who were already most lonely, although barriers to participation may be highest for these children (Stenning, 2020).

There were two examples of an intervention having no/little stated effect on individual wellbeing. *Street Change in Oslo* (Hagen & Tennøy, 2021), which involved the removal of approximately 760 on-street parking spaces, the reuse of the spaces for other things (e.g. planting), and a new driving patten in Oslo, Norway, saw little change in travel behaviour – from car to more sustainable modes – or what people did in the city centre because of the intervention. Similarly, while *Light Box Exhibitions* (Tischler, 2018) that showcased the work of artists with lived experience of mental health challenges in London, England, was associated with supporting cohesion between people with and without mental health challenges, a significant minority (11%) of attendees said the experience did not make them think about, and have new feelings towards, mental health.

Inconvenience of not being able to drive down the road as part of a journey was a negative outcome of the *Fisher Avenue Road Closure* (Kingham et al, 2020), although a majority of residents felt this was a worthwhile sacrifice.

#### Other outcomes

The environmental impact of alternative use of space interventions was reported in two studies. *The Abattoir/Cultureghem* (Alexander, 2021) was successful at reducing food waste from the marketplace and promoting environmental sustainability. Conversely, Adhikhari et al (2021) reported issues with the amount of food waste produced by a *Play Streets* programme in a low-



income neighbourhood in Columbus, Ohio. They question the rigidity of the free meals programme, given that a lot of it was wasted.

Alternative use of space interventions were reported to have had some impacts with stakeholders other than residents/community members. Increased organisational collaboration and organisation capacity (for evaluation, governance, readiness for funding application) was seen in *Place & Space NI* (S3 Solutions, 2018). *The Big Lunch* (Terry et al, 2021) provided opportunities to spread broader public health messages (e.g. smoking cessation). There was a ‘spill-over’ effect observed in *Incredible Edible Todmorden* (Morley et al, 2017) and *Pop-up Parks* (Winter et al, 2020) were the ideas and ethos of an intervention were taken on by other stakeholders (e.g. local authorities).

#### **Comparison with original review findings**

- There are more alternative use of space interventions in the update – 11 in 2018, 23 in 2022.
- Social relations outcomes are similar. Both reviews report improvements to social connections, interaction, cohesion, and social capital. Both interventions also report some evidence of exclusionary practices.
- Community wellbeing outcomes are similar. Both reviews show improved sense of safety, built environment quality, economic benefits, sense of pride, identity, and community, and increased civic activity. The update provides more evidence of improved social determinants of health and empowerment. The update also highlights potential negative community wellbeing outcomes.
- Individual empowerment outcomes are similar. Both provide evidence of increased physical activity, hedonic wellbeing, and skills/knowledge. The update provides additional evidence about mental health and wellbeing benefits and empowerment. The update also provides evidence of some adverse and neutral outcomes.
- The update shows mixed evidence of the environmental benefit, and evidence of the positive organisational outcomes, of interventions – neither of which are raised in the original review.

#### ***Case study: Pop-up Resource Village (McCunn et al, 2020)***

*Pop-up Resource Village* was a series of organised events to bring together the people, businesses, and cultural aspects of a neighbourhood in West Oakland, CA. It was organised by a third sector organisation called Designing Justice + Designing Spaces and had vendor stations, educational opportunities (e.g. cooking demonstrations, mobile classroom), live music, and local businesses pop up shops. The “village” was centred outside a local co-op grocery store and spread along the main street.

*Figure 6 Alternative use of space case study, Pop-up Resource Village (McCunn et al, 2020)*

#### **Evidence statements: Alternative use of space**

Evidence statements relate to the entire updated body of evidence, as it would be potentially misleading to prepare evidence statements based only on the 5 year refresh. Statements in bold represent the strongest evidence.

There is moderate to strong evidence from 18 studies (1GQ (qualitative), 7MQ (2 qualitative, 5 quantitative), 10 LQ (4 qualitative, 6 quantitative)) that alternative use of spaces can have positive impacts on social relations.

- Moderate evidence on social interaction (2MQ, 9LQ)
- Moderate to strong evidence on social cohesion (1GQ, 1MQ, 6LQ)

- Moderate to strong evidence on social capital (1GQ, 1MQ, 3LQ)

**There is strong evidence from 28 studies (2GQ qualitative, 12MQ (5 qualitative, 7 quantitative), 14LQ (4 qualitative, 10 quantitative)) that alternative use of spaces can have positive impacts on community wellbeing.**

- Moderate evidence on sense of community and identity (2MQ, 5LQ)
- Moderate evidence on sense of belonging and pride (6MQ, 10LQ)
- Moderate to strong evidence on civic participation (1GQ, 1MQ, 3LQ)
- Moderate evidence on social determinants of health (6MQ, 5LQ)
- Moderate to strong evidence on reduced crime or fear of crime (1GQ, 2MQ, 4LQ)

There is moderate to strong evidence from 19 studies (1GQ qualitative, 4MQ (1 qualitative, 3 quantitative), 14LQ (4 qualitative, 10 quantitative)) that alternative use of spaces can have positive impacts on individual wellbeing.

- Moderate to strong evidence of impact on physical activity (1GQ, 2MQ, 6LQ)
- Moderate evidence of impact on skills & knowledge (2MQ, 6LQ)
- Moderate to strong evidence of impact on mental wellbeing (1GQ, 2MQ, 1LQ)
- Low to moderate evidence of impact on hedonic wellbeing (1MQ, 5LQ)
- Moderate evidence of negative or unequal impacts (3MQ, 1LQ)

### *Urban regeneration*

Defined as the process of improving derelict or dilapidated districts of a city, typically through redevelopment (Oxford English Dictionary, 2018).

Eight interventions were coded as urban regeneration. These were *Open Doors Pilot Programme* (MHCLG, 2020), a M,GQ MME, *Connswater Community Greenway* (Hunter et al, 2021), a GQ natural experiment, *Muri Liberi and Or.Me* (Tartari et al, 2022), a LQ qualitative study, *Natural Outdoor Environment* (Tiguero-Mas et al, 2021), a MQ qualitative study, *Acton Gardens Regeneration* (Bacon et al, 2021), a L,MQ MME, *Aylesbury Estate Regeneration* (Social Life, 2022), a L,MQ MME, *Cherry Hill Community Gardens* (Brace et al, 2017), a MQ process evaluation, and *Clean & Green* (Heinze et al, 2018), a GQ observational study.

### Social relations

There were only minimal evidence of social relations developing via urban regeneration. *Or.Me* (Tartari et al, 2022), a collaborative street art project in Milan, Italy, was found to successfully build social cohesion around an agenda of social events connected to each co-created public artwork. In both *Aylesbury Estate Regeneration* (Social Life, 2022), which involved the demolition and rebuilding of approximately 3,500 homes and other infrastructure in south London, England, and *Acton Gardens Regeneration Programme* (Bacon et al, 2021) social relationships were also developed between residents.

*“Yes, there’s lots of different people here. We meet outside our building, in the stairway and talk and have tea” (Social Life, 2022, participant)*

However, these positive outcomes appeared to be outweighed by more negative outcomes for social relations. *Connswater Community Greenway* (Hunter et al, 2021), *Aylesbury Estate Regeneration* (Social Life, 2022), *Acton Gardens Regeneration Programme* (Bacon et al, 2021), and *NoLo* (Tartari et al, 2022) all damaged social ties and cohesion within communities. In most

interventions, there appeared to be dual issues of existing social ties between long-term residents being weakened at the same time as divisions emerging between longer-term and newer residents.

*“There are issues with social cohesion...and there are concerns that some new residents from higher income backgrounds are not integrating [...] A tightly knit community of people from different backgrounds was built over many years and there is a feeling that this is unravelling and the sense of community is being lost.” (Social Life, 2022, p.47, study authors)*

The full or partial closure of well-established community spaces where people could interact was a reoccurring reason for this (Social Life, 2022; Bacon et al, 2021; Tartari et al, 2022). Other reasons were increasing disrepair of neighbourhoods, population churn, and the replacement of longer standing residents that were part of stable social networks with more vulnerable people on temporary tenancies (Social Life, 2022).

### Community wellbeing

Urban regeneration interventions had mixed impacts on community wellbeing. Sense of belonging remained high in *Aylesbury Estate Regeneration* (Social Life, 2022) and *Or.Me* (Tartari et al, 2022), although in the case of the *Aylesbury Estate Regeneration* this may be a legacy effect from prior to the intervention. In *Or.Me* (Tartari et al, 2022) this was attributed to the street art and associated events reflecting local identity and culture.

Outcomes related to crime and feelings of safety were mixed. Improvements were found in *Clean & Green* (Heinze et al, 2018) and *Connswater Community Greenway* (Hunter et al, 2021). In both, this was attributed to the spaces being used more. Other supporting factors were the installation of 24 hour-a-day lighting and CCTV in *Connswater*. However, in *Acton Gardens* (Bacon et al, 2021), although crime was less of an issue, more residents reported feeling unsafe. This was attributed to the disruption caused by the regeneration work.

Two interventions improved civic activity among residents. In *Acton Gardens* (Bacon et al, 2021) residents were becoming more active in organising their own activities and initiatives, including Facebook and mutual aid groups. In *Or.Me* (Tartari et al, 2022), many residents continued to be involved in community initiatives after the intervention had finished.

Urban regeneration initiatives had some impact on social determinants of health and wellbeing, although these were not entirely positive. A reoccurring positive impact of urban regeneration was to the quality of the built environment (Bacon et al, 2021; Hunter et al, 2021; Tartari et al, 2022). However, in *NoLo* (Tartari et al, 2022) it was generally only newer residents who appreciated the new street art. Access to healthy food was improved in *Cherry Hill Community Garden* (Brace et al, 2017), a community garden established in a small, urban neighbourhood in the southern region of Baltimore, Maryland, and that has led to the creation of four more community gardens in the area via the People Garden Grant.

The impact of urban regeneration on existing local assets was generally negative. In *Aylesbury Estate Regeneration* (Social Life, 2022), while the provision of services and facilities remained a strength of the estate, the physical infrastructure was dilapidated and had not been improved. In *Acton Gardens* (Bacon et al, 2021), there were concerns among all parts of the community about growing pressure on existing facilities due to the population increasing. Housing quality had not improved in *Aylesbury Estate Regeneration* (Social Life, 2022) and was not supporting the wellbeing of residents. Moreover, residents continued to report feeling powerless (Social Life, 2022). In both *Aylesbury Estate Regeneration* (Social Life, 2022) and *NoLo* (Tartari et al, 2022) there was a very clear disparity

between newer and more established residents about the interventions taking place. Newer residents generally viewed changes more favourably, whereas established residents were more likely to hold more negative views.

### Individual wellbeing

Individual wellbeing outcomes were mixed for urban regeneration interventions. One positive outcome was that many residents in *Or.Me* (Tartari et al, 2022), a co-produced public art intervention in Milan, Italy, became more interested in new local artistic events. Some residents were also benefitting economically from renting their homes to tourists recently attracted to the area (Tartari et al, 2022). *Cherry Hill Community Gardens* (Brace et al, 2017) had multiple opportunities for community members to learn new skills, including school children, local young people, and other residents.

In terms of negative individual wellbeing outcomes, there was a decrease in residents' quality of life (measured via the EQ5D tool) and no change observed in their mental wellbeing (measured via the WEMWBS tool) in *Connswater Community Greenway* (Hunter et al, 2021). In *Aylesbury Estate Regeneration* (Social Life, 2022), individual mental wellbeing was very often adversely affected by homes in poor condition, a lack of support networks, and uncertainty about the permanence of housing. Moreover, sense of control and empowerment decreased in *Acton Gardens* (Bacon et al, 2021) and *Aylesbury Estate Regeneration* (Social Life, 2022); there were declines in the number of people that thought they could influence what happened in the neighbourhood.

At a system level, only *Clean & Green* (Heinze et al, 2018) showed any potential cost savings for the local authority. It was reported that participants provided ~\$5.5million worth of mowing and rubbish collecting work that would have had to be paid by the local authority, if at all.

### **Comparison with original review findings**

- Social relations outcomes are similar. Both reviews found improvements to social connections and cohesions. Both also found issues around exclusion and gentrification. However, the update finds more negative outcomes.
- Community wellbeing outcomes are somewhat different. Both reviews found improved crime and feelings of safety, and the quality of built environment improved. However, the update presents a much more mixed picture, whereas the original provides more positive outcomes.
- Individual wellbeing outcomes are also somewhat different. Both reviews found evidence of increased skills and knowledge. However, the original found more positive outcomes, whereas the presents more mixed results.
- Some economic benefit to local authorities were found in the update. Evidence in the update generally suggests newer residents are more likely to benefit, while more established residents are more likely to be negatively affected.

### **Case study: Open Doors Pilot Programme (MHCLG, 2020)**

The *Open Doors Pilot Programme* intended to help bring properties in high streets and town centres that would otherwise remain vacant into 'meanwhile use' for up to twelve months. The programme was managed by the Meanwhile Foundation working with landlords and community groups. Community groups could use vacant property rent-free and also draw down up to £25,000 for regeneration.

Figure 7 Urban regeneration case study, *Open Doors Pilot Programme (MHCLG, 2020)*

### **Evidence statements: Urban regeneration**

Evidence statements relate to the entire updated body of evidence, as it would be potentially misleading to prepare evidence statements based only on the 5 year refresh. Statements in bold represent the strongest evidence.

There is moderate evidence from 11 studies (1GQ quantitative, 3MQ (1 qualitative, 2 quantitative), 7LQ (1 qualitative, 6 quantitative)) that urban regeneration has a mixed impact on social relations.

- Mixed impacts on neighbourhood social capital (Moderate to weak evidence of positive impacts (1MQ, 1LQ), moderate evidence of negative impacts (1GQ, 4LQ))
- Moderate evidence of a positive impact on social interactions (1MQ, 7LQ)

**There is strong evidence from 14 studies (2GQ quantitative, 4MQ (1 qualitative, 3 quantitative), 7LQ (2 qualitative, 5 quantitative)) that urban regeneration has mixed impacts on community wellbeing.**

- There is weak evidence of a mixed impact on sense of belonging and pride (6 LQ studies – 2 negative, 4 positive)
- Weak evidence of a positive impact on civic participation (4LQ)
- Mixed evidence of impact on crime or fear of crime (**strong evidence of positive impact (2GQ, 1 LQ)**, weak evidence of a negative impact (3LQ))
- Mixed evidence of a mixed impact on social determinants of health (Moderate to strong evidence of a positive impact (1GQ, 1MQ, 1LQ); Weak evidence of a negative impact (2LQ))
- Moderate evidence of negative impacts (1MQ, 3LQ)

There is moderate to strong evidence from 11 studies (1GQ quantitative, 4MQ (1 qualitative, 3 quantitative), 6LQ (1 qualitative, 5 quantitative)) of a range of impacts of urban regeneration on individual wellbeing.

- Moderate evidence of a positive impact on skills & knowledge (2MQ, 5LQ)
- Mixed impact on mental wellbeing (Moderate evidence of a negative impact (1GQ, 1 LQ), moderate to weak evidence of a positive impact (1MQ))
- Weak evidence of a positive impact on physical activity (3LQ)
- Weak evidence of a positive impact on mental health (2LQ)
- Moderate evidence of a negative impact on empowerment (2MQ)

### Community development

Community development is defined as ‘a long-term value based process which aims to address imbalances in power and bring about change founded on social justice, equality and inclusion’ (Federation for Community Development Learning, 2009).

Six interventions were coded as community development. These were *Community reclamation of space after Grenfell* (Waine & Chapman, 2022), a MQ qualitative study, *Phat Beets* (Alkon & Cadji, 2020), a MQ qualitative study, *Rohingya Little Local* (Bestman et al, 2020), a GQ qualitative study, *Derwenthorpe* (Quilgars et al, 2019), a MQ qualitative study, *Space & Place NI* (S3 Solutions, 2018), a LQ MME, and *Parks for People* (Eadson et al, 2021), a LQ MME.

### Social relations

There was some evidence of community development interventions producing positive social relations outcomes and reducing social isolation. Community development interventions were often sites for people to come together, such as *Place & Space NI* (S3 Solutions, 2018) and *Rohingya Little Local* (Bestman et al, 2020). Networks were supported informally through people attending events/interventions but also formally through organised activities like volunteering.

*"volunteering sessions offer opportunities for people to get together and make connections. Volunteers aren't necessarily in touch with health or social services, but getting involved can make a big difference to their quality of life" (Eadson et al, 2021:22, study authors)*

There was some evidence of social cohesion being supported through community development interventions. This included bringing together people of different ages, beliefs and ethnicities (S3 Solutions, 2018), people with and without disabilities (Eadson et al, 2021), established and newer residents (Eadson et al, 2021), and residents with different housing tenure types (Quilgars et al, 2019). Cohesion was supported in *Parks for People* (Eadson et al, 2021) by improvements to the paths, entrances and park facilities that made parks more accessible to more people. Similarly, cohesion was supported in *Place and Space NI* (S3 Solutions, 2018) and *Derwenthorpe* (Quilgars et al, 2019) by multi-purpose facilities and green spaces, respectively, that a range of community members could use.

However, feeling well connected was not always universal. In *Derwenthorpe* (Quilgars et al, 2019) some residents remained less well connected than others. This was associated with location within the housing estate – those in phase 1 had more social relationships – but also with housing tenure – owner-occupiers had more relationships than renters (Quilgars et al, 2019)

There was no evidence specifically about community development interventions and social capital outcomes.

### Community wellbeing

Community development interventions produced a range of community wellbeing outcomes. One of the most frequently occurring community wellbeing outcomes was increased community empowerment. *Rohingya Little Local* (Bestman et al, 2020), in which the Burmese Rohingya community in Canterbury, Australia, controlled AU\$10,000 to for work to address local health priorities, enabled community empowerment and collective control over funding decisions relating to their health and wellbeing. In *Parks for People* (Eadson et al, 2021) local residents in the mostly deprived surrounding areas became more aware that they also deserve good quality green space, while some park users felt more included in decision making. Also, local action as part of *Community*

*Reclamation after Grenfell* (Waine & Chapman, 2022), in which residents reclaimed vacant spaces, was seen as an expression of collective voice and empowerment (Waine & Chapman, 2022).

*"...the grassroots response was informed by a history of activism and a collective sense of having long been ignored and failed. They gave a sense of how the use of local spaces folded into an activist reclamation of places and amenities that was, as described above, pivotal to developing awareness of shared interests and empowerment. " (Waine & Chapman, 2022, study authors)*

Related to empowerment, the provision of communal spaces in *Derwenthorpe* (Quilgars et al, 2019), such as pedestrian and cycling routes and leisure spaces (e.g. play parks) enabled residents to feel a sense of ownership over the whole development.

Community development interventions sometimes supported a sense of belonging and community. This included *Derwenthorpe* (Quilgars et al, 2019), *Parks for People* (Eadson et al, 2021), and *Community Reclamation after Grenfell* (Waine & Chapman, 2022). Relatedly, the communities' reclamation of unused local space following the Grenfell fire saw a new sense of identity emerge around and through these shared activities and spaces (Wain & Chapman, 2022)

A reduced fear of crime and anti-social behaviour was found in *Place & Space NI* (S3 Solutions, 2018).

*Parks for People* (Eadson et al, 2021) was found to have increased civic activity. Community action was directly empowered through programme grants. Also, even where there were existing community groups and activities, *Parks for People* projects acted as a catalyst and focal point for further action (Eadson et al, 2021). *Parks for People* (Eadson et al, 2021) was also found to have reduced health inequalities by opening up access, increasing park users, and enabling a broader range of communities members to access the benefits of physical activity.

There were instances of community development interventions supporting wider social determinants of health. *Derwenthorpe* (Quilgars et al, 2019) improved housing quality and was a visually attractive area. *Place & Space NI* (S3 Solutions, 2018) increased community members' connectivity with nature. *Parks for People* (Eadson et al, 2021) was found to have economic benefits in terms of providing space for local businesses (e.g. café, physical activity classes), employment opportunities for residents, and a greater range of amenities for residents.

However, a negative community outcome associated with community development was to do with gentrification. Specifically, in *Phat Beets* (Alkon & Cadji , 2020), there was a concern that, while the intervention was intended to support historic (Afro-Caribbean) residents, it was very often the newer (white) residents attending the farmers market and benefiting from rising house prices.

### Individual wellbeing

There were a small number of individual wellbeing outcomes from community development interventions. Both *Parks for People* (Eadson et al, 2021) and *Derwenthorpe* (Quilgars et al, 2019) were found to have increased community members' physical activity. This was done through providing accessible spaces for people to be active.

*Parks for People* (Eadson et al, 2021) was found to have improved individual mental health and wellbeing. This included for volunteers and project workers delivering activities but also residents able to enjoy relaxing and being in a nice green space. Moreover, patients of a local GP were being 'referred' for walks around the park to improve their physical and mental wellbeing.

*Place & Space NI* (S3 Solutions, 2018) was found to have improved individual empowerment by providing opportunities to take on community leadership roles during project development and collaboration with other agencies.

#### Other outcomes

There were some system level outcomes. Both *Phat Beets* (Alkon & Cadji, 2020) and *Place & Space NI* (S3 Solutions, 2018) resulted in more inter-agency collaboration, particularly among community sector organisations. Relatedly, *Rohingya Little Local* (Bestman et al, 2020), *Parks for People* (Eadson et al, 2021), and *Place & Space NI* (S3 Solutions, 2018) all improved capacity within delivery organisations, including impact measurement skills, organisation and governance, and readiness for future funding application.

#### **Comparison with original review findings**

- Social relations outcomes are similar. Both reviews found evidence of improvements to social interactions, isolation, and cohesion. However, update does not find any evidence of social capital, which is in the original.
- Community wellbeing outcomes are similar. Both reviews found similar positive outcomes. However, the update found some evidence of negative effects (e.g. gentrification) that were not in the original.
- The update found evidence of positive organisational outcomes that were not in the original review.

#### ***Case study: Community Reclamation of Space after Grenfell (Waine & Chapman, 2022).***

*Community Reclamation of Space after Grenfell* is not a formal programme. Rather it is the grassroots community response to the fire at Grenfell Tower that involved taking over and using local buildings and open spaces to help the community in the immediate aftermath of the fire and then later for community use (it is a form of ‘meanwhile use’ in the absence of a more coordinated response by relevant authorities). Activities included memorials, murals, sports facilities, music rooms, community cafes, creches, food banks, and collective eating and fast-breaking.

*Figure 8 Community development case study, Community Reclamation of Space after Grenfell (Waine & Chapman, 2022)*

#### **Evidence statements: Community development**

Evidence statements relate to the entire updated body of evidence, as it would be potentially misleading to prepare evidence statements based only on the 5 year refresh. Statements in bold represent the strongest evidence.

