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SCHOOL OF HEALTH & COMMUNITY STUDIES

what works wellbeing

Community Wellbeing Case Study Synthesis

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Executive summary

(i)- Introduction

Practice-based case studies are recognised as an important source of knowledge and learning and one that is complementary to research-based evidence. Case studies offer practitioners, researchers and policy makers:

- Rich descriptions of a local context and the complexity of multi-sectoral, multi-level action.
- Communication of early or interim results.
- A summary of successes, unintended consequences, challenges and learning.
- A knowledge translation tool to support better implementation.
- A way of disseminating key information on a programme to a wide audience.

There is a major methodological gap when it comes to synthesising this type of evidence. This makes it difficult to pool findings from multiple case-studies and, through comparison, identify key dimensions of programmes and how they work across different contexts.

Definitions:

Case study - '(...] an in-depth, possibly longer term investigation of a single or very limited number of people, events, context, organisation or policy. A case study might be used when seeking to understand a significant or novel situation and to provide particularly rich data.' (HM Treasury 2011)

Practice-based evidence – 'Practice-based case studies report on the evidence generated from the implementation of an intervention in a real-life practice setting and include the learning from those involved in the development and delivery of that intervention. Such case studies typically provide a narrative explaining how the intervention developed in that context and what happened. They are most often developed by practitioners involved in an intervention, but can also be developed in collaboration with funders, third sector organisations or researchers aiming to capture practice-based knowledge.'

This study addressed this knowledge gap by identifying the most robust methods to collate, review and synthesise practice-based case study evidence and by carrying out a pilot synthesis on practice-based community wellbeing case studies. The pilot focused on community-based interventions (projects, initiatives, services or programmes) that aimed to improve social relations and community wellbeing through better community infrastructure (places and spaces). This built on a previous

systematic review of this topic (Bagnall, South et al. 2018). The study used scoping review methodology to identify appropriate review and synthesis methods.

There were four interconnected phases:

Phase 1- Methods review – to scope and select appropriate methods for case study collection and synthesis through a rapid review of key literature on case studies.

Phase 2- Gathering a collection of practice-based case studies.

Phase 3 Analysis and synthesis of a sample of case studies (using agreed methods).

Phase 4 - Application & recommendations - review of methods and recommendations for future development, implementation and dissemination.

(ii) - Methods review

A rapid review of academic and non-academic literature was carried out to identify ways to synthesise practice-based case study evidence. Forty articles were included in the methods review. Articles covered practice-based case studies, the role of practice-based case studies in policy decisions, and how to produce, analyse and synthesise practice and research-based case studies. There were no articles found about synthesising practice-based case study evidence.

Key learning points from the methods review were summarised in Table (i) below.

Table (i): Summary of learning points from the literature review.

Theme	Key learning
What is a case study?	● 'Case study' is something of an umbrella term that can be used to refer to a range of different types of information. ● Commonly agreed features of case studies are that they involve an in-depth and detailed examination of one phenomenon. ● In a practice context, case studies are commonly a description of what happened (rather than an investigation of how or why something occurred) and are often used to celebrate successes or disseminate learning.
Strengths of case studies	● Case studies can capture community perspectives and provide a 'thick' description of implementation processes and context. ● The narrative form of case studies can make them easy to understand and share. ● Practice-based case studies that celebrate successes may not contain sufficient information to inform practice and may only present positive aspects.
Limitations of case studies	● Case studies are often valued less than other forms of evidence in health and policy decisions.

	● Common weaknesses are not describing the problem to be addressed in enough detail, nor the context, processes or outcomes. ● There is a balance to be struck in writing a case study between accessibility and providing the necessary 'thick' description.
Synthesis – which cases are suitable?	● Synthesis provides opportunities to produce more robust findings across multiple case studies. ● Not all case studies are appropriate to be included in a synthesis. ● Points to consider for selection are whether case studies cover the same topic or unit of analysis, whether sufficient information is provided about the context, programme outcomes/impact, and the research methodology used. ● The case studies that are needed for a synthesis may not always be available, particularly with regard to practice-based evidence.
Synthesis – approaches to synthesis	● A wide range of methods for synthesising research-based case studies have been developed, including adapting existing methods of primary data analysis. ● Matrices/frameworks are commonly utilised to manage the complexity of qualitative data. ● There is no established 'best' method for synthesising practice-based case studies. ● An approach that involves displaying cases in a matrix (data extraction table), subdivided by fields of interest, can permit comparison of cases in a synthesis.
Quality appraisal	● Research literature highlights different perspectives on whether notions of validity and reliability can be applied to research-based case studies. ● Considering the convincingness, authenticity and plausibility of a case study may be a more appropriate way of assessing practice-based case studies. ● How believable a case study is depends on knowing how the case study was undertaken.
What makes a good case study?	● Quality should be assessed on the strength of the description, including both the accessibility of the information and how believable it is. ● Accessibility relates to both how well written and presented a case-study is and whether there is a 'thick' description of the programme (enough to understand what happened, when, how and why). ● Several checklists have been produced that specify what should be included in a 'good' practice-based case study.
Reporting templates	● Templates can be used throughout the process (reporting, data extraction, synthesis).

	● Templates help to standardise information so that is it sufficiently comparable and enhance quality