**There is strong evidence from 8 studies (2GQ qualitative, 1MQ quantitative, 5LQ (1 qualitative, 4 quantitative)) that community development interventions have a positive impact on social relations.**

- **Strong evidence of a positive impact on social interactions (2GQ, 3LQ)**
- Moderate to strong evidence of a positive impact on social cohesion (1GQ, 1MQ, 4LQ)
- Moderate to strong evidence of a positive impact on social capital (1GQ, 2LQ)



**There is strong evidence from 12 studies (3GQ, qualitative 1MQ qualitative, 8LQ (2 qualitative, 6 quantitative)) that community development interventions have a positive impact on community wellbeing.**

- Moderate to strong evidence of a positive impact on community empowerment (1GQ, 3LQ)
- Moderate to strong evidence of a positive impact on sense of belonging, pride or community identity (1GQ, 6LQ)
- Moderate to strong evidence of a positive impact on social determinants of health (1GQ, 5LQ)
- Weak evidence of a negative impact via gentrification (1MQ)

There is moderate to strong evidence from 6 studies (1GQ qualitative, 1MQ quantitative, 4LQ (1 qualitative, 3 quantitative)) that community development interventions have a positive impact on individual wellbeing.

- Moderate to strong evidence of a positive impact on physical activity (1GQ, 1MQ, 2LQ)
- Weak evidence of a positive impact on mental wellbeing (3LQ)
- Moderate evidence of a positive impact on knowledge and skills (1GQ, 1LQ)
- Weak evidence of a positive impact on empowerment (1LQ)

Is there an association between setting and: type of intervention, population, outcomes measured and direction and size of effect?

As with the original review, due to the heterogeneity within intervention categories in relation to specific settings, study designs, populations and outcomes measured, it is not possible to determine whether there is any association between setting and type of intervention, population, outcomes measured and effect size.

Comparison with original review

- In both 2018 and now, it is not possible to make associations between setting and type of interventions, population, outcomes measured and direction and size of effect due to the heterogeneity of the studies.

Are there differences in effectiveness across population groups, particularly those at risk of health inequalities? (for example, people from different socio-economic backgrounds, ethnicity, age or gender)?

Twelve studies were labelled to have reported outcomes specifically about health inequalities. These were *Parks for People* (Eadson et al, 2021), *Connswater Community Trust* (Hunter et al, 2021), *Street Reallocation in Oslo* (Hagen & Tennøy, 2021), *INHERIT* (Bell et al, 2019), *Community reclamation of space after Grenfell* (Waine & Chapman, 2022), *Play Streets* (Stenning, 2020), *Active Neighbourhoods* (Active Neighbourhoods, 2020), *Play Streets* (Umstattd Meyer et al, 2021), *Natural Outdoor Environments* (Triguero-Mas et al, 2021), *The Big Lunch* (Terry et al, 2021), *Cherry Hill Community Garden* (Brace et al, 2017), and *Fjuzn Multicultural Festival* (Rapošová, 2019).

These twelve studies spanned seven (out of eight) intervention categories. Alternative use of space (n=5) and green and blue space (n=5) were the most populous, followed by urban regeneration (n=3), events, community development, and neighbourhood design (n=2), and community hubs (n=1). No placemaking interventions were labelled as reporting outcomes specifically about health inequalities.

Beyond those thought to be explicitly about health inequalities, others included populations that may be considered at risk of health and wellbeing inequalities included ethnically diverse communities (n=18), economically disadvantaged people/communities (n=10), people with disabilities/chronic illness (n=14), unemployed people (n=3), refugees & asylum seekers (n=6), and older people (n=27) (see Figure 6).

### *Social relations*

Improvements in social relations were a frequent outcome in the interventions specifically about health inequalities. This included opportunities for vulnerable families to come together in *Active Neighbourhoods* (Active Neighbourhoods, 2020), people with intellectual disabilities, people with mental health challenges, and migrants and asylum seekers feeling more included in *Parks for People* (Eadson et al, 2021), and *Big Lunch* events (Terry et al, 2021) being a deliberate tool to overcome local divisions and lack of cohesion. However, an observed challenge to social relations in *Fjuzn Multicultural Festival* (Rapošová, 2019) was the events focus on “new minorities” creating boundaries with the existing community.

### *Community wellbeing*

Interventions tagged as specifically about health inequalities had positive community wellbeing outcomes.

Improvements in community empowerment were observed in *Community reclamation of space after Grenfell* (Waine & Chapman, 2022). Following the fire, the community developed a new critical awareness of its conditions and mobilised in response to perceived social cleansing and gentrification (Waine & Chapman, 2022).

Another community wellbeing outcome was improved perceptions of safety. *Play Streets* (Stenning, 2020) helped create a safe space that local children wanted to play/be in. One respondent discussed the intervention helping their teenage son overcoming struggles with anxiety about going out (Stenning, 2020).

However, gentrification was an adverse community wellbeing outcome. In *Natural Outdoor Environments* (Triguero-Mas et al, 2021), the therapeutic potential of the recent and ongoing re-naturalizing projects was lost to some underprivileged residents that were pushed out of neighbourhoods by higher rental and property prices.

### *Individual wellbeing*

Positive individual wellbeing outcomes were observed in interventions about health inequalities.

Improved facilities in *Parks for People* (Eadson et al, 2021) increased the diversity of park users, bringing the physical benefits to a wider range of people. This specifically included families with young children and people with mobility issues or disabilities (Eadson et al, 2021). Similarly, *Cherry Hill Community Garden* (Brace et al, 2017) included spaces specifically designed for people with limited mobility and disabilities to participate in gardening, increasing access to physical activity and the benefits of being in nature. *Active Neighbourhoods* (Active Neighbourhoods, 2020) encouraged increased physical activity particularly among children.

### Comparison with original review

The refresh has included more studies specifically about health inequalities in the refresh (n=12) compared to the original (n=5), although both also included many more studies in communities/with populations at risk of experiencing health inequalities.

#### *Social relations*

The original review found some evidence of improvements in social relations but also some evidence that interventions reinforced marginalisation and that positive outcomes were not always evenly distributed among community members.

The refresh also found benefits to social relations for populations at risk of health inequalities from across intervention types. The refresh also found evidence of interventions increasing division between 'targeted' recipients of interventions and broader communities.

#### *Community wellbeing*

The original review found some evidence of broad community benefits from interventions for people at risk of health inequalities, including creating opportunities for marginalised people to be more involved in their communities.

The refresh also found broad community wellbeing benefits. Improvements in community empowerment and feelings of safety were found in the refresh but not the original review. However, negative issues around gentrification were more prominent in the refresh, such as community members being pushed out of neighbourhoods by rising prices, thus missing out on the benefits of interventions.

#### *Individual wellbeing*

The original and refresh reviews both found evidence of individual wellbeing outcomes being more equitably spread among populations. The original found access to green space for under-represented groups improved, while the refresh found evidence of increased diversity of users (e.g. in parks)

Are there differences in effectiveness across interventions that aim to mix population groups, are open to a mix of population groups, or are targeted towards specific population groups? Eighteen interventions were coded as having the aim of deliberately mixing of social groups. These were: *The Grange* (Jackson and Ronzi, 2021), *New Beginning Festival* (Hassanli et al, 2021), *Fjuzn Multicultural Festival* (Rapošová, 2019), *Street Party* (Stevenson, 2019), *Indy Man* (de Jong & Steadman, 2021), *Multicultural festivals in Canada* (McClinchey et al, 2021; 2017), *The Big Lunch* (Terry et al, 2021), *Derwenthorpe* (Quilgars et al, 2019), *Play Streets* (Adhikhari et al, 2021), *The Abattoir/Cultureghem* (Alexander, 2021), *Play Streets* (Stenning, 2020), *Christmas lunch* (Collins et al, 2017), *CITE at the Bentway* (Glover et al, 2021), *The Frankfurt Mainkai Riverfront Closure* (Pandit et al, 2021), *Acton Gardens Regeneration Programme* (Bacon et al, 2021), *Campus-community garden* (Jakubec et al, 2021), *The Green Prosperity Project* (Ramsden, 2021), and *Parks for People* (Eadson et al, 2021).

These eighteen interventions covered all eight intervention categories, the most populous being alternative use of space (n=11) followed by events (n=8), green and blue space (n=4), neighbourhood design and placemaking (n=3), community hubs (n=2), community development (n=2), and urban regeneration (n=1).

#### *Social relations*

Interventions coded as having a deliberate aim of deliberately mixing social groups repeatedly had positive social relations outcomes.

The *New Beginning Festival* (Hassanli et al, 2021) provided opportunities for attendees from multiple cultures to bond and bridge social ties through sharing experiences. During the *Fjuzn Multicultural Festival* (Rapošová, 2019) relationships within social groups were solidified while new relationships were formed. *Street party* (Stevenson, 2019) enabled people to perform neighbourly friendliness, disrupt mundane social relations, and engage diverse communities. Bonding capital was increased within ethnic community group members and opportunities to bridge with other ethnic groups occurred during *Multicultural Cultural Festivals in Canada* (McClinchey et al, 2021; 2017). Two examples of *Play streets* (Stenning 2020; Adhikhari et al, 2021) increased neighbourhood social contact among residents of all ages. Ongoing contact and development of supportive social networks were reported from *Christmas lunch* (Collins et al, 2017).

### *Community wellbeing*

A range of community wellbeing outcomes were observed in interventions coded as having a deliberate aim of mixing social groups.

*The Big Lunch* (Terry et al, 2021) helped to create and sustain a sense of thriving communities, increasing civic activity by harnessing the energy, passion, and skills of individuals who want to improve their communities. Similarly, *The Abattoir/Cultureghem* (Alexander, 2021) utilised the skills and energy of staff and volunteers to recirculate and redistribute food in a way that was enjoyable and therapeutic to those involved. *Derwenthorpe* (Quilgars et al, 2019) resulted in a socially sustainable community, high-quality and aesthetically pleasing housing and neighbourhoods, and a new enthusiastic community. *The Frankfurt Mainkai Riverfront Closure* (Pandit et al, 2021) created a safer and healthier urban environment that attracted different user-groups to become more physically active and socially engaged. Also, *CITE at the Bentway* (Glover et al, 2021) created a greater sense of belonging among those who used the public space.

However, negative community wellbeing outcomes include neighbourliness coming under strain (Bacon et al, 2021), tensions between population groups (Bacon et al, 2021), and the marginalisation of some community members (Ramsden, 2021).

### *Individual wellbeing*

A range of individual wellbeing outcomes were observed in interventions coded as having a deliberate aim of mixing social groups. This included: increased physical activity in *Playstreets* (Adhikhari et al, 2021), *Parks for People* (Eadson et al, 2021), and *The Frankfurt Mainkai Riverfront Closure* (Pandit et al, 2021); hedonic wellbeing in *The Abattoir/Cultureghem* (Alexander, 2021); improved knowledge and skills in *Parks for People* (Eadson et al, 2021) and *Campus Community Garden* (Jakubec et al, 2021); and increased individual empowerment and ownership in *Derwenthorpe* (Quilgars et al, 2019).

### Comparison with original review

The refresh included more studies that include interventions deliberately mixing social groups (n=18) compared to the original (n=6).

#### *Social Relations*

The original review found more mixed results – some studies reporting improvements in social connections/social capital, but also negative impacts on existing networks.

The refresh found many more positive impacts of interventions deliberately mixing social groups, including increased bridging and bonding social capital and neighbourliness/neighbour social contact.

#### *Community wellbeing*

Both the original and refresh found positive and negative community wellbeing outcomes. Both found evidence of an increased sense of community. The original also found evidence of improved family wellbeing but a loss of culture/identity in one study.

The refresh found evidence of a greater range of positive outcomes, including improvements to housing, the look and feel of neighbourhoods, safer environments that attracted different populations, and sense of belonging. However, there was also evidence of neighbourliness coming under strain, tensions between populations, and marginalisation of some community members.

#### *Individual wellbeing*

A range of individual wellbeing outcomes were found in both the original review and refresh.

Both found evidence of improved individual empowerment, opportunities for leadership roles/responsibilities, and improved skills and knowledge. The refresh also found evidence of improvements to sense of enjoyment and increased physical activity.

The original found some evidence of a loss of cultural identity/language. This was not the case in the refresh.

### Impacts related to Covid-19 pandemic

There was only limited information about the outcomes of interventions being affected by the Covid-19 pandemic. Three studies reported on the impact of the pandemic on their outcomes, whilst several more reported on the restrictions that the pandemic had placed on their data collection methods.

*Parks for People* (Eadson et al, 2021) was thought to be good for the health and wellbeing of many people during “lockdown”, providing green spaces for exercise and relaxation. However, there were also negative aspects. Volunteer opportunities ceased, which meant people were unable to access their regular therapeutic activity. The closure of some facilities, such as playparks and public toilets, meant the spaces became problematic to use. Finally, some spaces became overcrowded – disrupting or marginalising regular users (Eadson et al, 2021).

Similarly, in the *Acton Gardens Estate Regeneration* (Bacon et al, 2021) residents and agencies were found to have come together to support the community during the pandemic, including many residents who had not previously been active in the community. The pandemic response highlighted the strength of collaborative working between different agencies in both *Acton Gardens Regeneration* (Bacon et al, 2021) and *Aylesbury Estate Regeneration* (Social Life, 2022). However, in *Aylesbury Estate Regeneration* (Social Life, 2022), the estate went into rapid decline during the first “lockdown” and it had not managed to bounce back. All the progress that had been made in terms

of social relations, living conditions, self-actualisation, were degraded since the lockdown began (Social Life et al, 2022).

Finally, communities involved in *The Big Lunch* (Terry et al, 2021) were quick to respond to need by providing virtual or socially distanced events. Many Big Lunch areas also supported other civic activity during the pandemic, such as WhatsApp groups between neighbours, collecting groceries, and picking up prescriptions.

Q2. What factors (positive and negative) affect the implementation or effectiveness of the interventions?

#### *Accessibility*

Interventions could be more or less accessible to residents/community members. Strategies to increase accessibility included making physical changes to facilities (e.g. widening paths, providing changing facilities), running activities to target specific residents (Eadson et al, 2021), delivering interventions in more central and /or prominent locations (Hassanli et al, 2021; Tischler, 2018), providing free or discounted tickets (Mair & Duffy, 2018), making all marketing material accessible and emphasising that everyone is welcome (Stenning, 2020).

#### *Comfortable, friendly, safe environment*

Feelings of safety within an intervention space were directly linked to the success of the intervention in one study (Abramovic et al, 2019). In this case, feelings of community connectedness amongst the Burmese refugees were directly linked to their feeling safe in these spaces. However, how a feeling of safety was established was not entirely clear. This can be linked to the provision of practical things, such as chairs and food, for participants, as appropriate, but also to recognising cultural sensitivities. In Parks for People (Eadson et al, 2021), providing informal as well as formal spaces, facilities and activities allowed residents to engage in ways that suited them (Eadson et al, 2021).

#### *Co-production*

Co-production was consistently thought to support the delivery of place and space interventions (Glover et al, 2021; Harris, et al, 2018; Morley et al, 2017; Winter et al, 2020; Eadson et al, 2021). This includes co-production during the planning of an intervention but also during the delivery. Co-production can occur between organisations and with community members themselves.

Involving residents/community members in the design and delivery of interventions was consistently approved of by all stakeholders. Involving residents/community members in the design of interventions is emphasised by both Eadson et al (2021) and Austin et al (2021). Conversely, a lack of adequate community consultation is flagged by Ward Thompson et al (2019) as an issue that may have led to low engagement with the interventions. A potential way of engaging local populations is to connect the intervention to local identity, culture, and priorities (Fiedler & Wickham, 2022). Allowing community members control of the delivery of an intervention was thought to boost positive outcomes (Abramovic et al, 2019).

Co-production and collaboration can be an effective way of allaying any fears, concerns, or misconceptions stakeholders may have about an intervention. For example, there were early fears about Incredible Edible Todmorden's provision of free food threatening local market traders and retailers (Morley et al, 2017) but these were allayed by strengthened relationships with IET over time.

However, co-production is not without challenges. Conflict and tension can arise between individuals (Stenning, 2020). Conflict and tension can also arise with other agendas (Castle et al, 2018). There can be challenges about how representative meaningful involvement is/has been (Quilgars et al, 2019). There can also be practical limitations on stakeholder involvement.

#### *Volunteers*

Volunteer roles were consistently reported to support positive outcomes both in terms of supporting the successful delivery of interventions and creating positive outcomes for volunteers themselves (Fiedler & Wickham, 2022; Mair & Duffy, 2018; Clements, 2018; Terry et al, 2021).

However, volunteering can place a strain on community members and concern about the sustainability of events relying on volunteers was highlighted (McClinchey 2021; 2017). Having a network of volunteers to draw on as necessary was a potential solution (Eadson et al, 2021; Collins et al, 2017).

#### *Skilled facilitators/ community assets*

Staff, volunteers and/or organisers have a key role in successful delivery. This includes having people with the necessary substantive skills, such as the cook with the community café in The Abattoir/Cultureghem (Alexander, 2021), cultural knowledge to meet the needs of the community, and personality to engage residents, volunteers, and other stakeholders (Morley et al, 2017). For example, a number of volunteers in Clunes Booktown Festival (Mair & Duffy, 2018) had worked in business and could draw on their professional networks to support the delivery of the festival.

*“The inspirational and charismatic personalities of the individuals who founded [Incredible Edible Todmorden] were understood to be pivotal in catalysing the initiative and motivating engagement” (Morley et al, 2017)*

However, there was a concern in The Green Prosperity Project (Ramsden, 2021) that staff did not have the necessary skills to support volunteers with more serious mental health challenges.

#### *Flexibility*

Being able to adapt to, very often, changing circumstances was thought to support delivery of place and space interventions. Community reclamation of unused local space following the Grenfell fire (Waine & Chapman, 2022) is an extreme example of how activities evolve over time in response to community need (Waine & Chapman, 2022). A suggested approach is to have a set of core principles/aims around which specific activities can come and go (Morley et al, 2017).

A flexible approach to volunteer management was thought to be positive because it allows community members to contribute in ways most appropriate for them (Castle, 2018). In the Abattoir/Cultureghem (Alexander, 2021), different groups of volunteers (and community members) were always showing up, demonstrating that sharing food and eating together can take place in haphazard groupings and still be meaningful.

#### *Focal point*

Providing a focal point or activity within place and space interventions that ‘hooks’ people in was consistently raised. Tailoring the ‘hook’ to different audiences was also found to be beneficial.

For example, Pokemon Go was used to draw young people and families to explore local beaches and woods as part of Active Neighbourhoods (Active Neighbourhoods, 2020). In Incredible Edible Todmorden (Morley et al, 2017), signs were placed around growing areas to serve as an initial point of contact to draw the community in and enable informal learning. Also, in Play Streets (Stenning,



2020), 'old fashioned' games were used to encourage older neighbours to join in and to promote intergenerational relations.

#### *Inclusion and exclusion*

Knowing how inclusive/exclusive an intervention should be was a repeated challenge. The Happiness Garden (Abramovic et al, 2019), New Beginnings Festival (Hassanli et al, 2021), and Fjuzn Multicultural Festival (Rapošová, 2019) all benefitted from having some aspect of exclusivity.

*"The garden participants place great importance on having access to a site dedicated solely to the Burmese refugee community, with this being the only place in Canberra specifically designated for this diverse ethnic group" (p.703) (Abramovic et al, 2019)*

Relatedly, an issue about potentially inappropriate participants emerged. For example, there was a stigma and fear around adults without children participating in Play Streets (Stenning, 2020).

#### *Consistency*

Many interventions were one-off events or held for a limited time. In these cases, there is an issue about appropriately ending an intervention (Tischler, 2018) and about legacy (Waine & Chapman, 2022).

There may be value in interventions being repeated or happening multiple times. For example, residents strongly agreed that a regularly set up Pop-Up Resource Village would benefit the neighbourhood (McCunn et al, 2020).

#### *Having clear expectations*

It is important to have clear expectations and a well-defined and agreed mission so that potential users understand what the intervention is about and so are suitably prepared. For example, the extensive positive media coverage of Incredible Edible Todmorden (Morley et al, 2017) led to pressure for the intervention to live up to its reputation.

It can also take time for interventions to be fully developed and/or for any subsequent benefits to materialise and this needs to be made clear.

#### *Connecting to a broader programme/agenda*

It may be that an intervention is only one part of a broader programme or that subsequent action is needed in addition to what is taking place to fully realise the benefits. For example

- Medlock River (de Bell et al, 2020) - users agreed that to ensure long-term social and environmental sustainability further restoration, including providing visitor amenities, would be needed.
- Advice from Incredible Edible Todmorden (Morley et al, 2017) was to start small, linking incremental change to a bigger vision.
- Street Reallocation in Oslo (Hagen & Tennøy, 2021) – the city centre had already been through multiple changes to discourage car use and encourage public transport/active travel.
- Play Street (Stenning, 2020) complemented other existing community activities such as Facebook and WhatsApp groups.

#### *Funding & resources*

While funding and resources were not always discussed, they were seen as both enabling and challenging factors for multiple interventions. An intervention requires appropriate resources and if these are not available the intervention will not happen (Terry et al, 2021). Resources include



money and (staff) time as well as consideration of possible opportunity costs (e.g. what could happen instead of an intervention and what might be lost by doing the intervention) (Winter et al, 2020).

Ongoing development or just maintenance of interventions are critical considerations to maintain long-lasting benefits. This requires sustainable funding, not just one-off grants (Eadson et al, 2021).

#### *Community context*

Successful interventions require an understanding of the context in which they take place so that the intervention aligns with the resources available and so that it can effectively support needs.

Context includes:

- Existing social infrastructure, such as allotments, parks, etc (Stenning, 2020).
- Local history of place and activism (Waine & Chapman, 2022).
- Existing power structures (Waine & Chapman, 2022).
- Community norms around volunteering and other community involvement (Mair & Duffy, 2018; Morley et al, 2017).
- The physical environment, including the proposed location of an intervention (Hassanli et al, 2021), accessibility (Eadson et al, 2021), other (competing) activities already taking place there (Stenning, 2020).
- Socio-economic conditions at the individual, meso, and macro level (Hunter et al, 2021).
- Weather – too hot or too cold is a potential deterrent or impediment (Abramovic et al, 2019).

Comparison with original review

Both the original review and refresh identify similar factors that affect the implementation of effectiveness of interventions. Factors identified in both span individual, organisational, and society/community levels.

The original review describes thirteen factors. These are condensed into eleven factors in the refresh and two additional factors are identified (see below) – *Connecting to broader programmes/agendas* and *Funding and resources*.

Original	Update
Accessibility	Accessibility
Comfortable, friendly, safe environment	Comfortable, friendly safe environment
Skilled facilitators	Skilled facilitators/community assets
Flexibility	Flexibility
Focal point	Focal point
Providing a reason to interact	
Volunteers	Volunteers
Community norms	Community context
Involvement in organisation and planning	Co-production
Inclusion and exclusion	Inclusion and exclusion
Consistency	consistency
Long term outcomes and sustainability	Managing expectations
Not enough change	
	Connecting to broader programmes/agendas
	Funding and resources

*Factors that can positively and negatively affect intervention implementation, comparison between the original review and refresh*

## 4 Discussion

### New issues in the update compared to the original review

#### Methods

The review publications reflected a similar breadth of methodologies for measuring community wellbeing to the earlier review. Other than the challenges to data collection in research brought about by the COVID-19 pandemic, no additional major methodological challenges were identified, although anecdotally, the review team found the reporting of methodological limitations in the included studies in the update review to be more thorough and thoughtful. There is more ethnographic (n=1 in 2017, n=6 in 2022) and qualitative (n=11 in 2017, n=14 in 2022) research in the update. This could indicate a greater drive to fully understand the subjective experience of wellbeing, and/or the development, implementation and impacts of complex interventions.

#### Themes

Environmental issues were more prominent in the update compared to the original review. For example, the environmental impact of alternative use of space interventions was reported in two studies. *The Abattoir/ Cultureghem* (Alexander, 2021) was successful at reducing food waste from the marketplace and promoting environmental sustainability. Conversely, Adhikhari et al (2021) reported issues with the amount of food waste produced by a *Play Streets* programme. Positive environmental impacts and improvements to biodiversity were also seen from green and blue space interventions. This was seen in *Active Neighbourhoods* (Active Neighbourhoods, 2020), *Medlock River* (de Bell et al, 2020), *Woods In and Around Towns* (Ward-Thompson et al, 2019), and *Connswater Community Greenway* (Hunter et al, 2021). While the original review highlighted some risks to the environment from place & space interventions, the update finds 1) a greater volume of evidence about environmental issues and 2) more evidence of the potential benefits. This suggests that issues around environmental sustainability, which have historically been marginal in debates about community wellbeing (Atkinson et al, 2017), may be becoming more central. This probably reflects the greater focus in the media on environmental sustainability in the past few years since 2017.

Gentrification, while featuring in the original review, also appears more prominently in the update. It is more prominent across intervention categories, with an overarching concern that interventions risk weakening existing social ties between long-term residents at the same time as fuelling divisions between longer-term and newer residents. For example, in *Phat Beets* (Alkon & Cadji, 2020), there was a concern that, while the intervention was intended to support historic (Afro-Caribbean) residents, it was very often the newer (white) residents attending the farmers market and benefiting from rising house prices. The impact of a sudden influx of new residents was a shared issue across *Incredible Edible Todmorden* (Morley et al, 2017) and *Acton Gardens Estate Regeneration* (Bacon et al, 2021), where some new residents were using the area as 'dormitories' for sleeping but leaving for work and leisure (Acton Gardens). There was a concern that *The Frankfurt Mainkai Riverfront* (Pandit et al, 2021) was fuelling gentrification. In *Natural Outdoor Environments* (Triguero-Mas et al, 2021) there were concerns about gentrification and divisions between newer and longer-term residents. Finally, in *NoLo* (Tartari et al, 2022), whilst new residents appreciated the new street art and interpreted it as a sign of aspiration and development, to longer-term residents the new art signalled gentrification. This increased focus on gentrification may reflect the UK policy focus on place

inequity through “levelling up” and the idea of “left behind places”, and possibly also the Chief Medical Officer’s report on health and wellbeing issues in coastal towns. This focus on equity means that the voices and concerns of established communities may be heard more now than they were five years ago.

The increase in outcomes related to bridging social capital in the update may be related to the apparent increase in universal interventions, and also the increase in interventions with an explicit aim to mix populations, so more bridging, and possibly also linking, social capital may more naturally arise from these. This may also be true of the increased reporting of organisational benefits seen in this update. There was also an increase in interventions that had both universal and targeted elements, possibly in response to recommendations to implement the public health equity model of proportionate universalism, in which interventions to improve health and wellbeing are available for all, but those with the poorest health or wellbeing receive additional targeted interventions or adaptations to the interventions, to enable them to access and benefit from them proportionate to their additional need (Marmot et al., 2010; 2020).

### Limitations

This was a rapid update of a full systematic review, and so a more restricted, but specific, range of databases was searched. The search was still comprehensive, with unpublished and grey literature being sought via searches of relevant organisational websites and a call for evidence. As in the original review, searches were limited to English language publications. It is possible that some relevant studies may have been missed.

As in the original review, the update did not include studies of interventions in virtual or online space, or hybrid (virtual combined with face to face) interventions. Studies that included only older people, or only children or young people, were also excluded, as were those of people with specific illnesses or conditions that the intervention was intended to ‘treat’. Observational epidemiological studies of longstanding community places or spaces, that did not include an assessment of the impact of changes to the place or space, were excluded. There is, for example, a large body of evidence about the benefits of green and blue space to individual health and wellbeing that was not included in this review (e.g. Lovell et al., 2014).

Finally, as with every systematic review, it is important to note that absence of evidence of effect is not the same as evidence of no effect. That is, if included studies have explicitly reported that there was no impact on an outcome related to wellbeing or social relations, we have also reported this (in Appendix E). The evidence statements include statements about negative or no effects of interventions, as measured in included studies, but do not include reflections on studies where outcomes could have been measured but were not reported. Therefore, in cases where the evidence is not strong, there is certainly scope for further research to collect evidence of impact on wellbeing or social relations outcomes.

### Impact of COVID/ relevance to COVID recovery plans

- The review found limited information about how interventions and outcomes were affected by the COVID-19 pandemic, but where reported this confirms that the pandemic was a disruptive event for communities and community-based organisations. Further research will be needed to review new studies reporting on interventions delivered in the pandemic and in the immediate recovery phase.

- The relevance and transferability of review findings for pandemic recovery is an area for consideration. Many of the interventions and outcomes reported have high relevance for current policy challenges and can potentially address societal concerns post-pandemic, such as strengthening community resilience and community cohesion, reduction of social isolation, high levels of poor mental health, and quality of, and engagement with, green and blue space.
- Potentially negative issues associated with alternative use of space, such as contested use of space between different age groups or communities of interest located in the same place, or between long established and newer residents, have direct relevance for both post pandemic recovery and interventions that will be introduced with the cost of living crisis (e.g. using libraries as warm hubs; repurposing of buildings e.g. empty shops). These types of issues, as well as the issue of gentrification and green gentrification, which is associated with events and neighbourhood design interventions, can result in negative changes in the perception of the area and in residents' sense of belonging, and have the potential to have a harmful impact on bridging and linking social capital and social cohesion.
- Transferability of interventions between different settings, places and contexts remains an issue; however, the review highlights the range of potential types of intervention approaches that could support the pandemic recovery at a community-level. The review confirms these are not standardised interventions and local adaptation will be needed. Many of the intervention models reviewed here could provide the flexible foundation for place-based action that can meet changing community conditions and priorities following the pandemic.
- More information is needed on the resources that are needed to support the development and implementation of community wellbeing interventions post pandemic. Socioeconomic conditions worsened for many communities during the pandemic and individuals and communities may face additional barriers to participation in community wellbeing interventions.

### Recommendations for policy makers and commissioners/ funders

- The body of evidence from the initial review and update provides a menu of possible wellbeing interventions linked to outcomes. This will be helpful for funders and policy makers in selecting approaches in different settings and contexts.
- Findings on influencing factors suggest that adequate investment in community infrastructure is needed, combined with attention to inclusive engagement, to ensure community wellbeing interventions have positive outcomes for a diverse range of communities and groups. Short term grants need to be linked to longer term funding to maintain and steward change made, and support ongoing wellbeing outcomes. These factors were also highlighted in the community wellbeing case study synthesis based on practice-based learning (South et al., 2021).
- The growing evidence base on community wellbeing highlights the broad range of outcomes that result from interventions that build social relations in places or spaces. The implications for policymakers and funders are that a breadth of potential wellbeing and wellbeing-related outcomes should be articulated within programme and funding specifications. It is important that evaluations are able to capture a potentially large range of outcomes from these types of interventions.

- The majority of studies relate to urban or suburban settings. Interventions commissioned in rural settings should be supported by a robust evaluation.
- When commissioning or implementing community place and space interventions to boost social relations or community wellbeing, attention must be given to the potential negative or unequal impacts of any interventions. Factors such as attention to inclusion, joint decision making and co-design of interventions with a diverse range of community members may help to mitigate against potential negative impacts.
- Related to the potential negative or unequal impacts of interventions such as contested use of space and gentrification, a wellbeing inequality impact assessment should be carried out before implementing new policy related to community place and space interventions, as well as meaningful community involvement to mitigate against such negative impacts.
- Interventions which are applied with the public health equity approach of proportionate universalism may result in the best outcomes for all across the social gradient, but this needs further evaluation to be commissioned as part of the policy approach.
- Resources need to be allocated for robust evaluations, particularly in the areas recommended below (Recommendations for research).

### Recommendations for practice

- The body of evidence from the initial review and update provides a menu of possible wellbeing interventions linked to outcomes. This will be helpful for practitioners in selecting approaches in different settings and contexts.
- A growing evidence base on green and blue space interventions suggests that these can be developed at a hyper-local level through to large programmes, and are associated with a broad range of health and well-being benefits, particularly at the individual level.
- Findings on influencing factors highlight the importance of a flexible approach, the development of a friendly and safe environment, attention to inclusion, and reducing barriers to ensure that activities are accessible, while also trying to preserve and restore the natural environment as much as possible.
- It is notable that the majority of studies again related to urban or suburban settings and there were few studies from rural settings. Practitioners should consider the transferability of interventions and whether local adaptations should be made.
- The emerging issue of contested space, in relation to different communities of interest, age groups and newer vs more established residents, as well as differing priorities regarding making outdoor spaces accessible and keeping the natural biodiversity of wild spaces, should be addressed directly. Findings on influencing factors suggest that community engagement and co-design of community places and spaces can mitigate against the potential harmful effects and result in more effective and inclusive interventions.

### Recommendations for research

Research needs to be able to follow changes in community practice and intervention types. New evaluations should draw on the historical evidence base at the same time as seeking to understand how interventions evolve within community practice to capture innovative practices and changing need. This suggests a need for research that involves a meta-narrative or storytelling approach.

- Further research should include elements of economic and health economic evaluation to help decide which types of interventions offer best value for money, or social return on investment, in a range of settings and contexts.
- The majority of studies relate to urban or suburban settings. Further research of place and space interventions designed to boost social relations and community wellbeing in rural settings is needed.
- The evidence base is still lacking methodologically robust studies of placemaking interventions.
- This review did not include interventions to boost social relations or community wellbeing that take place in virtual/ online/ digital or hybrid spaces. A systematic review of interventions to boost social relations in virtual or hybrid spaces is needed.
- Further research is needed to assess and understand the reach of wellbeing interventions within communities, including research with individuals and groups that do not participate in such interventions.
- Studies should consider using a range of outcome measures and analysis tools that reflect the complexity of community wellbeing, including measuring wellbeing at different levels (individual, community, organisations) and assessing multiple components or factors that contribute towards wellbeing. The development and refinement of logic models, theories of change or conceptual frameworks should be part of any future research studies.
- Further research is needed to understand how less structured or formal, more naturally occurring interventions affect wellbeing, such as the community's reclamation of space after Grenfell (Waine & Chapman, 2022) and Fischer Avenue Road Closure (Kingham et al, 2020), and, if effective, how this informal community action can be nurtured and supported.
- Further research should use appropriate methodologies to understand more explicitly what works, for whom, and in what context, and include a focus on populations and communities at risk of experiencing health inequalities.
- Further research should seek to explore potential mechanisms for impact, such as hope or optimism, and the impact of recurring events or longstanding changes, as well as influencing factors such as co-production.
- Further research should seek to foster a transdisciplinary approach to include a range of philosophical, theoretical and applicational dimensions to the discussion of the interrelationship between place, space and community wellbeing. Examples of disciplines to draw on include: landscape architecture & urban design, biophilia & biophilic design, environmental psychology, evolutionary psychology, sociology, neurology, physiotherapy, rehabilitation, teaching & learning, campus planning & educational facilities, workplaces, healthcare.
- There is little published research on the impact of interventions designed to aid pandemic recovery. As well as further research being needed, it would also be beneficial to collect practice-based case studies of such interventions, using a common template, for future synthesis.

## 5 Conclusions

In the five years since the literature searches were carried out for the original review, the evidence base has doubled in size, with 51 new studies meeting the review inclusion criteria, adding to the 51 included in the original review.

The 5 year refresh supports the findings of the original review, with notable increases in the knowledge base on green and blue spaces and alternative use of space. The changing pattern of evidence likely reflects different policy trends and opportunities in community-based work.

The 5 years refresh is able to offer more nuanced evidence statements across the whole body of evidence, relating to the eight intervention categories and across different domains of social relations and community wellbeing, owing to methodological developments in the process of summarising evidence for complex social interventions.

Place and space interventions lead to a broad range of positive community wellbeing outcomes, but the heterogeneous nature of the interventions and study designs means it is difficult to make direct comparisons between the intervention types to draw conclusions about what works best, for whom and in what circumstances.

There is strong evidence that community hubs have a positive impact on social networks, the social determinants of health, and on individual empowerment and mental health and wellbeing

There is moderate evidence that community events boost social relations and individual wellbeing, and strong evidence that they boost community wellbeing, particularly sense of belonging or pride through celebration of a shared identity, collective empowerment, civic participation and knowledge and cultural exchange. However, there was also moderate evidence of negative impacts, including potential loss of shared identity, gentrification, and/or physical or perceived exclusion of local residents from events.

There is strong evidence that neighbourhood design interventions can improve social networks, but also strong evidence that they can have been associated with negative perceptions of a 'problem' being transferred to other areas. There is moderate evidence they can improve other aspects of social relations, community wellbeing and individual wellbeing.

There is strong evidence that interventions in green and blue space can boost social cohesion, sense of belonging and pride, and, on an individual level, physical activity, skills and knowledge and empowerment.

The evidence base on placemaking interventions is weaker, with moderate to weak evidence supporting positive impacts on social relations and community wellbeing.

There is strong evidence that interventions that make alternative use of space can have positive impacts on community wellbeing particularly civic participation and reduced crime/ increased perception of safety. However, there was also moderate of negative or unequal impacts on individual wellbeing, probably related to perceived gentrification and contested use of space.

The evidence base on urban regeneration gives a mixed picture with both positive and negative impacts reported.



There is strong evidence that community development interventions can have a positive impact on social interactions and moderate to strong evidence of impacts on community empowerment, sense of belonging, pride or identity, social determinants of health, and physical activity.

The growing evidence base on community wellbeing highlights the broad range of outcomes that result from interventions that build social relations in places or spaces. The implications for policymakers and funders are that a breadth of potential outcomes should be articulated within programme and funding specifications. It is also important that evaluations are able to capture a potentially large range of outcomes from these types of interventions.

More adverse impacts of place and space interventions were reported in the 5 year refresh, including the issue of (green) gentrification and contested use of space.

Sustainability in relation to energy use and biodiversity was also an emerging theme in the 5 year refresh, reflecting policy and public priorities.

There was also an increase in universal (as opposed to targeted) interventions, and in interventions that had an explicit aim of mixing populations, and an increase in reported impacts on bridging social capital, which may be associated. Interventions which are applied with the public health equity approach of proportionate universalism may result in the best outcomes across the social gradient for all, but this needs to be further evaluated.

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## Appendix A: Search strategy

### SOCIAL POLICY AND PRACTICE

#### Search strings

##### A1 Social relations

(Soci\* OR community OR neighbour\* OR public OR cultural) AND (relation\* OR cohesion OR capital OR inclusion OR inclusive OR interaction\* OR network\* OR connect\* OR interconnect\* OR bond\* OR tie\* OR support OR integration OR participation OR engag\* OR exclu\* OR isolat\* OR marginali\* OR disengag\* OR fragment\* OR disconnect\* OR integration OR "capacity building" OR trust OR autonomy OR "positive relations" OR involvement OR loneliness)

A2. "interpersonal relation\*" OR connectedness OR "quality of relations" OR friend\* OR companion\* OR "close relationship\*" OR "social routine" OR reciprocity

##### B Wellbeing

"well-being" OR wellbeing OR "quality of life" OR happiness OR satisfaction OR (positive AND "mental health") OR wellness OR health\* OR "physical welfare" OR "purpose in life" OR flourish\* OR prosper\* OR resilien\* OR contentment OR "self-esteem" OR "overall health" OR belonging OR fulfil\* OR capabilit\* OR salutogen\* OR eudaimon\* OR eudaemon\* OR eudemon\* OR trust\* OR thriv\* OR vibran\* OR "sense of community" OR "sense of belonging" OR empower\* OR liveability OR livability OR sustainab\*

##### C Interventions

policy OR policies OR intervention\* OR strateg\* OR initiative\* OR scheme\* OR programme\* OR program\* OR investment\* OR environment\* OR regeneration\* OR coproduc\* OR co-produc\* OR volunteer\* OR "what works" OR implement\* OR evaluat\* OR "social impact\*" OR measur\* OR project\* OR plan\* OR enterprise\* OR design\* OR "active by design" OR asset-based OR area-based OR social-based OR community-based OR community-led OR community-driven OR community-orient\*

##### D1 Misc. public spaces

(communit\* OR communal OR public OR open OR neighbour\* OR neighbor\* OR local OR town OR city OR village OR bumping OR meeting OR social OR third OR 3rd OR urban OR rural) AND (space\* OR place\* OR area\* OR cent\* OR infrastructure\* OR asset\* OR garden\* OR hall\* OR square\* OR green\* OR event\* OR hub\* OR venue\*)

##### D2 Misc. public spaces 2

"physical environment" OR "built environment" OR "living environment" OR "inclusive environment" OR "free speech zone" OR "safe space\*" OR "healthy living cent\*" OR "therapeutic landscape\*" OR "health\* place\*"

EBSCO

Search strings

A1 Social relations

(Soci\* OR community OR neighbour\* OR public OR cultural) N3 (relation\* OR cohesion OR capital OR inclusion OR inclusive OR interaction\* OR network\* OR connect\* OR interconnect\* OR bond\* OR tie\* OR support OR integration OR participation OR engag\* OR exclu\* OR isolat\* OR marginali\* OR disengag\* OR fragment\* OR disconnect\* OR integration OR "capacity building" OR trust OR autonomy OR "positive relations" OR involvement OR loneliness)

A2 "interpersonal relation\*" OR connectedness OR "quality of relations" OR friend\* OR companion\* OR "close relationship\*" OR "social routine" OR reciprocity

B Wellbeing

"well-being" OR wellbeing OR "quality of life" OR happiness OR satisfaction OR (positive N3 "mental health") OR wellness OR health\* OR "physical welfare" OR "purpose in life" OR flourish\* OR prosper\* OR resilien\* OR contentment OR "self-esteem" OR "overall health" OR belonging OR fulfil\* OR capabilit\* OR salutogen\* OR eudaimon\* OR eudaemon\* OR eudemon\* OR trust\* OR thrive\* OR vibran\* OR "sense of community" OR "sense of belonging" OR empower\* OR liveability OR livability OR sustainab\*

C Interventions

policy OR policies OR intervention\* OR strateg\* OR initiative\* OR scheme\* OR programme\* OR program\* OR investment\* OR environment\* OR regeneration\* OR coproduc\* OR co-produce\* OR volunteer\* OR "what works" OR implement\* OR evaluat\* OR "social impact\*" OR measur\* OR project\* OR plan\* OR enterprise\* OR design\* OR "active by design" OR asset-based OR area-based OR social-based OR community-based OR community-led OR community-driven OR community-orient\*

D1 Misc. public spaces

(communit\* OR communal OR public OR open OR neighbour\* OR neighbor\* OR local OR town OR city OR village OR bumping OR meeting OR social OR third OR 3rd OR urban OR rural) N3 (space\* OR place\* OR area\* OR cent\* OR infrastructure\* OR asset\* OR garden\* OR hall\* OR square\* OR green\* OR event\* OR hub\* OR venue\*)

D2 Misc. public spaces 2

"physical environment" OR "built environment" OR "living environment" OR "inclusive environment" OR "free speech zone" OR "safe space\*" OR "healthy living cent\*" OR "therapeutic landscape\*" OR "health\* place\*"

Social Sciences Citation Index

Search strings

A1 Social relations

(Soci\* OR community OR neighbour\* OR public OR cultural) NEAR (relation\* OR cohesion OR capital OR inclusion OR inclusive OR interaction\* OR network\* OR connect\* OR interconnect\* OR bond\* OR tie\* OR support OR integration OR participation OR engag\* OR exclu\* OR isolat\* OR marginali\* OR disengag\* OR fragment\* OR disconnect\* OR integration OR "capacity building" OR trust OR autonomy OR "positive relations" OR involvement OR loneliness)

A2 "interpersonal relation\*" OR connectedness OR "quality of relations" OR friend\* OR companion\* OR "close relationship\*" OR "social routine" OR reciprocity

B Wellbeing

"well-being" OR wellbeing OR "quality of life" OR happiness OR satisfaction OR (positive NEAR "mental health") OR wellness OR health\* OR "physical welfare" OR "purpose in life" OR flourish\* OR prosper\* OR resilien\* OR contentment OR "self-esteem" OR "overall health" OR belonging OR fulfil\* OR capabilit\* OR salutogen\* OR eudaimon\* OR eudaemon\* OR eudemon\* OR trust\* OR thrive\* OR vibran\* OR "sense of community" OR "sense of belonging" OR empower\* OR liveability OR livability OR sustainab\*

C Interventions

policy OR policies OR intervention\* OR strateg\* OR initiative\* OR scheme\* OR programme\* OR program\* OR investment\* OR environment\* OR regeneration\* OR coproduc\* OR co-produc\* OR volunteer\* OR "what works" OR implement\* OR evaluat\* OR "social impact\*" OR measur\* or project\* OR plan\* OR enterprise\* OR design\* OR "active by design" OR asset-based OR area-based OR social-based OR community-based OR community-led OR community-driven OR community-orient\*

D1 Misc. public spaces

(communit\* OR communal OR public OR open OR neighbour\* OR neighbor\* OR local OR town OR city OR village OR bumping OR meeting OR social OR third OR 3rd OR urban OR rural) NEAR (space\* OR place\* OR area\* OR cent\* OR infrastructure\* OR asset\* OR garden\* OR hall\* OR square\* OR green\* OR event\* OR hub\* OR venue\*)

D2 Misc. public spaces 2

"physical environment" OR "built environment" OR "living environment" OR "inclusive environment"  
OR "free speech zone" OR "safe space\*" OR "healthy living cent\*" OR "therapeutic landscape\*" OR  
"health\* place\*"

**(A1 OR A2) AND B AND C AND (D1 OR D2)**



**Places & Spaces Review – updated website list April 2022 – alphabetical, n=66**

**\*(Bold are new entries)**

Altogether Better <https://www.altogetherbetter.org.uk/>

American Public Health Association <https://www.apha.org/>

**Blue Health <https://bluehealth2020.eu/>**

Bromley by Bow Centre <https://www.bbbc.org.uk/>

Carnegie UK Trust <https://www.carnegieuktrust.org.uk/>

Centre for Thriving Places <https://www.centreforthrivingplaces.org/>

Centre for Urban Design & Mental Health <https://www.urbandesignmentalhealth.com/>

**Centre of Contemporary Culture of Barcelona - Public Space <https://www.publicspace.org/>**

**Clever Cities <https://clevercities.eu/>**

Community Catalysts <https://www.communitycatalysts.co.uk/>

Coop Foundation <https://www.coopfoundation.org.uk/>

Create Streets <https://www.createstreets.com/>

Department for Environment, Food and Rural Affairs  
<https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs>

Department for Levelling up, Housing and Communities  
<https://www.gov.uk/government/organisations/department-for-levelling-up-housing-and-communities>

Design Council <https://www.designcouncil.org.uk/>

Durham University – Faculty of Social Sciences and Health  
<https://www.durham.ac.uk/departments/academic/social-sciences-health/>

Eden Project Communities <https://www.edenprojectcommunities.com/>

**Esmée Fairbairn Foundation <https://esmeefairbairn.org.uk/>**

ESRC Research Investments - Health and Wellbeing <https://www.ukri.org/councils/esrc/>

EUPHA Urban Public Health section <https://eupha.org/urban-public-health>

European Commission [https://ec.europa.eu/info/index\\_en](https://ec.europa.eu/info/index_en)

Faculty of Public Health <https://www.fph.org.uk/>

Glasgow Centre for Population Health <https://www.gcph.co.uk/>

Greenspace Scotland <https://www.greenspacescotland.org.uk/>

Groundwork <https://www.groundwork.org.uk/>

Health Foundation <https://www.health.org.uk/>

Home Office <https://www.gov.uk/government/organisations/home-office>

**INHERIT (Inter-sectoral Health and Environment Research for Innovation)** <https://www.inherit.eu/>

Institute of Health Equity <https://www.instituteofhealthequity.org/home>

Jo Cox Foundation <https://www.jocoxfoundation.org/>

Joseph Rowntree Foundation <https://www.jrf.org.uk/>

Lancaster University – School of Health and Medicine <https://www.lancaster.ac.uk/health-and-medicine/research/>

Landscape Institute <https://www.landscapeinstitute.org/>

Local Government Association – Social Care, Health and Integration  
<https://www.local.gov.uk/topics/social-care-health-and-integration>

**Local Trust** <https://localtrust.org.uk/>

Locality <https://locality.org.uk/>

London School of Economics - Care Policy and Evaluation Centre <https://www.lse.ac.uk/cpec>

National Council for Voluntary Organisations <https://www.ncvo.org.uk/>

National Institute for Health and Care Excellence (NICE) <https://www.nice.org.uk/>

NESTA <https://www.nesta.org.uk/>

New Economics Foundation <https://neweconomics.org/>

New European Bauhaus [https://europa.eu/new-european-bauhaus/index\\_en](https://europa.eu/new-european-bauhaus/index_en)

NIHR Public Health Research Programme <https://www.nihr.ac.uk/explore-nihr/funding-programmes/public-health-research.htm>

NIHR School for Public Health Research <https://sphr.nihr.ac.uk/>

Office for Health Improvement and Disparities  
<https://www.gov.uk/government/organisations/office-for-health-improvement-and-disparities>

Office for National Statistics <https://www.ons.gov.uk/>

Picker Institute Europe <https://picker.org/>

Project for Public Spaces <https://www.pps.org/>

Public Health Agency (for Northern Ireland) - Health and Social Wellbeing Improvement  
<https://www.publichealth.hscni.net/directorates/public-health/health-and-social-wellbeing-improvement>

Public Health Scotland <https://www.publichealthscotland.scot/>

Royal Society for Public Health <https://www.rsph.org.uk/>

Royal Society of Arts <https://www.thersa.org/>

Scottish Community Development Centre - Community Health Exchange

<https://www.scdc.org.uk/what/chex>

**Sheffield Hallam University - Centre for Regional Economic and Social Research**

<https://www.shu.ac.uk/centre-regional-economic-social-research>

Simon Fraser University <https://www.sfu.ca/>

Social Care Institute for Excellence <https://www.scie.org.uk/>

The King's Fund <https://www.kingsfund.org.uk/>

**The Liverpool and Lancaster Universities Collaboration for Public Health Research (LiLaC)**

<https://lilac-healthequity.org.uk/>

The National Lottery Community Fund <https://www.tnlcommunityfund.org.uk/>

**The National Lottery Heritage Fund** <https://www.heritagefund.org.uk/>

Think Local Act Personal – building community capacity (BCC)

<https://www.thinklocalactpersonal.org.uk/Browse/Building-Community-Capacity/>

Turning Point <https://www.turning-point.co.uk/>

University of Bath - Department for Health <https://www.bath.ac.uk/departments/department-for-health/>

University of Central Lancashire <https://www.uclan.ac.uk/>

University of Kent - Personal Social Services Research Unit <https://www.pssru.ac.uk/>

University of Liverpool - Institute of Population Health <https://www.liverpool.ac.uk/population-health/>

University of Northampton - Centre for Health Sciences and Services

<https://www.northampton.ac.uk/research/research-institutes-and-centres/centre-for-health-sciences-and-services/>

University West - Center for Health Promotion and Salutogenesis <https://www.hv.se/en/meet-university-west/organisation/centres-in-university-west/salutogenesis/>

Wales Centre for Public Policy <https://www.wcpp.org.uk/>

Wellcome Trust <https://wellcome.org/>

Welsh Parliament/Senedd Cymru <https://senedd.wales/>

WHO Urban Health <https://www.euro.who.int/en/health-topics/environment-and-health/urban-health>

World Green Infrastructure Network? <https://worldgreeninfrastructurenetwork.org/>

World Health Organization - Regional Office for Europe - <https://www.euro.who.int/en>

## Appendix B: List of included studies

1. Abramovic, J., Turner, B. and Hope, C. (2019) Entangled recovery: Refugee encounters in community gardens. *Local Environment*, 24(8), pp.696-711.
2. Active Neighbourhoods (2020) *Active Neighbourhoods - Urban nature delivering healthier communities for people and wildlife: Final Report (2016-2019)*. Plymouth: Active Neighbourhoods - Plymouth City Council.
  - van den Bogerd, N., Elliott, L.R., White, M.P., Mishra, H.S., Bell, S., Porter, M., Sydenham, Z., Garrett, J.K. and Fleming, L.E. (2021). Urban blue space renovation and local resident and visitor well-being: A case study from Plymouth, UK. *Landscape and Urban Planning*, 215, 104232.
3. Adhikhari, D., Henderson, T., Dolce, M., Banks, A.R., Zaim, H., Onwuka, A. and Jones, N. (2021) An evaluation of PlayStreets in the South Side neighborhood of Columbus, Ohio. *Perspectives in Public Health*, 141(2), pp.97-101.
4. Alexander, K. (2021) Old abattoirs and new food politics: Sharing food and eating together at the meat market of Brussels. *Food and Foodways*, 29(3), pp.223-242.
5. Alkon, A.H. and Cadji, J. (2020) Sowing seeds of displacement: Gentrification and food justice in Oakland, CA. *International Journal of Urban & Regional Research*, 44(1), pp.108-123.
6. Austin, G., Duncan, M.J. and Bell, T. (2021) Codesigning parks for increasing park visits and physical activity in a low-socioeconomic community: The Active by Community Design experience. *Health Promotion Practice*, 22(3), pp.338-348.
7. Bacon, N., Bayram, C., Naylor, A. and Dixon, T. (2021) *Measuring the social impact of regeneration in South Acton: Results of the third social sustainability assessment*. Research for Acton Gardens LLP. London: Social Life.
8. Bell, R., Khan, M., Romeo-Velilla, M., Stegeman, I., Godfrey, A., Taylor, T. et al. (2019) Ten lessons for good practice for the INHERIT Triple Win: Health, Equity, and Environmental Sustainability. *International Journal of Environmental Research and Public Health*, 16(22), 4546.
  - Anthun K.S., Lillefjell M., Espnes, G.A., Hope, S., Maass, R.E.K., Nguyen, C., Sætermo, T.F. and Morris, G. (2019) *INHERIT: Implementing triple-win case studies for living, moving and consuming that encourage behavioural change, protect the environment, and promote health and health equity*. Brussels, Belgium: EuroHealthNet.
  - Anthun, K.S., Maass, R.E.K., Hope, S., Espnes, G.A., Bell, R., Khan, M. and Lillefjell, M. (2019) Addressing Inequity: Evaluation of an intervention to improve accessibility and quality of a green space. *International Journal of Environmental Research and Public Health*, 16, 5015.
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  - Bell R., Khan, M., Romeo-Velilla, M., Stegeman, I., Godfrey, A., Costongs, C. et al., (2019) *INHERIT: Creating triple-wins for health, equity and environmental sustainability: Elements of good practice based on learning from the INHERIT case studies*. Brussels: EuroHealthNet.
  - García de Jalón, S., Chiabai, A., Mc Tague, A., Artaza, N., de Ayala, A., Quiroga, S., Kruize, H., Suárez, C., Bell, R. and Taylor, T. (2020) Providing access to urban green

- spaces: A participatory benefit-cost analysis in Spain. *International Journal of Environmental Research and Public Health*, 17(8), 2818.
9. Benton, J.S., Cotterill, S., Anderson, J., Macintyre, V.G., Gittins, M., Dennis, M. and French, D.P. (2021) A natural experimental study of improvements along an urban canal: impact on canal usage, physical activity and other wellbeing behaviours. *The International Journal of Behavioral Nutrition and Physical Activity*, 18(1), 19.
  10. Bestman, A., Lloyd, J., Hawkshaw, B., Kabir, J. and Harris, E. (2020) The Rohingya Little Local: Exploring innovative models of refugee engagement in Sydney, Australia. *Australian Journal of Primary Health*, 26(5), pp.367-373.
  11. Brace, A.M., Braunstein, N.S., Finkelstein, B. and Beall, D. (2017) Promoting healthy food access in an urban food desert in a Baltimore City neighborhood. *Food Studies: An Interdisciplinary Journal*, 7(4), pp.17-30.
  12. Castle, E. (2018) *Health aspects of community-engaged natural play space planning, design and implementation [Theses and Dissertations 2184]*. Grand Forks, North Dakota: University of North Dakota.
  13. Cervera, M., Bell, S., Muñoz, F., Mishra, H.S., Fleming, L.E., Grellier, J., Carrasco-Turigas, G., Nieuwenhuijsen, M.J., Vert, C. and Gascon, M. (2021) A transdisciplinary approach to recovering natural and cultural landscape and place identification: A case study of Can Moritz Spring (Rubí, Spain). *International Journal of Environmental Research and Public Health*, 18, 1709.
  14. Clements, J. (2018) Community resources for small city creativity? Rethinking creative economy narratives at the Blue Mountains Music Festival. *Australian Geographer*, 49(4), pp.537-552.
  15. Collins, T., Kenney, C. and Hesk, G. (2017) 'It pushed me back into the human race': Evaluative findings from a community Christmas event. *Health & Social Care in the Community*, 25(5), pp.1601-1606.
  16. de Bell, S., Graham, H. and White, P.C. (2020) Evaluating dual ecological and well-being benefits from an urban restoration project. *Sustainability*, 12(2), 695.
  17. de Jong, A. and Steadman, C. (2021) (Re)crafting belonging: cultural-led regeneration, territorialization and craft beer events. *Social and Cultural Geography*, DOI: 10.1080/14649365.2021.1939126
  18. Durán Vian, F., Serrano Martínez, M. and Pons Izquierdo, J.J. (2018). Citizen participation as a social shift tool in projects of urban fluvial space recovery: A case study in Spain. *Urban Forestry & Urban Greening*, 31, pp.252-260.
  19. Eadson, W., Harris, C., Parkes, S., Speake, B., Dobson, J. and Dempsey, N. (2021) *Why should we invest in parks? Evidence from the Parks for People programme*. London: The National Lottery Community Fund and The National Lottery Heritage Fund.
  20. Fiedler, T. and Wickham, M. (2022) Investigating social capital development in embedded festivals: The case of the Cygnet Folk Festival. *Event Management*, 26, pp.1193-1210.
  21. Glover, T.D., Munro, S., Men, I., Loates, W. and Altman, I. (2021) Skateboarding, gentle activism, and the animation of public space: CITE - A Celebration of Skateboard Arts and Culture at The Bentway. *Leisure Studies*, 40(1), pp.42-56.
  22. Hagen, O.H. and Tennøy, A. (2021) Street-space reallocation in the Oslo city center: Adaptations, effects, and consequences. *Transportation Research: Part D*, 97, 102944.
  23. Harris, M.W., Barnett, T. and Bridgman, H. (2018) Rural Art Roadshow: A travelling art exhibition to promote mental health in rural and remote communities. *Arts and Health*, 10(1), pp.57-64.

24. Hassanli, N., Walters, T. and Williamson, J. (2021) 'You feel you're not alone': How multicultural festivals foster social sustainability through multiple psychological sense of community. *Journal of Sustainable Tourism*, 29(11), pp.1792-1809.
25. Heinze, J.E., Krusky-Morey, A., Vagi, K.J., Reischl, T.M., Franzen, S., Pruett, N.K., Cunningham, R.M. and Zimmerman, M.A. (2018) Busy streets theory: The effects of community-engaged Greening on Violence. *American Journal of Community Psychology*, 62(1), pp.101-109.
26. Hunter, R.F., Adlakha, D., Cardwell, C., Cupples, M.E., Donnelly, M., Ellis, G. Gough, A., Hutchinson, G., Kearney, T., Longo, A., Prior, L., McAneney, H., Ferguson, S., Johnston, B., Stevenson, M., Kee, F. and Tully, M.A. (2021) Investigating the physical activity, health, wellbeing, social and environmental effects of a new urban greenway: a natural experiment (the PARC study). *International Journal of Behavioral Nutrition and Physical Activity*, 18, 142.
27. Jackson, C. and Ronzi, S. (2021) Residents' perceptions of a community-led intervention on health, well-being, and community inclusion through photovoice. *Health Education & Behavior*, 48(6), pp.783-794.
  - Jackson, C. (2019) *Residents' perceptions of the impact of a complex community intervention on health, wellbeing and community inclusion. A photovoice study in Blackpool, North West England [Masters Dissertation]*. Liverpool: The University of Liverpool.
28. Jakubec, S.L., Szabo, J., Gleeson, J., Currie, G. and Flessati, S. (2021) Planting seeds of community-engaged pedagogy: Community health nursing practice in an intergenerational campus-community gardening program. *Nurse Education in Practice*, 51, 102980.
29. Kingham, S., Curl, A. and Banwell, K. (2020) Streets for transport and health: The opportunity of a temporary road closure for neighbourhood connection, activity and wellbeing. *Journal of Transport & Health*, 18, 100872.
30. Mair, J. and Duffy, M. (2018) The role of festivals in strengthening social capital in rural communities. *Event Management*, 22(6), pp.875-889.
31. McClinchey, K.A. (2021) Contributions to social sustainability through the sensuous multiculturalism and everyday place-making of multi-ethnic festivals. *Journal of Sustainable Tourism*, 29(11-12), pp.2025-2043.
  - McClinchey, K.A. (2017) Social sustainability and a sense of place: harnessing the emotional and sensuous experiences of urban multicultural leisure festivals. *Leisure/Loisir*, 41(3), pp.391-421.
32. McCunn, L.J., Vickerie-Dearman, L.S. and Gagnon, T. (2020) Evaluating a pop-up resource village in West Oakland: Making connections with sense of place and perceptions of safety. *International Journal of Community Well-Being*, 3(2), pp.241-266.
33. Ministry of Housing, Communities and Local Government (2020) *Open Doors Pilot Programme: Evaluation report*. London: Ministry of Housing, Communities and Local Government.
34. Morley, A., Farrier, A. & Dooris, M. (2017) Propagating success: The Incredible Edible model. Final Report. Manchester; Preston: Manchester Metropolitan University; University of Central Lancashire.
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## Appendix C: List of excluded studies

### Excluded on intervention n=136

1. Abrams, D., Broadwood, J., Lalot, F., Davies Hayon, K. and Dixon, A. (2021) *Beyond us and them – societal cohesion in Britain through eighteen months of COVID-19*. Belong - The Cohesion and Integration Network and The University of Kent.
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5. All Party Parliamentary Group on Social Inclusion (2020) *Building stronger communities in post-pandemic Britain: a report by the All Party Parliamentary Group on Social Integration*. London: British Future.
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### Excluded on country n=6

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8. Todd, C., Camic, P.M., Lockyer, B., Thomson, L.J.M. and Chatterjee, H.J. (2017) Museum-based programs for socially isolated older adults: Understanding what works. *Health and Place*, 48, pp.47-55.

9. Walsh, S.E. and LaJoie, A.S. (2018) Influence of built environment quality and social capital on mental health of residents of assisted living communities in Louisville, Kentucky. *Gerontology and Geriatric Medicine*, 4, pp.1-9.
10. Winer, M., Dunlap, S., St Pierre, C., McInnes, D.K. and Schutt, R. (2021) Housing and social connection: Older formerly homeless veterans living in subsidized housing and receiving supportive services. *Clinical Gerontologist*, 44(4), pp.460-469.
11. Wood, E. and Isaac, S. (2017) *Innovation Fund: Creative social activity and older adult wellbeing*. Leeds: International Centre for Research in Events, Tourism and Hospitality, Leeds Beckett University.

#### **Excluded on setting n=4**

1. Anguelovski, I., Connolly, J. and Brand, A.L. (2018) From landscapes of utopia to the margins of the green urban life: For whom is the new green city?. *City*, 22(3), pp.417-436.
2. Anguelovski, I., Irazábal-Zurita, C. and Connolly, J.J. (2019) Grabbed urban landscapes: Socio-spatial tensions in green infrastructure planning in Medellín. *International Journal of Urban and Regional Research*, 43(1), pp.133-156.
3. Bachman, J.R., Feng, F. and Hull, J.S. (2022) Resident impacts for queer film festivals: Assessing benefits and loyalty in Vancouver, British Columbia, Canada. *Event Management*, 26(1), pp.107-126.
4. Devine, A., Quinn, B., and Devine, F. (2021) Reaching across the divide: The role of cultural events in peacebuilding. *Event Management*, 25(4), pp.363-380

#### **Excluded on year n=1**

1. Earle, J.B. (2016) *Local governmental development of alternative food systems in distressed urban areas [Theses and Dissertations]*. Minneapolis, MN: Walden University.

#### **Duplicate studies with 2018 review n=5**

1. Anderson, J. and Baldwin, C. (2017) Building well-being: neighbourhood flourishing and approaches for participatory urban design. In Phillips, R., and Wong, C. eds. (2017) *Handbook of community well-being research*. International Handbooks of Quality-of-Life. Dordrecht, Netherlands: Springer Publications, pp.313-337.
2. Anderson, J., Ruggeri, K., Steemers, K. and Huppert, F. (2017) Lively social space, well-being activity, and urban design: Findings from a low-cost community-led public space intervention. *Environment & Behavior*, 49, pp.685-71.
3. Coghlan, A., Sparks, B., Liu, W. and Winlaw, M. (2017) Reconnecting with place through events: Collaborating with precinct managers in the placemaking agenda. *International Journal of Event and Festival Management*, 8(1), pp.66-83.
4. Jung, H., Lee, S.Y., Kim, H.S. and Lee, J.S. (2017) Does improving the physical street environment create satisfactory and Active streets? Evidence from Seoul's Design Street Project. *Transportation Research Part D: Transport and Environment* 50, 269-79
5. Mangadu, T., Kelly, M. and Orezza, M.C.E., Gallegos, R. and Matharasi, P. (2017) Best practices for community gardening in a US-Mexico border community. *Health Promotion International*, 32, pp.1001-1014.

**Not available for full text screening n=4**

1. Jaszczak, A. (2018) *The role of public spaces in the integration of residents in Cittaslow towns. In 5th International Multidisciplinary Scientific Conference on Social Sciences and Arts SGEM*, pp. 287-294.
2. Martinis, S.P., Kontoni, D-P.N. (2017) Sustainable urban planning interventions in the historical center of the Greek town of Kalavryta. *Habitat International*, 63, pp.131-148.
3. Olson, J.T. (2020) *From vacant lots to community gardens: Health and well-being in the neighbourhood*. Milwaukee, WI: The Medical College of Wisconsin.
4. Pourat, N.; Martinez, A. E., Haley, L.A. and Chen, X. (2018) *Parks after dark evaluation brief*. Policy Brief (UCLA Center for Health Policy Research), 2018(4), pp.1-12.



Appendix D – Comparison table of description of included studies between original review (2018) and update (2022)

	<b>2018</b>	<b>2022</b>
<b>Total</b>	51	51
<b>Country</b>		
UK	11	21
USA	24	8
Canada	6	3
Netherlands	1	0
Australia	5	8
Turkey	1	0
South Korea	1	0
Spain	1	2
Switzerland	1	0
Germany	1	1
Belgium	0	1
Czechia	0	1
Italy	0	1
New Zealand	0	1
Norway	0	1
Slovakia	0	1
Multiple	0	2
<b>Study design</b>		
Case Studies	11	18
Mixed-methods evaluations	15	16
Cross-sectional surveys	9	5
Longitudinal studies	2	5
Qualitative studies	11	14
Action Research	1	1
Pre/Post design	5	2
Ethnographic	1	6
Observational	0	3
Natural experiment	0	2
<b>Setting</b>		
Urban	23	35
Rural	4	6
Suburban	10	3
Mixed	6	5
Unclear	7	2
<b>Aim of intervention</b>		
Improve social relations	20	24
Improve community wellbeing	29	35
Other	19	27
<b>Category of intervention</b>		

Community hubs	11	5
Events	9	15
Neighbourhood design	16	11
Green and blue space	14	22
Placemaking	9	5
Alternative use of space	11	23
Urban regeneration	11	8
Community development	7	6
<b>Population involved</b>		
Mix of street users	10	15
Children & adolescents	10	29
Older people	8	27
Working age people	6	31
Families	7	21
Ethnically diverse communities	7	18
Economically disadvantaged	20	10
People with disabilities and/or chronic illness	3	14
Specific gender groups (male, female, trans)	3	19
Unemployed people	3	3
Homeless people	1	0
Prisoners & ex-offenders	1	0
Refugees & asylum seekers	1	6
Religious or political groups	0	4
Other stakeholders	9	0
<b>Targeted or universal?</b>		
Targeted an area or group	37	9
Universal	14	30
Both (Universal and targeted)	0	10
Unclear	0	2
Deliberate mixing of groups	6	18

## Appendix E: Table of characteristics of included studies

**Intervention category:** Alternative Use of Space (AU), Community Development (CD), Community Hubs (CH), Events (EV), Green and Blue Spaces (GB), Neighbourhood Design (ND), Placemaking (PM), Urban Regeneration (UR), Other (OT).

**Type of intervention:** Enhance (EH), Maintain (MT), Protect (PT), Not Sure/Unclear (UN).

**Temporal effect of the intervention:** Permanent change (PC), Temporary Change (TC), Both/Mix (BM); Not Sure/Unclear (UN).

**Study design:** Case Study (CS), Cross-sectional Study (CSS), Ethnographic Study (ES), Longitudinal Study (LS), Mixed-Method Evaluation (MM), Natural Experiment (NE), Pre-and-post Study (PP), Qualitative Study (QS), Observational study (OS), Survey (SU).

**Outcomes:** Social Relations (SR), Community Wellbeing (CWB), Individual Wellbeing (IWB), Individual Health (IH), Community-level Health (CH), Social Determinants of Health (SDH), Process Outcomes (PO), Adverse or Unintended Effects (AUE), Costs (C), System level outcomes (SY), Inequalities (INE), Other outcomes (OT).  
Positive Effect (+), Negative Effect (-), Mixed Effect (?), Neutral Effect (=).

Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID-19.
Abramovic, J. et al. (2019)	Australia.	Burmese refugees living in Canberra.	Burmese families. A community garden project which has plots within a larger garden rental scheme in the city of Canberra.	CH, GB.	The Happiness Garden. A garden run by a community organisation, created to assist the recovery of Burmese refugees. Each individual or family has their own plot. The garden is supported and managed through the shared gardening experience, which includes communal gatherings.	EH. PC.	Consultation.	CS.	Document analysis; participant observation (10 visits); semi structured interviews, n=8 (4 refugees, 4 project organisers); Thematic analysis	SR+, CWB?, IWB?, IH+, PO?.	N/A.
Active Neighbourhoods (2020)	UK (England).	Local residents and visitors to the sites.	Local residents. Neighbourhoods in Plymouth, Devon that experience high health inequalities,	GB.	Active Neighbourhoods. Active Neighbourhoods work with communities to improve their local greenspaces, improving infrastructure, creating and protecting	EH. PC.	Partnership.	MM.	Repeated cross-sectional study. Includes surveys (including WEMWBS) and interviews as well	SR+, CWB+, IWB+, IH+, SDH+,	N/A.

Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID -19.
			with neglected urban greenspaces.		wildlife rich spaces, and collecting data. The local green and blue spaces are used as community hubs.				as monitoring data.	PO+, INE+.	
Adhikhari, D. et al. (2021)	USA.	Adults and children in the community.	Children and young people and local neighbourhood. One block in a low-income urban neighbourhood in Columbus, Ohio.	AU.	PlayStreets. A weekly initiative (mid-June to mid-August). Activities include sports, toy cars, scooters, arts and crafts for 5-17 year olds. Hospital sponsored and supported by a community health initiative. Volunteers staff the sessions.	EH. TC.	Partnership.	CSS.	Cross sectional survey for adults and (adapted) for children, handed out at PlayStreets events. N=69 respondents. Convenience sampling and descriptive statistics	SR+, CWB+, IWB+, IH+, PO-, OT-.	N/A.
Alexander, K. (2021)	Belgium.	Staff and community attendees.	Local people. The Abattoir is in the commune of Anderlecht, one of the largest and poorest in Belgium.	AU.	The Abattoir/Cultureghem. The market is a shared space and used for activities for children, and as a "zero food waste pop-up restaurant" (Barratoir) where volunteers collect unsold food from the market vendors, and as a "collect met" (foodbank) weekly event in an unrented meat locker where unsold produce is given away.	EH. BM.	Consultation.	ES.	Ethnographic, participant observations; interviews with staff and community attendees.	SR+, CWB+, IWB+, IH+, SDH+, PO+, SY+, OT+.	N/A.
Alkon, A.H. and Cadji, J. (2020)	USA	Local residents.	Local residents. A neighbourhood with many food-insecure low-income residents affected by green gentrification.	CD, GB.	Phat Beets – community garden and food justice organization. Phat Beets mission is to create a healthier, more equitable food system in their North Carolina neighbourhood., and activities include farmer's	EH. PC.	Placation.	QS.	Observations and interviews.	PO+, AUE-.	N/A

Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID-19.
					markets, community/gardens/urban farming, community market farms, backyard gardens, urban farming education programmes.						
Austin, G. et al. (2021)	Australia.	Local residents and park users.	Local residents. Low-socioeconomic community in Bundaberg, Queensland.	GB, ND.	Active by Community Design (ABCD) Project. The co-design/redesign of two community parks, engaging with low-socioeconomic communities, practitioners and researchers.	EH. PC.	Consultation.	CS.	Utilizing a pre-post evaluation design, baseline measures were completed with a series of validated tools for park use and park quality.	SR+, CWB+, IWB+, PO+.	N/A.
Bacon, N. et al. (2021)	UK (England).	Residents and stakeholders.	Residents of the South Acton Estate and Acton Gardens. The South Acton Estate, is the largest housing estate in the London Borough of Ealing.	ND, UR.	Acton Gardens regeneration programme. This housing estate programme was not complete and involves redevelopment of existing homes and the development of new housing, with the aim to create five parkland neighbourhoods, a new community hub, retail facilities and improved access to the local area.	EH. PC.	Placation.	MM, LS.	Longitudinal research involving residents' survey (online n=130; door to door n=100, telephone n=4); stakeholder interviews; site survey	SR?, CWB?, IWB?, IH+, SHD+. PO-, SY+.	Methods, Intervention, Outcomes.
Bell, R. et al. (2019)	Norway, Sweden, Spain, Netherlands, UK, Portugal, Belgium,	Various.	Local residents. Nine case study sites in low-income areas with poor access to green spaces.	GB.	EU INHERIT project. Nine case studies focused on four themes: increasing availability and access to green spaces, energy efficient housing, healthy and more sustainable diet, and	EH. PC.	Partnership.	CS, MM.	Nine mixed method case studies.	SR=, CWB?, IWB=, IH?, SDH?, PO+, INE+, CO+.	N/A.

Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID -19.
	Germany, Greece, and Czech Republic.				active transport. Two examples include: the Malvic Path (Norway) – a recreational path linking two communities and Thinking Fadura (Spain) – improved access to open space.						
Benton J.S. et al. (2021)	UK (England).	Canal path users.	Local residents and canal path users. An urban canal setting located in an affluent area within the city of Salford, England's 22 <sup>nd</sup> most deprived local authority.	GB.	Urban canal improvements. The improvements to the northern side of the canal included new footpaths, resurfacing existing footpaths, enhancement of an existing park and village green, removal of vegetation, new seating, signage and informal play equipment.	EH. PC.	Therapy.	NE.	Two comparison sites were matched to the intervention site. Systematic observations at baseline, and 7, 12 and 24 months post-baseline.	SR?, IH?, PO+.	N/A.
Bestman. A. et al. (2020)	Australia.	Programme staff and Rohingya community members.	Community members. The Rohingya community living in the city of Canterbury-Bankstown in Sydney, Australia.	CD, EV.	Rohingya Little Local project. A project using a model of community engagement to address a health priority (chosen by the community itself). As part of the project program staff from Can Get Health in Canterbury (CGHiC) worked with community members to support the planning and implementation of two community-led events: a soccer (football) tournament and a picnic day.	UN. TC.	Citizen Control.	QS.	qualitative focus groups, field notes and meeting notes	SR+, CWB+, SDH+.	N/A.
Brace, A.M. et al. (2017)	USA.	No detail.	Local residents. Cherry Hill is a small, urban neighbourhood in the southern region of Baltimore	GB, UR.	Cherry Hill Community Gardens. Cherry Hill Urban Garden was established to improve the health of residents by	EH. PC.	Mixed - Partnership, Delegation.	OS.	Data to assess program reach were collected from micro-subgrant reports	IWB+, SDH+, PO+, INE+.	N/A.

Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID-19.
			City. It is geographically isolated and is a US Department of Agriculture (USDA) designated urban food desert.		growing and selling fresh organic produce. The produce is sold weekly, on site at subsidized prices. Plus, engaging community members in gardening and educational activities.  Two school gardens, and other community gardens were subsequently set up.				which described program activities.  Changes in food access include micro-subgrant awardee activity report, awardee street addresses, and the 2105 USDA Food Desert Atlas		
Castle, E. (2018).	USA.	Community members.	Local residents. Six communities in rural North-West Minnesota.	GB.	Connecting Children in Nature in Northwest Minnesota project. A community-engaged planning, design, construction and use of natural play spaces, aiming to promote an increased sense of community ownership and to promote healthy, active lifestyles.	EH. PC.	Partnership.	QS.	exploratory study, utilizing a grounded theory approach	SR+, CWB?, IWB+, IH+, CH+, PO?, OT-.	N/A.
Cervera, M. et al. (2021)	Spain.	Local residents.	Local residents. Rubí an industrial city located 20 km from Barcelona, has a combination of a dense city centre, industrial parks, and a significant expanse of low-density residential areas (dispersed) mixed with non-developable	GB, ND.	Blue acupuncture: Can Moritz Spring. The BlueHealth intervention aimed to recover and renovate an abandoned historical site (the spring of Can Moritz) and nearby derelict land and stream, in collaboration with residents.	MT. PC.	Partnership.	CS.	questionnaire survey and two public participation landscape/place evaluation workshops. The survey was carried out pre- and postintervention implementation.	CWB+.	N/A.

Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID-19.
			land. The intervention took place in a valley next to a low-density residential area.								
Clements, J. (2018)	Australia.	Local stakeholder groups.	Festival attendees and stakeholders. The festival is held in Katoomba, the largest town in the City Council area, located on the fringes of the Greater Sydney Metropolitan Area.	EV.	The Blue Mountains Music Festival. A blues, roots and folk festival, that has run for more than twenty years. The festival has grown to attract 400-500 visitors and features international musicians. The organisation of the event still involves volunteers.	NS.	Delegation.	CS.	semistructured interviews with 16 people from local stakeholder groups	CWB?, IWB+, PO+, CO+.	N/A
Collins, T. et al. (2017)	UK (England).	Guests (aged 62-86), university staff, and student volunteers (aged 23-58).	Isolated older people who would be on their own on Christmas Day, university staff and their families, and student volunteers. The University of Salford	AU, EV.	Community Christmas Event (Christmas Lunch). The University of Salford hosted a lunch for 15 guests joining staff and student volunteers on Christmas Day.	EH. TC.	Therapy.	QS.	"qualitative multi-method approach"	SR?, IWB+, PO+.	N/A.
de Bell et al. (2020)	UK (England).	Local residents, including members of user groups with a specific interest in the green spaces	Local users. A section of the river Medlock, near Manchester.	GB.	Medlock River Restoration. Restoration of a section of the Medlock River. This involved widening the channel, removing bricks and adding footpaths, in order to improve water flow, provide habitats for wildlife and increase access for local people.	EH. PC.	Manipulation	CS.	Focus groups	CWB?, IWB-, IH+, PO+, OT+.	N/A.



Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID-19.
		around the rivers.									
de Jong, A. and Steadman, C. (2021)	UK (England).	Craft beer enthusiasts.	Attendees to the event. The Victoria Baths, an Edwardian, Grade II listed building in Manchester.	AU, EV.	Indy Man. A four-day craft beer event that is part of a programme of events.	UN. TC.	Manipulation.	CS, ES.	participant observations & Social media analysis across a one-month period	SR?, CWB-, IWB+, PO+.	N/A.
Durán Vian, F. et al. (2018).	Spain.	Local citizens and visitors.	Local citizens and visitors. Arévalo is a rural municipality of 8,123 inhabitants, located only one hour from Madrid. It is surrounded by mostly agricultural land and has two rivers Adaja and Arevalillo on either side meeting at the northern most part.	GB.	"El Parque Fluvial de Arévalo" (The Fluvial Park of Arévalo) urban fluvial space recovery project. Phase 1 of the project on the Arevalillo river involved technical actions - landscape restoration and public use (including a 1.6m fluvial path and placing of urban furniture), and social actions - citizen participation and environmental education.	EH. PC.	Consultation.	CS, SU.	Questionnaire - 8 months following first phase completion.	CWB+, IWB+, IH+, PO+, SY+, OT+.	N/A.
Eadson, W. et al. (2021)	UK (England & Scotland).	Park users, and other stakeholders including: PFP project leaders and park managers, local authority officers, community groups, local	Users of parks. Six case study parks in Edinburgh, Lambeth, Leicestershire, Lincoln, Manchester, and Tunbridge Wells.	AU, CD, CH GB.	Parks for People (PFP) programme. The PFP programme was used to restore and improve parks. Examples included: new play equipment, outdoor-gym equipment, Multi-Use Games Area, skate parks, redevelopment of football and other sports pitches, walking/running trails, a café, and a range of community projects and events.	EH, PT. PC.	Partnership.	CS, MM.	Qualitative case studies focusing on the social and economic benefits of parks investments	SR+, CWB?, IH?, SDH+, PO+, SY+, INE+, CO+.	Methods, Outcomes.

Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID-19.
		enterprises, and local service providers.									
Fiedler, T. and Wickham, M. (2022)	Australia.	Festival attendees and festival stakeholders.	Festival attendees and local community. A rural regional location in Cygnet, Tasmania, an 'island, off an island' remote setting with dispersed towns and a sparse population (1,600).	AU, EV.	Cygnet Folk Festival. A folk and music festival that offers a wide range of music, dance, poetry and workshop events. The event is an 'embedded festival' - held in a regional location, co-opting the location's infrastructure (such as using schools, halls, churches, shops etc..) and presenting volunteering opportunities.	EH. TC.	Not sure/unclear.	MM, CS.	quantitative survey instrument to measure social impacts - demographic data and social capital (n=255)  semi structured interviews (n=18 festival stakeholders)	SR+, CWB+, IWB+, PO+.	N/A.
Glover, T.D. et al. (2021)	Canada.	Programme staff.	Skateboarders and residents in the city of Toronto. The Bentway, a public space that transformed 1.75km underneath the Gardiner Expressway in Toronto.	AU, EV, PM.	Celebration of Skateboard Arts and Culture (CITE) at The Bentway. An art installation and pop-up skate park that included skateable sculptures. Plus, interdisciplinary programme of workshops, performances, marketplace, and speaker series.	EH. TC.	Partnership.	CS, QS, ES.	3 interviews with programme staff, content analysis, observations.	SR+, CWB+, PO+.	N/A.
Hagen, O.H. and Tennøy, A. (2021)	Norway.	City centre users and commuters.	City centre users and commuters. An area in Oslo city centre approx. 1.8km <sup>2</sup>	AU, ND.	Street reallocation in the city of Oslo. This included removal of approximately 760 on-street parking spaces, reuse of space (e.g, widened sidewalks, pedestrianization, greeneries, outdoor seating)	EH. BM.	Manipulation.	LS, CS, NE..	surveys (before, during, and after implementation), "city centre users" (n=5,457-6,018) and commuters (n=548-1,611); document	CWB+, IWB+, SDH?, PO+, INE-.	N/A.

Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID-19.
					and introduction of a new driving pattern.				analysis; photo-documentation		
Harris, M.W. et al. (2018)	Australia.	Exhibition visitors.	Local residents. The rural communities of Scottsdale, Georgetown, Smithton and Queenstown in Tasmania.	EV.	The Rural Art Roadshow. A travelling exhibition of art works selected from the 'Minds do Matter' art show, by Tasmanian artists with a direct or indirect experience of mental illness, some of whom spoke at the events. Four sites in rural locations for one week in each.	EH. TC.	Informing.	MM.	Anonymous short survey with six Likert scale statements and 3 open ended questions (n=56);	SR+, CWB+, IWB+, PO+.	N/A.
Hassanli, N. et al. (2021)	Australia.	Festival attendees.	Refugees, ethnic minority immigrants and local residents. A city-centre location at Darling Harbour in the heart of Sydney.	EV.	New Beginnings Festival. A one-day multicultural festival that includes live music, dance performances, creative workshops, cultural markets and world cuisine.	EH. TC.	Not sure/unclear.	QS, ES.	participant observation during the festival, in-the-moment conversations with attendees, and semi-structured interviews with attendees (n=15)	SR+, CWB+, IWB+, IH+, PO+.	N/A.
Heinze, J.E. et al. (2018)	USA.	Local residents and other members of the public.	Community members. Residential street segments containing vacant lots in Flint, Michigan.	GB, UR.	Clean and Green program. Community-based routine maintenance of vacant lots by community members including mowing, weeding and removal of trash, with some additional landscaping.	MT. TC.	Partnership.	OS.	compared incidence of violent crime among 216 residential streets segments that contained vacant lots maintained by C & G groups to street segments (n = 446) with unmaintained	CWB+, CO+.	N/A.

Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID-19.
									vacant lots over a 5-year timeframe (2009–2013)		
Hunter, R.F. et al. (2021)	UK (Northern Ireland).	Local residents living within twenty-nine electoral wards.	Local residents. East Belfast area. Seven of the electoral wards are within the top 25% most deprived in Northern Ireland	GB, UR.	Connswater Community Greenway (CCG). A major urban regeneration project including a 9km urban greenway along three rivers, remediated water courses, new or improved cycle and footpaths, a new civic square, tourism and heritage trails, new or improved bridges or crossings, new signage, public art installations, games areas and upgraded parks, new toilet facilities and 24 hour a day lighting. Social engagement and CCG promotional activities and events also occurred.	EH, MT. PC.	Placation.	MM, LS.	Household survey - conducted in 2010/11 (n=1,037) and again 2016/17 (six months after CCG opened)(n=968).	SR?, CWB+, IH?, PO +, INE=.	N/A.
Jackson, C. and Ronzi, S. (2021)	UK (England).	Residents of Grange Park.	Local residents (population approximately 6000). Grange Park area in Blackpool. An area with a housing estate and high levels of socioeconomic deprivation.	CH, GB.	The Grange. A community-led garden and hub (within a building), that responds to locally defined needs through a range of activities aimed at all ages including growing fruit and vegetables which are sold in the community shop, library, community café, and volunteering and adult learning programs.	EH. PC.	Delegation.	QS.	Community-based participatory research: photovoice (n=6 participants)	SR+, CWB?, IWB+, IH+, SDH+, PO+.	N/A.
Jakubec, S.L. et al. (2021)	Canada.	Students and garden	Community health nursing practice	GB.	Campus-community garden.	MT. PC.	Partnership.	QS.	participant observations,	SR+, CWB+,	N/A.

Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID -19.
		participants	students, research faculty, older adult residents and caregivers from longer-term care and assisted-living institutions, preschool-aged children from the campus childcare centre. University campus-community garden, situated outside the doors of the campus.		A campus-community garden project that involved weekly garden sessions over a four-month period.				interviews, and document analyses (of student proposals and reports)	IWB+, SY+.	
Kingham, S. et al. (2020)	New Zealand.	Residents of one residential street.	Residents. Fisher Avenue in Christchurch is a wide, straight, tree-lined 800m long street. It has around 65 houses and is located in a mostly residential suburb 3km south of the city.	AU.	Fisher Avenue road closure. Following road closure due to installation of new wastewater pipeline street activities were organised, including: a street party, games of cricket, basketball and football, and socialising.	UN. TC.	Citizen control.	QS, OS.	Semi-structured interviews (n=18) with residents; survey with open and closed questions	SR+, CWB?, IH+, OT+.	N/A.
Mair, J. and Duffy, M. (2018)	Australia.	Individuals connected with the event with social capital in the community.	Local residents and festival attendees. Clunes a town in Victoria, is located about one hour drive of Melbourne with a population of 1,782.	EV.	Clunes Booktown Festival. A book and literature festival that attracts 18,000 attendees.	EH. TC.	Placation.	CS, QS.	Participant observation (before, during and after the festival); Semi-structured interviews (n=6); Content analysis of media coverage	SR?, CWB+, IWB?, SDH+, PO+, SY+, AUE+, CO+.	N/A.

Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID-19.
McClinchey, K.A. (2021)	Canada.	Ethno-cultural group leaders/ members who are festival exhibitors.	Festival exhibitors/ attendees. Three festivals held in cities within the Canadian province of Ontario. The festival settings include an urban public park, the space outside a church, and various locations across a city.	AU, EV.	Three different festivals: The Multicultural Festival in Kitchener, Carassauga Festival and the KW Greek Food Festival. The three longstanding festivals that bring together different groups and organisations for food, traditional music and dance, and other activities.	EH. TC.	Not sure/unclear.	QS.	Semi-structured interviews (n=36 across all 3 festivals in 2021 paper) (n=30 in 2017 paper), active interviews with observation during practice or preparation for the festival (n=8 across all 3 festivals in 2021 paper).	SR+, CWB+, IWB+, PO-	N/A.
McCunn, L.J. et al. (2020)	USA.	Pop-up resource village attendees and community members.	Community members. An underutilized urban space in West Oakland an area of the city of Oakland, California.	AU, EV.	Pop-up Resource Village (PRV). Two mini-PRVs as trial events were followed by two larger pre-launch PRVs and then a PRV launch. All were held in the same location with demonstrations and activities (e.g. yoga, cooking demonstrations, mobile classroom, live music, massage and acupuncture services) and local businesses' pop-up shops.	EH. TC.	Not sure/unclear.	MM, CS.	Questionnaires were used at all five events (mini PRVs, pre-launch PRVs and launch PRV), and a community baseline questionnaire.	SR+, CWB+, IWB?, SDH+, OT-	N/A.
Ministry of Housing, Communities and Local Government (2020)	UK (England).	Community groups, landlords and local businesses from five pilot sites.	Local communities (including landlords, occupants, local businesses, community organisations and local community members).	AU, UR.	Open Doors Pilot Project. Vacant properties in highstreets were brought back into temporary or 'meanwhile' use by local community groups and charitable organisations.	EH TC.	Not sure/unclear – Mixed.	MM.	Face to face and telephone interviews (n=20 with community groups, n=16 with local businesses); Management information via	SR+, CWB?, CH+, PO-, SY+, AUE-	Methods, Intervention, Outcomes.

Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID-19.
			Five pilot sites on high streets in urban areas of Slough, Fenton (Stoke on Trent), Kettering, Bradford and Rochford. All sites had experienced some socioeconomic decline.						online form - just after occupancy (n=29) and again towards the end (n=20); Counterfactual interviews non-participating landlords (n=5) and unsuccessful community groups (n=3); Secondary data source analysis where relevant.		
Morley, A. et al. (2017)	UK (England).	Local residents, volunteers, stakeholders.	Local residents. Todmorden, a market town in West Yorkshire. The population of Todmorden Ward is less ethnically diverse, poorer, more deprived and with greater rates of ill health than national averages.	AU, GB, ND.	Incredible Edible Todmorden. The Incredible Edible model is based on three 'spinning plates': community (growing food in public spaces), business and learning. Examples of community growing include areas at the police station, health centre, train station and on previously derelict land. The 'Incredible Edible Way' is a walking route that connects these places.	EH. PC.	Citizen Control.	MM.	Literature review; Theory of Change Stakeholder Workshop and refinement; Community Survey (n=320); Volunteer Survey (n=28); Interviews (n= 24) and focus groups (n=2); Social Return on Investment (SROI)	SR?, CWB?, IWB?, IH+, CH?, SDH?, PO+, CO+.	N/A.
Pandit, L. et al. (2021)	Germany.	Pedestrians, cyclists and other user groups of a riverfront area.	Pedestrians, cyclists and other user groups. The Mainkai riverfront area located in the heart	AU, ND.	The Frankfurt am Main Mainkai Riverfront road closure experiment. A street along a stretch of the Mainkai riverfront was temporarily closed to	EH. TC.	Manipulation.	PP.	The research uses two sets of data collected before (July 2019) and after the road closure (May	SR?, IH?, PO?.	Intervention, Outcomes.

Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID-19.
			of the city of Frankfurt am Main. It is a pedestrianized area of about 800m in length that includes some green spaces, a children's park and bridges, and has a street running alongside.		vehicular traffic, encouraging pedestrians and other user groups to use the extended open space.				2020*) based on pedestrian counts and behavioural observations.		
Quilgars, D. et al. (2019)	UK (England).	Residents/ households and key stakeholders.	Residents of the Derwenthorpe housing development. Derwenthorpe is an urban extension on the outskirts of York of about 500 homes.	CD, ND, PM.	Derwenthorpe. The housing development was built with the aim to create a socially and environmentally sustainable community. It is a mixed community of social housing, shared ownership and owner-occupier and offered a range of environmental and social interventions from the start.	EH. PC.	Not sure/unclear.	LS.	In-depth interviews n=43 took part in 69 interviews over three rounds; Individual and household carbon footprint - Stockholm Environment Institute's online environmental footprint calculator (REAP Petite). Resident n-111 completed the REAP Petite; 9 stakeholder interviews.	SR?, CWB?, IWB+, IH+, SDH+, PO-, OT+.	N/A.
Ramsden, S. (2021)	UK (England).	Operational staff, urban agriculture volunteers and participants	Urban agriculture volunteers and participants. The project worked with communities in east Hull, and the community garden	GB.	The Green Prosperity (GP) Project Community Garden. The community garden was one part of the project's urban agriculture activity. The garden was used to develop volunteering	EH. UN.	Not sure/unclear.	CS.	Semi-structured interviews - operational staff (interviewees n=5), UA volunteers (interviewees	SR?, CWB+, IWB+, IH+, CH+, SDH?, PO-, SY+.	N/A.



Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID-19.
			was established at a local community farm. East Hull is a disadvantaged area in one of the UK's most disadvantaged cities.		activities, and once a week it was volunteer day and open to anyone to attend.				n=31), UA participants (interviewees n=11), and field notes.		
Rapošová, I. (2019)	Slovakia.	Festival organisers and festival attendees.	Festival organisers and festival attendees. The festival takes place in over 20 different locations in the city of Bratislava, for example the Old Marketplace in the city centre, music clubs, theatres, galleries, a bookstore, an Islamic Centre and a chapel.	EV.	Multicultural festival [fjúžn]. An annual multicultural festival that focuses on new minorities living in Slovakia, and includes concerts, discussions, artistic performances and exhibitions.	EH. TC.	Not sure/unclear.	ES.	Ethnographic observation of selected festival events, interviews with organisers, and analysis of festival-related documents	SR+, INE?.	N/A.

Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID-19.
S3 Solutions (2018)	UK (Northern Ireland).	Grantees and unsuccessful applicants, programme steering group.	Various. 9000 individuals had participated in Space & Place funded projects activities, events or programmes. 30 projects ranging from community buildings to outdoor spaces in a mix of urban and rural locations across Northern Ireland.	AU, CD, CH, GB, ND, PM.	Space and Place NI Programme. The programme had 30 projects awarded funding to create better spaces and places for people and communities. These included outdoor green space, community buildings, transformation of contested space, and re-use of derelict space.	EH. PC.	Not sure/unclear – mixed.	MM.	Focus group and 1-1 interviews with grantees, impact survey to grantees and unsuccessful applicants, facilitated discussion with programme steering group, review of monitoring forms, attendance of events	SR+, CWB+, CH+, PO-, SY+.	N/A.
Social Life (2022)	UK (England).	Residents, former residents, agencies and local stakeholders, local traders.	Residents. The Aylesbury Estate is located in Southwark, south London. In 2019 some parts of the estate were shown to be in the 10% most deprived small areas in England. At the start of the programme approximately 6,700 people were living there.	UR.	The Aylesbury Estate Regeneration Programme. The programme is due to be complete in 2035 and involves demolition and rebuilding of the site, requiring residents to be rehoused.	EH. PC.	Placation.	MM.	24 Stakeholder interviews; 81 street interviews with residents; 13 local trader interviews. 9 walking ethnographies; 4 ethnographic observations; 10 phone interviews; 26 online survey; Secondary data - government agencies and Southwark council.	SR?, CWB-, IWB?, SDH?, PO-, SY+, INE-.	Method, Intervention, Outcomes.

Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID-19.
Spilková, J. (2017)	Czechia.	Community garden managers/representatives.	Members and attendees. Eleven community gardens in different neighbourhoods in the city of Prague	AU, CH, GB, ND.	Community gardens - various. Eleven diverse community gardens started in a bottom-up manner, and many on previously vacant land. Most of the gardens have a seating/relaxation area, and all organise activities for members, neighbours or for the wider public.	EH. PC.	Not sure/unclear – mixed.	QS.	Semi-structured interviews; Photo documentation; Field study reports and other documents such as leaflets, websites and promotional materials.	SR?, CWB+, IWB+, PO+.	N/A.
Stenning, A. (2020).	UK (England).	Street organisers and activators, neighbours, residents, and local authority respondents who were organisers or participants in playing out sessions.	Residents of streets used for playing out. Various residential streets.	AU.	Play Streets. Residential streets temporarily closed for neighbours to get together to play and meet on a regular basis. Resident-led, with all ages attending.	EH. TC	Citizen control.	CSS, MM.	National survey; local survey to non-participants; telephone interviews with organisers and participants (n=10)	SR?, CWB+, IWB?, SDH+, PO?, INE?.	N/A.
Stevenson, N. (2019)	UK (England).	Residents and visitors of one residential street.	Residents and visitors. A street in Archway, North London comprising 110 properties.	AU, EV, PM.	Street Party. The street was reconfigured to hold a community street party with shared food, and activities which included a badminton court, football, arts activity, street museum, face painting, storytelling, a	EH. TC.	Citizen Control.	CS.	20 interviews (before and after) with a range of participants, organisers and non-participants; Questionnaires completed during the street party	SR+, CWB?, IWB+, PO?.	N/A.

Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID-19.
					chill out zone, Zumba, music and dancing.				(residents n=21 and visitors n=19); Observations		
Tartari, M. et al. (2022)	Italy.	Local creatives, artists, gallery owners and policy makers, students, local non-profit associations and residents.	Wider community, local community, stakeholders and residents. The street art projects were carried out in the NoLo (North of Loreto) and Ortica peripheral areas of Milan. Both have a similar historical, urban and social composition.	PM, UR.	Muri Liberi and Or.Me. The Muri Liberi (Free Walls) was a city sponsored street art project that made walls available to street artists. The Or.Me project was a community based-public art project.	EH. BM.	Therapy, partnership.	CS, ES.	Participant observation; Interviews - in-depth interviews and micro-interviews; Data collection from newspaper articles, documentaries and web and social media	SR?, CWB?, IWB?, SDH?, PO+.	Method.
Terry, V. et al. (2021)	UK (England, Northern Ireland, Scotland & Wales).	Eden Project Communities staff, Big Lunch organisers, Big Lunch representatives, and Big Lunch organisers, partners, volunteers and residents from eight Big Lunch case studies.	Participants of various The Big Lunch events. Eight case studies of The Big Lunch events included settings in: local parks, town squares and town halls, in streets, cul-de-sacs, a community garden, and other public areas.	AU, EV.	The Big Lunch. The Big Lunch runs every June. Single events use food as a vehicle to bring people together in their local area, to celebrate and strengthen residents' connection to a place, and provide an opportunity to form new connections and relationships with neighbours.	EH. TC.	Citizen control.	MM.	A desk based review, scoping interviews (EPC Team), a Theory of Change workshop, online surveys (Big Lunch organisers), indicator and outcome workshops), case studies of eight Big Lunch activities (n=34); share and build workshop.	SR?, CWB+, IWB+, CH+, SDH+, PO?, SY+, INE+, AUE+.	Method, Intervention, Outcomes.

Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID-19.
Tischler, V. (2018)	UK (England).	Exhibition visitors.	Street users. Urban public places in Dalston and Stratford.	AU, EV.	Light Box exhibitions. The Expert View, Dalston and Letting in the Light, Stratford. The exhibitions showcased the work of artists, including those with lived experience of mental illness, to raise awareness and understanding of mental health.	EH. TC.	Therapy.	CSS.	Interlinked cross-sectional surveys with open and closed questions. Numerical data were analysed using descriptive statistics and thematic analysis used to analyse textual data	CWB+, IWB?, PO-	N/A.
Triguero-Mas, M. et al. (2021)	UK (England), Canada, Ireland and USA.	Case study neighbourhood residents, community-based organizations, neighbourhood resident leaders and other stakeholders such as public agencies staff.	Neighbourhood residents. Five neighbourhoods experiencing different stages of gentrification processes and natural outdoor environments (NOE) interventions in the cities of Dublin, Montréal, Glasgow, San Francisco, and Washington.	GB, ND, UR.	Natural Outdoor Environment Interventions. The NOE interventions in the five cities included: enhanced or new green spaces and parks, bike lanes and infrastructure, canal regeneration, a 'living street', waterfront redevelopment.	EH. PC.	Not sure/unclear – mixed.	CS, QS.	Semi-structured interviews with stakeholders (n=117) - "(a) case study neighborhood residents, community-based organizations and neighborhood resident leaders; and (b) elected officials, midlevel planning, health or environmental staff in public agencies at municipal/national/regional level; and other local stakeholders	IWB-, SDH-, PO-, INE, AUE-, OT-.	N/A.
Umstattd Meyer, M.R. et al. (2021)	USA.	Implementation team members, adults and	School aged children. Four participating low-income, rural communities in	AU.	Play Streets. A place-based intervention where a street or public space is closed temporarily	EH. PC.	Partnership.	QS.	Semi-structured interviews and focus groups	SR+, CWB+, IH+, INE+.	N/A.

Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID -19.
		children (who had attended at least one Play street).	Maryland, North Carolina, Oklahoma and Texas.		by community members to provide a safe place for children to play.						
Waine, H. and Chapman, M. (2022)	UK (England).	Individuals who were active in local organisational work in the area of Grenfell at the time of the fire.	Community organisation, volunteers, residents, other community members. Grenfell Tower and surrounding area is situated on the Lancaster West Estate in the north of the London Borough of Kensington and Chelsea. This area is one of the most deprived areas in England.	AU, CD.	Local buildings and open spaces were taken over by community and voluntary organisations as part of a grassroots mobilisation to help the community in the aftermath of the fire at Grenfell Tower, and then later for other community activity.	UN. UN.	Not sure/unclear.	QS.	Narrative interviews (n=6) with individuals active in local organisational work in the area at the time of the fire. The research took place around the one year anniversary of the fire - 3 interviews before and 3 interviews after.	SR+, CWB?, PO+, INE+.	N/A.
Ward Thompson, C. et al. (2019)	UK (Scotland).	Local residents.	Local residents. Six sites in the Scottish Lowlands Forest District with woodlands situated within 1.5 km of settlements of at least 2000 people. Sites were chosen in areas of high deprivation.	GB.	Woods in and Around Towns (WIAT). Three targeted woodland sites underwent interventions specific to each site. These included physical interventions – changes to the woodland environment and social interventions – community engagement activities.	EH. PC.	Consultation.	MM, CSS, LS, PP.	Core community survey at each of the three intervention sites in three waves - baseline and after each intervention phase (n=5460 panel A). The completed survey had a nested cohort (n=609, panel B).; Environmental audits every six	SR+, CWB+, IWB?, IH?, SDH+, PO-, CO+, OT+.	N/A.

Reference	Country	Study population	Intervention population and setting.	Intervention category.	Intervention Description.	Type and effect of intervention.	Level of participation (Arnstein's Ladder)	Study design	Study design description	Outcomes	COVID-19.
									months before and after each intervention phase (n=256 community members; Post intervention focus group (n=34) Economic assessment		
Winter, S.J. et al. (2020)	USA.	Park users /community residents, local businesses, key informants.	Pop-up park users/local residents, and local businesses. Two pop-up park locations were in the city of Los Altos, California. Location A 8,200 ft <sup>2</sup> (approximately) green space with skate park 2,700ft <sup>2</sup> (approximately). Location B 2,300ft <sup>2</sup> (approximately) green space.	AU, ND.	Pop-up parks. Following closure of a street due to construction the area was converted into a pop-up park for a six-week period. Three more pop-up parks followed. Artificial turf, chairs, tables and umbrellas were made available and planned activities and events put on throughout.	EH. TC.	Therapy.	MM.	Findings from the convergent qualitative and quantitative data gathered in the first year of the study (2013) were added to in both an exploratory and explanatory sequential approach in 2014. Key longitudinal data were gathered again in 2016 and data were merged for analysis.	SR+, IH+, SDH+, PO?, SY+, AUE+.	N/A.

## Appendix F: Quantitative outcomes

Study	N, Length of follow-up	Social relations	Community wellbeing	Individual wellbeing	Other
Active Neighbourhoods 2020	N not reported; 3 years		88% of people involved feel more pride in the neighbourhood. 93% of local residents agreed that their nature reserve was now a more enjoyable place to visit; 80% agreed that they felt a greater sense of responsibility to look after the sites; 78% agreed that it was now a safer place to visit; 67% agreed that they were now more knowledgeable about their natural environment; and 58% agreed that they felt they now had a say about what happens in their nature reserves.	positive well-being (B = 7.42, 95% CI 4.18–10.67) and life satisfaction (B = 0.40; 95% CI 0.11–0.70) were both higher after the intervention compared to before, with associations for life satisfaction stronger among those who visited the site in the last four weeks	
Adhikari 2021	N=69; data collected during and immediately post-intervention.	80% of children met new friends; 54% of caregivers said they had more contact with neighbours.	95% said that PlayStreets make them feel like a part of their community. 92% of participants thought that PlayStreets made the neighborhood safer. Many respondents agreed that PlayStreets helped to keep their children out of trouble (78%).	half reported that children played more.	
Bacon 2021	N=230; 'snapshot' survey 5 years after the start of the regen intervention	In 2020 the people surveyed reported weaker relationships with their neighbours than in earlier years. This was stronger among people living in the new development than in the older estate.  2020 (2018) scores:	A third of residents surveyed had given help to families, friends or neighbours not living with them. They reported that they offered more support during the pandemic than before.  "On the South Acton Estate since 2015, overall the quality of the built environment on the existing	82% of respondents said they felt that the regeneration is improving quality of life, however this had fallen slightly from 2018 (94%). Fewer residents living in the older estate felt the regeneration was succeeding in this.  All measures of wellbeing fell notably from 2020 to 2018. This was	Satisfaction with facilities fell, particularly for sports and leisure and health facilities. People living on the older estate were more likely to be satisfied with childcare, health facilities, facilities for socialising and sports and leisure facilities than those living in the new homes



		<p>57% (78%) agree could go to someone in neighbourhood if needed advice; 45% (50%) agree that can borrow things and exchange favours with neighbours; 56% (80%) regularly stop and talk with people in neighbourhood; 85% (89%) agree that this local area is a place where people from different backgrounds get on; 58% (97%) agree that feel similar to others in the neighbourhood.</p> <p>New development/old estate:  Feel similar: 52%/ 69%  Different backgrounds get on: 81%/ 93%  Stop &amp; talk: 49%/ 72%  Borrow things: 43%/ 51%  Advice: 49%/ 76%</p>	<p>estate remained similar to previous years (Score in 2015 = 9/16; Score in 2018 = 8/16, score in 2020 9.5/16)</p> <p>In Acton Gardens the quality of the built environment in the first phases of Acton Gardens has slightly improved (Score in 2015 = 13/16; score in 2018 = 13/16, score in 2020 = 14/16)</p>	<p>especially marked for life satisfaction (68% in 2020 vs 87% in 2018). Life satisfaction was slightly higher among people responding to the survey who lived on the new development (76% vs 49%).</p> <p>Fewer people reported feeling that they could influence decisions affecting the area in 2020 than in 2018, and more said that they could not</p>	
Bell 2019	<p>Various (3 relevant case study sites)</p> <p>Malvik path: n=2072 at 4y follow up</p> <p>Thinking Fadura (TF) n=164, snapshot.</p> <p>RROA: n=151. 6 month follow up</p>		<p>No change in neighbourhood social capital (Malvik path)</p> <p>Satisfaction with availability and quality of nature contact and seaside declined slightly (Malvik path).</p> <p>Satisfaction with availability of sports facilities and walking/ biking paths increased (Malvik path).</p>	<p>No change in health or physical activity (Malvik path);</p> <p>Increased physical and recreational activity &amp; improved PH of green zone users (Thinking Fadura);</p> <p>Decline in physical activity but no change in health (RROA - seasonal?);</p> <p>No change in life satisfaction or thriving (Malvik path);</p> <p>Improved MH of green zone users (TF);</p> <p>No change in wellbeing (RROA)</p>	<p>increased house value (TF)</p> <p>(Thinking Fadura) the project's benefits outweigh the costs, from year 13 onwards: In the selected scenario (discount rate = 3.5%, time horizon = 20 years, assumed values for items with high uncertainty = 0%, and changes in future use = 0%), the NPV was around 1.2 million Euro, and the payback period was 10.6 years. Starting from year 13 onwards the Thinking Fadura project presents higher cumulative benefits than costs and therefore positive NPVs in the majority of scenarios.</p>

Benton 2021	N=64, follow up to 12 months	Connect behaviour increased at 12 months (p = .03) and 24 months (p = .006), but not at 7 months (p = .42) post-baseline		<p>Take Notice behaviour increased at 24 months (p = .001), but not at 7 months (p = .07) or 12 months (p = .58) post-baseline</p> <p>PA: number of people using the intervention canal path increased at all 3 follow-ups, controlling for day, time of day and precipitation: 7 months (IRR 1.67, 95% CI 1.44–1.95), 12 months (primary outcome) (IRR 2.10, 95% CI 1.79–2.48), and 24 months post-baseline (IRR 2.42, 95% CI 1.80–3.24).</p> <p>Compared to the comparison group, Walking behaviour increased in the intervention site at all three follow-ups; Vigorous activity increased at 7 months (p = .009) and 24 months (p = .002), but not at 12 months (p = .96) post-baseline</p>	the total number of people accessing the unchanged canal path decreased at 12 and 24 months postbaseline. This indicates there was some displacement to the intervention path from existing routes along the unchanged side of the canal. However, there was an overall increase in the combined total number of people using the canal at the intervention site, which suggests that displacement from this particular route cannot explain all of the observed increases in use of the intervention path.
Brace 2017	Whole neighbourhood ; 1 year		After the new gardens were constructed in the Cherry Hill neighborhood, 100 percent of residents lived within one mile of a community or school garden, and 90 percent of residents lived within one half mile of a community or school garden		
Cervera 2021	N=43, 1 year		Overall, the quality of the spring and its surroundings was mostly rated as “bad” or “very bad” before the intervention (40%), whereas after the intervention, more than 50% of the participants rated the site as of “good” or “excellent” quality. levels of satisfaction (rated as “totally		

			agree”) substantially increased from less than 20% to more than 60%.		
Duran Vian 2018	N=696, 8 months follow up		<p>Around twenty percent of the respondents had cooperated in the development and implementation of one or various project actions</p> <p>97% of the participants are convinced that the executed actions have improved the appearance of the municipality and their quality of life.</p> <p>Around 88% of the respondents affirmed that they were now more aware of the fluvial environment after the first phase execution. In case of those who participated in the project, the percentage increased to 96%</p>	1300 schoolchildren (80% of the local childhood) attended educational activities and 100 took part in the planting day. Also, around 300 people participated in educative workshops, ecosporting and therapeutic itineraries and cultural and sporting events.	
Eadson 2021	N=563; length of FU not clear		34% felt their ability to influence decisions relating to the park had improved over time, 63% felt there was no change, 3% said it had got worse.	<p>56% of park users said they had become more physically active since using a PFO park</p> <p>73% said connection to nature had improved.</p>	
Fiedler 2022	N=255, data collected during event		Community pride (cognitive social capital) returned the greatest number of positive responses (80% of respondents agreeing this was a result of the festival), with the opportunity of increased of participation in the event (76%), a shared experience (76%) and volunteering opportunities (75%) among the highest-ranked impacts		
Hagen 2021	N=6018, 2 years		there was an increase in the proportion agreeing that the city center offered a good walking	little change in enjoyment - More than 80 percent of the respondents answered that they enjoyed staying	From 2017 to 2019, there was an increase in respondents who answered, “very easy” (from 55% to 61%). This may

			design and comfort after the street-space reallocation from driving and parking cars to other modes and use	in the city center “very much” or “pretty much” for all the years investigated	indicate that the perceived accessibility to the city somewhat improved.  Respondents with children younger than 18 years living at home were more likely to say that they visited less frequently (20%) compared with other groups (16%)
Harris 2018	N=56, data collected during event		Mean score of 4.5 (SD 0.5) on a 5 pt Likert scale agreed the rural roadshow was a welcome addition to our community activities	Mean score of 3.8 (SD 0.9) on a 5 pt Likert scale agreed the rural roadshow was helpful to their understanding of mental health	
Heinze 2018	N=216 vacant lots maintained by community members vs 446 control sites, 5 year follow up		community-engaged greening of vacant lots is associated with nearly a 40% reduction in assaults and total violent crime compared to vacant lots not maintained by these groups		The Genesee County Land Bank Authority estimates that C & G participants have provided \$5.5 million worth of mowing and trash removal work since program inception...encouraging and supporting the community in neighborhood greening efforts can provide substantial support for city budgets
Hunter 2021	N=968, 6 month follow up	small improvement in local area trust between baseline and follow-up.  a small decline in social networks (i.e., contact with friends, family, neighbours)	Perceptions of the environment for attractiveness[,]...traffic...and safety improved over time in the intervention area	There was little evidence of a difference in mean WEMWBS before (mean = 50.6) compared with after the intervention.  There was evidence of a decline in mean quality of life from before (EQ5D mean = 73.3) to after (mean = 63.2) the intervention.  There was a significant decline in the proportion of the local population meeting the UK physical activity guidelines. At baseline, 68% of participants met the physical guidelines, which declined to 61% at follow-up...This decline is broadly in line with the Northern Ireland	those in the most deprived quintiles had a similar reduction in physical activity behaviour compared to those in the lesser deprived quintiles.  The construction period and postcompletion of the greenway was at a time of significant economic austerity, resulting in uncertainty regarding job security and job location; a time when health and wellbeing was at its most vulnerable

				population which has seen a decline of 6% of adults meeting the UK physical activity guidelines over a similar time period	
MHCLG 2020	N=38, 6-9 months follow up	14 of 29 groups who provided information on the ages of attendees said that a 'mix of different ages' attended their groups.			There is only limited evidence of increasing footfall on high streets, and therefore increased custom for local businesses
Morley 2017	Volunteer survey n=28; 8y follow up (by comparing with previous studies)	100% reported improved friendship circle	96% reported improved sense of belonging to a community;	<p>Volunteer survey: respondents reported a positive relationship between their IET involvement and a range of health, wellbeing and knowledge accumulation factors. In particular, positive impacts on their sense of well-being, sense of belonging to a community and friendship circle were near universal. The proportion of positive relationships for the other categories ranged from 61% for knowledge of preparing and cooking food to 79% of the understanding of community issues.</p> <p>72% reported increased physical health; 77% increased activeness; 64% improved quality of diet; 96% improved sense of wellbeing;</p>	The SROI analysis showed a Net Social Return for IET activities in 2016 of £878,609, set against inputs totalling £159,512 – and concluded that for every £1 invested, largely through volunteer time and small financial contributions, £5.51 was returned to the Todmorden community. Of this return, 75% was attributable to the uplift in demand for local food, as evidenced by the community survey, and 9.4% was attributable to the increase in visitors to Todmorden.
Pandit 2021	N = whole neighbourhood ; 10 month follow up.	The Mainkai street showed more standing activities which included social chatting, eating and drinking, taking pictures and other interactive activities		With road closure during pandemic, walking cases decreased by 35% (n pre-scenario = 453; n postscenario = 291) while cycling cases increased by 1150% (n pre-scenario = 6; n post-scenario = 69). In both cases, more homogeneous distribution of children walking along the entire stretch was observed as compared to cycling, and spaces that were	all user-groups showed a decline in their peak hour frequency except cyclists. This reflects how the pedestrianized street attracted more cyclists, with overall decline (-4%) in pedestrians during the pandemic scenario

				previously not utilized by children were now occupied by them	
Quilgars 2019	N=1212, 6 year follow up	While owners retain the 60:40 split between neighbours and friends, shared owners and renters have a much higher proportion of neighbours than friends, approximately 80:20	REAP Petite respondents were asked about their perceptions of Derwenthorpe as a strong community. The majority of respondents of all tenure types agreed that it was, with 'settled' residents more likely to agree compared to 'new' residents (71% compared to 64%).  68% very satisfied with their local areas, compared to 58% nationally.		
S3 Solutions 2018	N-30 organisations and their local communities; 6 year follow up	Reduced vulnerability and isolation for 2953 people	Enhanced diversity and social cohesion with 10,323 people expressing improvements in these areas	Increased connectivity with community green spaces for 757 people  Improved health & well-being for 8162 people  Increased capacity including advocacy for 9353 people through using accessible and inclusive community space  Reduced fear of crime and anti-social behaviour for 1360 people	Stronger community leadership with 174 leading in project development and collaboration with external agencies  Increased multi-agency cross sectoral partnership & collaboration with 57 different agencies across the spectrum of projects
Social Life 2022	N=81, 5 year follow up	The majority of respondents (69%) said they feel this is an area where people from different backgrounds get on well together. In the residents survey of 2014, 94% said they feel people of different backgrounds get on well together, this was higher than in comparable areas.	85% of people in the street interviews said they felt they belong in the area. As in 2014-15, belonging is still very high compared to other comparable areas  71% of the people interviewed said they did not feel like they have a say over what happens in the area		The majority of residents interviewed that are living within the regeneration area said they were dissatisfied with their current housing situation (58%) with only a quarter of residents (26%) saying they were satisfied. 17% of the people interviewed had mixed feelings, many saying they liked their homes but there were problems overall

		77% agreed they had friends, family or neighbours they could turn to if they needed help or support			
Stenning 2020	N=61, 2 year follow up	<p>Knew more people (95% agree), street felt friendlier and safer (86.7% agree); children made new friends (71.7% agree) spanning different ages and schools.</p> <p>96.6% say hello to neighbours more often; 77.6% stop to chat to neighbours more often; 65.5% neighbours ask favours of each other more often; 39.7% neighbour socialising with each other more; 32.8% neighbours babysitting for each other more; 29.3% playdates; 48.3% increase in children playing out informally; 50% other street events e.g. big lunch</p>	<p>increased sense of belonging (91.7% agree)</p> <p>street felt friendlier and safer (86.7% agree).</p>		
Terry 2021	N=211, 1 year follow up	Nearly three quarters (74%) of Big Lunch organisers agree that The Big Lunch helps to bring different generations together.	87% agreed or strongly agreed that 'It made me feel a part of something bigger' and 'I feel a stronger sense of community'		
Tischler 2017	N=158, snapshot survey during visit		The exhibitions were successful in raising awareness with most respondents (106/158, 67%) stating that the lightboxes had got them thinking about mental health. Eighteen (11%) responded that the exhibitions did not make them think about mental health at all. When asked if the exhibitions had triggered new thoughts about mental health, 85 (54%) responded "yes" or "yes-profoundly", 40		

			(25%) said “slightly” and 22 (13%) said “not at all”		
Ward Thompson 2019	N=5460, follow up 4 or 8 months (immediately post intervention)	The intervention was also associated with increased social cohesion (panel A, B 0.5, 95% CI 0.29 to 0.70; $p < 0.001$ ) by wave 3 but these findings were significant for panel A only	The environmental audit results showed a significant difference between intervention and control site scores at each time point, both for community ( $p < 0.001$ ) and for expert audits ( $p < 0.001$ ). The interventions were perceived as significantly enhancing the quality of the intervention woodlands compared with baseline, and this was true regardless of seasonality. By summer 2015, after both phases of the intervention were completed, the intervention sites were considered to be of significantly higher quality than the control sites. However, for the community auditors (but not the expert auditors), this had also been true at baseline.	Measures of PA (as measured by the IPAQ-SF) showed positive association with the intervention for moderate levels of PA (panel A, B 249.2, 95% CI 58.25 to 440.1; $p = 0.01$ ; panel B, B 559.3, 95% CI 211.3 to 907.2; $p = 0.002$ ) and overall PA (panel B, B 861.5, 95% CI 106.5 to 1616.4; $p = 0.025$ ). This compared favourably with the control group, in which levels of PA declined over time  Awareness of the local woods also increased significantly for the intervention group (panel B, OR 3.39, 95% CI 1.72 to 6.67; $p < 0.001$ ). For those who visited their local woods (a minority of participants), there was a significant increase in going for a walk in the woods by wave 3 (panel A, OR 3.3, 95% CI 1.73 to 6.29; $p < 0.001$ ) and for walking with family and/or friends by wave 2 (panel A, OR 3.42, 95% CI 1.37 to 8.56; $p < 0.01$ ). For measures of experience of the woods associated with attention restoration theory, we found a significant association between the intervention and ‘being away’ and ‘fascination’ by wave 3 for both panels [‘being away’, panel B, B 2.72, 95% CI 1.95 to 3.49; $p < 0.001$ ]	Multilevel regression models showed a differential impact between intervention and control at survey wave 3 in panel A [B (unstandardised coefficient) 3.58, 95% confidence interval (CI) 2.85 to 4.31; $p < 0.001$ ] and in panel B (B 3.03, 95% CI 1.54 to 4.52; $p < 0.001$ ). Mental well-being results showed a similar differential impact, with a decline in SWEMWBS score by wave 3 for panel A (B -0.57, 95% CI -1.10 to -0.03; $p < 0.05$ ) and panel B (B -1.65, 95% CI -2.73 to -0.57; $p < 0.01$ ). Using the same analytical approach, we found no significant change in HRQoL (EQ-5D) associated with the intervention. "... " The increase in PSS scores and decrease in SWEMWBS scores associated with the intervention was strongly evident in those who had not made such nature visits, suggesting that factors other than the WIAT intervention lie behind the mental health patterns observed.
Winter 2020	N=261, 4 year follow up	Socialize with others (16.9%)  ...Park users reported that they most liked the park because of the opportunities to be social (19%) and outside (15%)	The data showed that the parks were visited by a reasonably large, multigenerational group of users who came to engage in leisure-time physical activity, shop at local		From a business perspective, the data collected in 2014 indicated that foot traffic into seven of eight businesses directly fronting on the location A park increased during a 4-day period when the park was in place, compared to a



			stores, attend programmed events, and socialize with others		similar 4-day period when the park was not present. All downtown business owners/ managers (N = 95) were surveyed and the vast majority (70.3%) reported no decrease in sales compared to the month before when the pop-up park was not in place. City sales tax data also indicated increases in year-on year sales tax revenue in the financial quarter in which the parks were in place (2014 and 2016), but not for 2015 when there was no pop-up park
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## Appendix G: Validity assessment table

Key: Y = Yes; N = No; ? = can't tell; n/a = not applicable

0 = low quality- (<50% criteria met); 1 = moderate quality (50-75% met); 2= good quality (>75% met)

### Qualitative studies

Study	Qualitative method appropriate?	Research design appropriate?	Clear statement of findings?	Data collection appropriate?	Recruitment strategy appropriate?	Rigorous data analysis?	Researcher relationship considered?	Ethical issues taken into account?	Contribution ?	Level
Abramovic et al. 2019	Y	Y	Y	Y	?	?	N	?	Y	1
Active Neighbourhoods 2020	Y	Y	N	?	?	?	N	?	Y	0
Alexander 2021	Y	Y	N	?	?	?	N	?	Y	0
Alkon & Cadji 2020	Y	Y	Y	Y	N	?	Y	?	Y	1
Bacon et al. 2021	Y	Y	Y	Y	Y	?	Y	?	Y	1
Bell et al. 2019	Y	Y	Y	?	?	N	?	?	Y	0
<b>Bestman et al. 2020</b>	Y	Y	Y	Y	Y	Y	?	Y	Y	2
<b>Castle 2018</b>	Y	Y	Y	Y	Y	Y	Y	Y	Y	2
<b>Clements 2018</b>	Y	Y	Y	Y	Y	Y	Y	?	Y	2
Collins et al. 2017	Y	Y	Y	Y	Y	Y	?	?	Y	1
<b>de Bell et al. 2020</b>	Y	Y	Y	Y	Y	Y	?	Y	Y	2
de Jong 2021	Y	Y	Y	Y	Y	?	?	?	Y	1
Eadson et al. 2021	Y	Y	Y	?	?	?	?	?	Y	0
Fiedler and Wickham 2022	Y	Y	Y	Y	?	Y	?	?	Y	1
Glover et al. 2021	Y	Y	Y	Y	?	Y	?	?	Y	1

Study	Qualitative method appropriate ?	Research design appropriate?	Clear statement of findings?	Data collection appropriate?	Recruitment strategy appropriate?	Rigorous data analysis?	Researcher relationship considered?	Ethical issues taken into account?	Contribution ?	Level
Harris et al. 2018	Y	Y	Y	Y	Y	?	?	?	Y	1
Hassanli et al. 2021	Y	Y	Y	Y	Y	Y	?	?	Y	1
<b>Jackson and Ronzi 2021</b>	Y	Y	Y	Y	Y	Y	?	Y	Y	2
<b>Jakubec et al. 2021</b>	Y	Y	Y	Y	Y	Y	?	Y	Y	2
Kingham et al. 2020	Y	Y	Y	Y	Y	?	?	?	Y	1
Mair and Duffy 2018	Y	Y	N	Y	Y	Y	?	?	Y	1
McClinchey 2021	Y	Y	N	?	Y	?	?	?	Y	0
<b>MHCLG 2020</b>	Y	Y	Y	Y	Y	?	Y	Y	Y	2
<b>Morley et al. 2017</b>	Y	Y	Y	Y	Y	Y	?	Y	Y	2
Quilgars et al. 2019	Y	Y	Y	?	Y	?	?	?	Y	1
Ramsden 2022	Y	Y	Y	Y	?	?	Y	?	Y	1
Rapošová 2019	Y	?	Y	?	?	?	?	N	?	0
S3 Solutions 2018	Y	?	?	?	?	?	?	?	?	0
Social Life 2022	Y	Y	Y	Y	Y	?	Y	?	Y	1
Spilková 2017	Y	?	Y	Y	Y	?	?	?	Y	1
Stenning 2020	Y	Y	Y	Y	Y	?	N	?	Y	1
Stevenson 2019	Y	?	Y	?	?	?	?	?	Y	0
Tartari et al. 2022	Y	Y	?	?	?	?	?	?	Y	0
Terry et al. 2021	Y	?	Y	?	Y	?	?	?	Y	0
Triguero-Mas et al. 2021	Y	Y	Y	Y	Y	Y	?	?	Y	1
<b>Umstatt Meyer et al. 2021</b>	Y	Y	Y	Y	Y	Y	?	Y	Y	2
Waine and Chapman 2022	Y	Y	Y	Y	Y	?	?	Y	Y	1

Study	Qualitative method appropriate?	Research design appropriate?	Clear statement of findings?	Data collection appropriate?	Recruitment strategy appropriate?	Rigorous data analysis?	Researcher relationship considered?	Ethical issues taken into account?	Contribution?	Level
Ward Thompson et al. 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y	2
Winter et al. 2020	Y	Y	?	?	?	?	?	?	Y	0

#### Quantitative studies

Study	Int well describe?	Specific intervention	Appr measure	B&A	All F U	Assignment level OK	Comp approp	Study conduct OK	Repr sm pl	Bsln equiv	Sm pl size	35% complete	Dropout recorded	Dropout rpeorted	Cfd g & ctm n	Msr mt equi v	Vali d meas	Ind meas	Obj meas	Analys appr	Metho ds appr	Missi ng data	LEVEL
Active Neighbourhoods 2020	Y	Y	Y	Y	?	n/a	?	?	?	?	?	?	?	N	n/a	n/a	Y	Y	N	?	?	?	0
Adhikari et al. 2021	Y	Y	Y	N	n/a	n/a	n/a	Y	?	n/a	?	n/a	n/a	n/a	n/a	n/a	?	N	N	Y	Y	?	0
Austin et al. 2021	Y	Y	N	N	N	n/a	n/a	?	?	?	N	N	N	n/a	n/a	n/a	N	N	Y	?	N	?	0
Bacon et al. 2021	Y	Y	Y	n/a	N	n/a	n/a	Y	N	n/a	?	n/a	n/a	n/a	n/a	n/a	Y	Y	N	?	?	?	0
Bell et al. 2019	Y	Y	Y	Y	N	Y	n/a	Y	?	?	Y	N	Y	n/a	N	Y	Y	?	Y	Y	Y	Y	1
Benton et al. 2021	Y	Y	Y	N	n/a	n/a	Y	Y	Y	Y	Y	n/a	n/a	n/a	Y	Y	Y	Y	Y	Y	Y	n/a	2
Brace et al. 2017	Y	Y	N	Y	n/a	Y	Y	?	n/a	?	?	n/a	n/a	n/a	?	Y	Y	Y	Y	?	Y	n/a	1
Cervera et al. 2021	Y	Y	N	Y	N	n/a	n/a	Y	?	n/a	N	?	n/a	n/a	n/a	n/a	Y	N	N	Y	Y	?	0
Durán Vian 2018	Y	Y	Y	N	n/a	n/a	Y	Y	?	?	Y	n/a	n/a	n/a	?	n/a	N	Y	N	?	?	?	0

Study	Int well describe d?	Specific intervention	Appr measure	B&A	All F U	Assignment level OK	Comp approp	Study conduct OK	Repr sm pl	Bsln equ iv	Sm pl size	35% comple te	Dropo ut record ed	Dropo ut rpeort ed	Cfd g & ctm n	Msr mt equ iv	Vali d meas	Ind meas	Obj meas	Analy sis appr	Metho ds appr	Missi ng data	LEVEL
Eadson 2021	Y	Y	?	N	n / a	n/a	N	?	N	n/a	?	?	n/a	n/a	n/a	n/a	?	Y	N	?	?	?	0
Fiedler and Wickham 2022	Y	Y	Y	N	n / a	n/a	n/a	Y	?	n/a	?	n/a	n/a	n/a	n/a	n/a	Y	N	N	N	?	?	0
Hagen and Tennøy 2021	Y	Y	Y	Y	n / a	n/a	Y	Y	Y	n/a	Y	?	n/a	n/a	?	Y	Y	Y	N	N	N	?	1
Harris 2018	Y	Y	Y	N	n / a	n/a	n/a	Y	?	n/a	N	n/a	n/a	n/a	n/a	n/a	Y	N	N	Y	Y	?	1
Heinze et al. 2018	Y	Y	Y	Y	n / a	n/a	Y	Y	Y	?	Y	Y	n/a	n/a	Y	Y	Y	Y	Y	Y	Y	?	2
Hunter et al. 2021	Y	Y	Y	Y	Y	n/a	Y	Y	?	Y	Y	n/a	n/a	n/a	Y	Y	Y	Y	N	Y	Y	?	2
McCunn et al.2020	Y	Y	Y	N	N	n/a	Y	Y	?	?	N	n/a	n/a	n/a	?	Y	Y	Y	N	Y	Y	?	1
MHCLG 2020	Y	Y	?	Y	N	n/a	n/a	Y	Y	n/a	?	n/a	n/a	n/a	n/a	n/a	Y	Y	N	?	?	?	1
Morley et al. 2017	Y	Y	Y	N	n / a	n/a	n/a	?	?	n/a	n / a	n/a	n/a	n/a	n/a	n/a	Y	Y	N	Y	Y	?	1
Pandit et al. 2021	Y	Y	Y	n / a	n / a	n/a	n/a	Y	Y	n/a	n / a	n/a	n/a	n/a	n / a	n/a	Y	Y	Y	Y	Y	n/a	2
S3 Solutions 2018	?	Y	?	N	n / a	n/a	?	?	?	n/a	?	n/a	n/a	n/a	n/a	Y	?	Y	?	?	?	?	0
Social Life 2022	Y	Y	?	N	n / a	n/a	n/a	?	?	n/a	?	n/a	n/a	n/a	n/a	n/a	?	Y	?	?	?	?	0
Stenning 2020	Y	Y	Y	N	N	n/a	Y	Y	Y	n/a	N	n/a	n/a	n/a	N	Y	N	N	N	?	N	?	0
Terry 2021	?	Y	?	N	n / a	n/a	n/a	?	?	n/a	n / a	n/a	n/a	n/a	n/a	n/a	?	?	?	?	?	?	0
Tischler 2018	Y	N	N	n / a	n / a	n/a	?	?	n / a	n/a	n / a	n/a	n/a	n/a	n/a	n/a	?	n/a	n/a	Y	Y	N	0

Study	Int well describe d?	Specific interventi on	Appr measu re	B& A	A ll F U	Assignm ent level OK	Com p approp	Study condu ct OK	Re pr sm pl	Bsln equ iv	Sm pl size	35% comple te	Dropo ut record ed	Dropo ut rpeort ed	Cfd g & ctm n	Msr mt equi v	Vali d meas	Ind meas	Obj meas	Analy sis appr	Metho ds appr	Missi ng data	LEVEL
Ward Thompson et al. 2019	N	Y	N	Y	N	Y	N	?	Y	N	?	?	Y	Y	n/a	Y	Y	Y	N	Y	Y	Y	1
Winter 2020	Y	Y	Y	N	n / a	n/a	n/a	?	?	n/a	?	n/a	n/a	n/a	n/a	n/a	Y	Y	N	Y	Y	n/a	1

## Appendix H: Summary of Findings table (whole body of evidence)

Positive Effect (+), Negative Effect (-), Mixed Effect (?), Neutral Effect (=).

Outcome	Type of evidence	Effect	Initial level of certainty	Concerns about certainty domains	Final level of certainty
<b>Community hubs</b>					
<b>Social relations (ORIGINAL REVIEW)</b>	8 studies: 1 case study (LQ), 2 mixed method evaluations (LQ), 1 cross-sectional survey (LQ), 5 qualitative studies (3 LQ, 1 MQ, 1 GQ)	Community cohesion +; Bridging social capital +; Increased social networks +; Improved quality of social relations +	Moderate	Methodological limitations: moderate Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: not serious Inconsistency: Not serious Publication bias: Not suspected Relevance: High Coherence: Minor concerns Adequacy of data: Moderate concerns	Moderate (all)
<b>SR UPDATED</b>	<b>14 studies:</b> 2 case studies (1LQ, 1 MQ), 4 MME (4LQ), 1 cross-sectional survey (LQ), 7 qualitative studies (3 LQ, 2 MQ, 2 GQ)	All + except for Spilková (?), 1)	Moderate	Methodological limitations downgraded from serious to moderate; imprecision downgraded from serious to not serious; coherence upgraded to high	Strong (social networks) Moderate (social cohesion; social capital) Low (negative effect on social cohesion, 1 LQ study)
<b>Community wellbeing (ORIGINAL REVIEW)</b>	7 studies: 2 case studies (1 MQ, 1 LQ), 1 mixed method evaluation (LQ), 1 cross-sectional survey (LQ), 3 qualitative studies (1 GQ, 2 LQ)	Pride in community +; Sense of belonging +; Sense of community +;	Moderate	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: serious Inconsistency: Not serious Publication bias: Not suspected Relevance: High	Low (sense of pride); Moderate (civic participation);

Outcome	Type of evidence	Effect	Initial level of certainty	Concerns about certainty domains	Final level of certainty
		Civic participation +		Coherence: Minor concerns Adequacy of data: Moderate concerns	
<b>CWB UPDATED</b>	<b>12 studies:</b> 3 case studies (1 LQ, 2 MQ), 3 MMEs (3LQ), 1 cross-sectional survey (LQ), 5 qualitative studies (2 GQ, 1 MQ, 2 LQ)	All + except Ley (-)	Moderate	Methodological limitations downgraded from serious to moderate; imprecision downgraded from serious to not serious; coherence upgraded to high	Strong (social determinants of health) Moderate (sense of belonging, sense of pride, community empowerment, civic participation)
<b>Individual wellbeing (ORIGINAL REVIEW)</b>	5 studies: 1 mixed methods evaluation (MQ), 1 cross-sectional survey (LQ), 3 qualitative studies (1 LQ, 1 MQ, 1 GQ)	Wellbeing +; Health +; Knowledge & skills +;	Moderate	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: serious Inconsistency: not serious Publication bias: Not suspected Relevance: High Coherence: Minor concerns Adequacy of data: Moderate concerns	Low (wellbeing; health); Moderate (knowledge & skills)
<b>IWB UPDATED</b>	<b>10 studies:</b> 1 case study (MQ), 3 MME (2 LQ, 1 MQ), 1 cross-sectional survey (LQ), 5 qualitative studies (1 LQ, 2 MQ, 2 GQ)		Moderate	Methodological limitations downgraded from serious to moderate; imprecision downgraded from serious to not serious; coherence upgraded to high	Strong (mental health and wellbeing) Strong (empowerment/ sense of control) Low (organisational impact)
<b>Events</b>					
<b>Social relations (ORIGINAL REVIEW)</b>	10 studies: 3 mixed method evaluations (3LQ), 2 cross-	Social relations +; Community cohesion +	Moderate	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence)	Moderate



Outcome	Type of evidence	Effect	Initial level of certainty	Concerns about certainty domains	Final level of certainty
	sectional surveys (2LQ), 5 qualitative studies (2 GQ, 3 MQ)			Imprecision: serious Inconsistency: Not serious Publication bias: Not suspected Relevance: High Coherence: Moderate concerns Adequacy of data: Moderate concerns	
<b>SR UPDATED</b>	<b>23 studies:</b> 7 MMEs (3 MQ, 4 LQ), 2 cross-sectional surveys (2 LQ), 14 qualitative studies (3 GQ, 8 MQ, 3 LQ)		Moderate	Methodological limitations and imprecision downgraded from serious to moderate; coherence upgraded to high.	Moderate to strong (social networks; social cohesion; social capital) Moderate to strong (negative - exclusion effects)
<b>Community wellbeing (ORIGINAL REVIEW)</b>	11 studies: 4 case studies, 1 before and after study, 2 mixed methods evaluations, 2 cross-sectional surveys, 2 qualitative studies	Sense of pride +; Heritage +; Physical environment +; Organisational relationships +; Exclusion -	Moderate	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: serious Inconsistency: Not serious Publication bias: Not suspected Relevance: High Coherence: Moderate concerns Adequacy of data: Moderate concerns	Moderate (sense of pride; heritage; civic participation; exclusion);  Low (environment; organisational relationships)
<b>CWB UPDATED</b>	<b>22 studies:</b> <b>13 qual (2 GQ, 7 MQ, 4 LQ)</b> <b>9 quant (5 LQ, 4 MQ)</b>		Moderate	Methodological limitations and imprecision downgraded to moderate; coherence upgraded to high	Strong (sense of pride; sense of belonging; community empowerment; civic participation; knowledge and cultural exchange) Moderate (social determinants of health; negative impacts on

Outcome	Type of evidence	Effect	Initial level of certainty	Concerns about certainty domains	Final level of certainty
					shared identity, gentrification, exclusion)
<b>Individual wellbeing (ORIGINAL REVIEW)</b>	No evidence				
<b>IWB UPDATED</b>	<b>13 studies (1GQ, 7MQ, 5LQ):</b> 3MQ, 1LQ  1GQ, 3MQ, 2LQ  2MQ  1GQ	Mental health & wellbeing + Skills & knowledge + Hedonic wellbeing + Employability +	Moderate	Methodological limitations: moderate Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: moderate Inconsistency: Not serious Publication bias: possible Relevance: High Coherence: High Adequacy of data: Moderate concerns	Moderate (all)
<b>Neighbourhood design</b>					
<b>Social relations (ORIGINAL REVIEW)</b>	15 studies: 2 case studies, 3 before and after studies 5 mixed methods evaluations, 3 cross-sectional surveys, 1 longitudinal survey, 1 qualitative study	Social cohesion +; Social relations – (top down); Social relations +; Contacts & trust +;	Moderate	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: serious Inconsistency: Not serious Publication bias: Not suspected Relevance: High Coherence: Minor concerns Adequacy of data: Moderate concerns	Moderate (social cohesion; social relations);  Low (social relations top-down; contacts & trust)

Outcome	Type of evidence	Effect	Initial level of certainty	Concerns about certainty domains	Final level of certainty
<b>SR UPDATED</b>	<b>21 studies (2 GQ, 7 MQ, 12 LQ)</b> 9 studies (2 GQ, 2 MQ, 5 LQ) 6 studies (3 MQ, 3 LQ) 5 studies (1 MQ, 4 LQ)	Social relations +  Social networks +  Social cohesion ? Social capital +	Moderate	Methodological limitations and imprecision downgraded from serious to moderate. Coherence upgraded to high.	Strong (social relations, social networks) Moderate (mixed impact on social cohesion) Low (social capital)
<b>Community wellbeing (ORIGINAL REVIEW)</b>	17 studies: 3 case studies, 3 before and after studies, 5 mixed methods evaluations, 3 cross-sectional surveys, 1 longitudinal survey, 2 qualitative studies	Sense of belonging/ pride +; Perceived area attractiveness; Social norms +; Policy change +; Safety +; Economic impact +; Civic participation +; Transfer of problem -; Exclusion -	Moderate	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: serious Inconsistency: Not serious Publication bias: Not suspected Relevance: High Coherence: Minor concerns Adequacy of data: Moderate concerns	Moderate (sense of pride/ belonging; perceived areas attractiveness; feeling safe; civic participation; transfer of problem)  Low (social norms; local policy; economic impact; exclusion)
<b>CWB UPDATED</b>	<b>23 studies (2 GQ, 6 MQ, 15 LQ)</b> 14 studies (1GQ, 3MQ, 10LQ) 13 studies (1GQ, 4MQ, 8LQ) 5 studies (2 MQ, 3 LQ)	Sense of pride etc + SDH + Civic participation +	Moderate	Methodological limitations and imprecision downgraded from serious to moderate. Coherence upgraded to high.	Moderate to strong (sense of pride etc.; SDH; gentrification) Moderate (civic participation) Strong (problem transfer)

Outcome	Type of evidence	Effect	Initial level of certainty	Concerns about certainty domains	Final level of certainty
	4 studies (2MQ, 2 LQ) 7 studies (1GQ, 1MQ, 4LQ) 4 studies (2GQ, 2LQ)	Sense of safety ? Gentrification – Problem transfer -			
<b>Individual wellbeing (ORIGINAL REVIEW)</b>	2 studies: 1 before and after study, 1 qualitative study	Physical activity +;	Moderate	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: serious Inconsistency: Not serious Publication bias: Not suspected Relevance: High Coherence: Minor concerns Adequacy of data: Moderate concerns	Moderate
<b>IWB UPDATED</b>	<b>11 studies (2 GQ, 5 MQ, 4 LQ)</b>	Individual wellbeing +	Moderate	Methodological limitations and imprecision downgraded from serious to moderate. Coherence upgraded to high.	Moderate
<b>Green and blue space</b>					
<b>Social relations (ORIGINAL REVIEW)</b>	15 studies: 3 case studies, 5 mixed method evaluations, 2 cross-sectional surveys, 1 longitudinal survey, 4 qualitative studies	Improved social interactions +; Community cohesion +; Wider community cohesion -; Social networks +; Social capital +;	Moderate	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: serious Inconsistency: Not serious Publication bias: Not suspected Relevance: High Coherence: Minor concerns Adequacy of data: Moderate concerns	Moderate (social interactions; community cohesion; social networks; social capital)  Low (negative effects on wider cohesion)

Outcome	Type of evidence	Effect	Initial level of certainty	Concerns about certainty domains	Final level of certainty
<b>SR UPDATED</b>	<b>22 studies (3 GQ, 5 MQ, 14 LQ)</b> 6 studies (2GQ, 2MQ, 2LQ)  8 studies (2GQ, 2MQ, 4LQ) 8 studies (1GQ, 2MQ, 5LQ) 2 studies (1GQ, 1MQ)	Social interactions ? Social cohesion + Social capital + Exclusion -	Moderate	Methodological limitations and imprecision downgraded from serious to moderate. Coherence upgraded to high.	moderate, mixed (social interactions) Strong (social cohesion) Moderate (social capital) Moderate (exclusion)
<b>Community wellbeing (ORIGINAL REVIEW)</b>	12 studies: 2 case studies, 4 mixed methods evaluations, 3 cross-sectional surveys, 1 longitudinal survey, 2 qualitative studies	Community pride +; Use of space +; Family wellbeing +; Civic participation +; Knowledge exchange +; Awareness/connectedness +; Negative effects on environment - ;	Moderate	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: serious Inconsistency: Not serious Publication bias: Not suspected Relevance: High Coherence: Minor concerns Adequacy of data: Moderate concerns	Moderate (pride; increased use; family wellbeing; civic participation)  Low (knowledge exchange; awareness/ connectedness; negative effects on environment)
<b>CWB UPDATED</b>	<b>26 studies (5GQ, 7MQ, 14LQ)</b> 11 studies (2GQ, 3MQ, 6LQ) 5 studies (1GQ, 2MQ, 2LQ) 9 studies (4GQ(1-), 1MQ (1-), 4LQ (1-)) 4 studies (4LQ)	Sense of belonging, pride + Empowerment + SDH ?	Moderate	Methodological limitations and imprecision downgraded from serious to moderate. Coherence upgraded to high.	Mixed (overall)  Strong (sense of belonging & pride) Moderate (empowerment) Strong (SDH) Low (civic participation) Moderate (negative impacts)

Outcome	Type of evidence	Effect	Initial level of certainty	Concerns about certainty domains	Final level of certainty
	6 studies (1GQ, 4MQ, 1LQ)	Civic participation+ Negative impacts-			
<b>Individual wellbeing (ORIGINAL REVIEW)</b>	7 studies: 1 case study, 2 mixed methods evaluations, 1 cross-sectional survey, 1 longitudinal survey, 2 qualitative studies	Behavioural change +; Mental wellbeing +; Knowledge & skills +;	Moderate	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: serious Inconsistency: Not serious Publication bias: Not suspected Relevance: High Coherence: Minor concerns Adequacy of data: Moderate concerns	Moderate (behavioural change; mental wellbeing; knowledge & skills)
<b>IWB UPDATED</b>	<b>21 studies (5GQ, 6MQ, 10LQ)</b> 11 studies (3GQ, 3MQ, 5LQ) 2 studies (LQ)  10 studies (1GQ, 5MQ, 4LQ) 4 studies (2GQ, 2LQ) 13 studies (3GQ, 5MQ, 5LQ) 2 studies (MQ)	PA +  Connection to nature + MWB +  Empowerment+ Skills & knowledge+ Unequal benefit-		Methodological limitations and imprecision downgraded from serious to moderate. Coherence upgraded to high.	Strong (overall) Strong (physical activity) Weak (connection to nature) Moderate to strong (Mental wellbeing) Strong (empowerment) Strong (skills & knowledge) Moderate (unequal benefit)
<b>Place-making</b>					
<b>Social relations (ORIGINAL REVIEW)</b>	7 studies: 1 case study, 2 mixed methods evaluations, 1	Social interactions +; Social cohesion +;	Moderate	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence)	Low

Outcome	Type of evidence	Effect	Initial level of certainty	Concerns about certainty domains	Final level of certainty
	cross-sectional survey, 2 before and after studies, 1 qualitative study			Imprecision: serious Inconsistency: Not serious Publication bias: Not suspected Relevance: High Coherence: Minor concerns Adequacy of data: Moderate concerns	
<b>SR UPDATED</b>	<b>10 studies (3MQ, 7LQ)</b> 5 studies (3MQ, 2LQ)  7 studies (3MQ, 4LQ(1-)) 3 studies (LQ)	Social interactions+ Social cohesion+ Social capital+	Moderate	Methodological limitations and imprecision downgraded from serious to moderate. Coherence upgraded to high.	Moderate to low (overall) Moderate (social interaction) Moderate, mixed (social cohesion) Low (social capital)
<b>Community wellbeing (ORIGINAL REVIEW)</b>	7 studies: 1 case study, 2 mixed methods evaluations, 2 cross-sectional surveys, 2 before and after studies	Civic activity +; Sense of pride/ belonging/ community +; Attractiveness +; Economic impact +;	Moderate	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: serious Inconsistency: Not serious Publication bias: Not suspected Relevance: High Coherence: Minor concerns Adequacy of data: Moderate concerns	Low
<b>CWB UPDATED</b>	<b>9 studies (2MQ, 7LQ)</b> 6 studies (2MQ, 4LQ)  3 studies (2MQ, 1LQ) 3 studies (LQ)  1 study (LQ)	Sense of place, belonging, pride + SDH+ Civic participation+ Negative impact	Moderate	Methodological limitations and imprecision downgraded from serious to moderate. Coherence upgraded to high.	Low to moderate (overall) Moderate (sense of belonging, pride) Moderate (social determinants of health) Low (CP) Low (negative impact)

Outcome	Type of evidence	Effect	Initial level of certainty	Concerns about certainty domains	Final level of certainty
<b>Individual wellbeing (ORIGINAL REVIEW)</b>	2 studies: 1 cross-sectional survey, 1 before and after study	Physical activity +; Mental health +;	low	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: serious Inconsistency: Not serious Publication bias: Not suspected Relevance: High Coherence: Minor concerns Adequacy of data: Moderate concerns	Low
<b>IWB UPDATED</b>	<b>8 studies (1MQ, 7LQ)</b> 4 studies (1MQ, 3LQ) 1 study (LQ) 1 study (LQ)  1 study (LQ) 2 studies (1MQ, 1LQ)	PA+ Empowerment+ Knowledge & skills+ Economic+ Unequal benefit-	Moderate	Methodological limitations and imprecision downgraded from serious to moderate. Coherence upgraded to high.	Low (overall) Low (all)
<b>Alternative use of space</b>					
<b>Social relations (ORIGINAL REVIEW)</b>	14 studies: 2 case studies, 5 mixed methods evaluations, 3 cross-sectional surveys, 3 qualitative studies, 1 before and after study	Social interaction +; Social interaction between different groups +;	Moderate	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: serious Inconsistency: Not serious Publication bias: Not suspected Relevance: High Coherence: Minor concerns Adequacy of data: Moderate concerns	Moderate (social interaction; social interaction between different groups)



Outcome	Type of evidence	Effect	Initial level of certainty	Concerns about certainty domains	Final level of certainty
<b>SR UPDATED</b>	<b>18 studies (1GQ, 7MQ, 10LQ)</b> 11 studies (2MQ, 9LQ)  9 studies (1GQ, 2MQ, 6LQ) 5 studies (1GQ, 1MQ, 3LQ)	Social interaction+ Social cohesion + Social capital +	Moderate	Methodological limitations and imprecision downgraded from serious to moderate. Coherence upgraded to high.	Moderate (overall) Moderate (social interaction) Moderate (social cohesion) Moderate (social capital)
<b>Community wellbeing (ORIGINAL REVIEW)</b>	13 studies: 2 case studies, 5 mixed methods evaluations, 2 cross-sectional surveys, 3 qualitative studies, 1 before and after study	Perceived area attractiveness +; Increased use +; Increase community pride +; Civic participation +; Exclusion -		Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: serious Inconsistency: Not serious Publication bias: Not suspected Relevance: High Coherence: Minor concerns Adequacy of data: Moderate concerns	Low (perceived attractiveness; increased use; increased pride; exclusion)  Moderate (civic participation)
<b>CWB UPDATED</b>	<b>28 studies (2GQ, 12MQ, 14LQ):</b> 7 studies (2MQ, 5LQ)  16 studies (6MQ, 10LQ)  5 studies (1GQ, 1MQ, 3LQ)  11 studies (6MQ, 5LQ) 7 studies (1GQ, 2MQ, 4LQ)	Sense of community, identity + Sense of pride, belonging + Civic participation + SDH + Reduced crime +	Moderate	Methodological limitations and imprecision downgraded from serious to moderate. Coherence upgraded to high.	Strong (overall) Moderate (sense of community, identity) Moderate (sense of belonging, pride) Moderate to strong (civic participation) Moderate (SDH) Moderate to strong (reduced crime or fear of crime)
<b>Individual wellbeing</b>	3 studies: 1 cross-sectional survey, 2 qualitative studies	Behaviour change +;	Moderate	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence)	Moderate (behaviour change)  Low (knowledge & skills)

Outcome	Type of evidence	Effect	Initial level of certainty	Concerns about certainty domains	Final level of certainty
<b>(ORIGINAL REVIEW)</b>		Knowledge & skills +;		Imprecision: serious Inconsistency: Not serious Publication bias: Not suspected Relevance: High Coherence: Minor concerns Adequacy of data: Moderate concerns	
<b>IWB UPDATED</b>	<b>19 studies (1GQ, 4MQ, 14LQ):</b> 9 studies (1GQ, 2MQ, 6LQ) 8 studies (2MQ, 6LQ)  4 studies (1GQ, 2MQ, 1LQ)  6 studies (1MQ, 5LQ) 3 studies (2MQ, 1LQ)	PA + Skills & knowledge+ Mental wellbeing+ Hedonic WB+ Negative -	Moderate	Methodological limitations and imprecision downgraded from serious to moderate. Coherence upgraded to high.	Moderate to strong (overall) Moderate (PA) Moderate (skills & knowledge) Moderate to strong (mental wellbeing) Low to moderate (hedonic wellbeing) Moderate (negative impacts)
<b>Urban regeneration</b>					
<b>Social relations (ORIGINAL REVIEW)</b>	12 studies: 1 case study, 2 mixed methods evaluations, 3 cross-sectional surveys, 2 longitudinal surveys, 2 qualitative studies, 2 before and after studies	Social relations ?;	Moderate	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: serious Inconsistency: Not serious Publication bias: Not suspected Relevance: High Coherence: Minor concerns Adequacy of data: Moderate concerns	Low

Outcome	Type of evidence	Effect	Initial level of certainty	Concerns about certainty domains	Final level of certainty
<b>SR UPDATED</b>	<b>11 studies (1GQ, 3MQ, 7LQ):</b> 5 studies (1GQ, 4LQ) 8 studies (1MQ, 7LQ)  2 studies (1MQ, 1LQ) 1 study (LQ)	Social capital – Social interactions+ Social capital+ Social cohesion	Moderate	Methodological limitations and imprecision downgraded from serious to moderate. Coherence upgraded to high.	Low to moderate (overall) Moderate (mixed impact on social capital) Moderate (positive impact on social interactions)
<b>Community wellbeing (ORIGINAL REVIEW)</b>	11 studies: 1 case study, 2 mixed methods evaluation, 2 cross-sectional surveys, 2 longitudinal surveys, 2 qualitative studies, 2 before and after studies	Perceived area attractiveness +; Local economy +; Civic participation +; Crime/ fear of crime +;	Moderate	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: serious Inconsistency: Not serious Publication bias: Not suspected Relevance: High Coherence: Minor concerns Adequacy of data: Moderate concerns	Low
<b>CWB UPDATED</b>	<b>14 studies (2GQ, 4MQ, 7LQ):</b> 6 studies (6LQ)  4 studies (LQ) 6 studies (2GQ, 4LQ)  5 studies (1GQ, 1MQ, 3LQ) 4 studies (1MQ, 3LQ)	Sense of belonging, pride? Civic participation Reduced crime or fear of crime SDH Negative impacts	Moderate	Methodological limitations and imprecision downgraded from serious to moderate. Coherence upgraded to high.	Strong but mixed (overall) Low and mixed (sense of belonging and pride) Low (civic participation) Strong but mixed (crime/ fear of crime) Moderate but mixed (social determinants of health) Moderate (negative impacts)
<b>Individual wellbeing (ORIGINAL REVIEW)</b>	3 studies: 1 cross-sectional survey, 1 longitudinal survey and 1 qualitative study	Depression +; Individual behaviour change +;	Moderate	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: serious	Low

Outcome	Type of evidence	Effect	Initial level of certainty	Concerns about certainty domains	Final level of certainty
		Knowledge & skills +; Perceived exclusion		Inconsistency: Not serious Publication bias: Not suspected Relevance: High Coherence: Minor concerns Adequacy of data: Moderate concerns	
<b>IWB UPDATED</b>	<b>11 studies (1GQ, 4MQ, 6LQ):</b> 7 studies (2MQ, 5LQ)  3 studies (LQ) 2 studies (LQ) 3 studies (1GQ-, 1MQ+, 1LQ-) 2 studies (LQ)-	Skills & knowledge+ Physical activity+ Mental health+ mWB-  Empowerment-	Moderate	Methodological limitations and imprecision downgraded from serious to moderate. Coherence upgraded to high.	Moderate (overall) Moderate (skills & knowledge)+ Low (physical activity)+ Low (mental health)+ Moderate and mixed (MWB) Low (empowerment)-
<b>Community development</b>					
<b>Social relations (ORIGINAL REVIEW)</b>	7 studies: 2 case studies, 4 mixed methods evaluations, 1 before and after study	Social interaction +; Social capital +;	Moderate	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: serious Inconsistency: Not serious Publication bias: Not suspected Relevance: High Coherence: Minor concerns Adequacy of data: Moderate concerns	Moderate
<b>SR UPDATED</b>	<b>8 studies (2GQ, 1MQ, 5LQ):</b> 5 studies (2GQ, 3LQ)		Moderate	Methodological limitations and imprecision downgraded from serious to moderate.	Strong (overall) Strong (social interaction)

Outcome	Type of evidence	Effect	Initial level of certainty	Concerns about certainty domains	Final level of certainty
	6 studies (1GQ, 1MQ, 4LQ) 3 studies (1GQ, 2LQ)	Social interaction+ Social cohesion+ Social capital+		Coherence upgraded to high.	Moderate to strong (social cohesion) Moderate (Social capital)
<b>Community wellbeing (ORIGINAL REVIEW)</b>	8 studies: 3 case studies, 3 mixed methods evaluations, 1 before and after study	Knowledge & skills +; Sense of attachment +; Perceived area attractiveness +; Civic participation +; Sense of community identity +;	Moderate	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: serious Inconsistency: Not serious Publication bias: Not suspected Relevance: High Coherence: Minor concerns Adequacy of data: Moderate concerns	Moderate (civic participation; knowledge & skills)  Low (sense of attachment; perceived area attractiveness; sense of community identity)
<b>CWB UPDATED</b>	<b>12 studies (3GQ, 1MQ, 8LQ):</b> 4 studies (1GQ, 3LQ) 7 studies (1GQ, 6LQ)  6 studies (1GQ, 5LQ) 1 study (MQ)	Empowerment+ Sense of belonging, pride, identity+ SDH+ Negative impacts	Moderate	Methodological limitations and imprecision downgraded from serious to moderate. Coherence upgraded to high.	Strong (overall) Moderate to strong (empowerment) Moderate to strong (sense of belonging, pride, identity) Moderate to strong (SDH) Weak (negative impacts)
<b>Individual wellbeing (ORIGINAL REVIEW)</b>	1 mixed methods evaluation	Individual behaviour change +; Mental wellbeing +; Exclusion	Moderate	Methodological limitations: serious Indirectness: Not serious (Includes UK and non-UK evidence) Imprecision: serious Inconsistency: Not serious Publication bias: Not suspected	Moderate (individual behaviour change)  Low (mental wellbeing; exclusion)

Outcome	Type of evidence	Effect	Initial level of certainty	Concerns about certainty domains	Final level of certainty
				Relevance: High Coherence: Minor concerns Adequacy of data: Moderate concerns	
<b>IWB UPDATED</b>	<b>6 studies (1GQ, 1MQ, 4LQ):</b> 4 studies (1GQ, 1MQ, 2LQ) 3 studies (LQ)  2 studies (1GQ, 1LQ) 1 study (LQ)	Physical activity+ MWB+ Knowledge and skills+ Empowerment+	Moderate	Methodological limitations and imprecision downgraded from serious to moderate. Coherence upgraded to high.	Moderate to strong (overall) Moderate to strong (PA) Low (MWB) Moderate (Knowledge and skills) Low (empowerment)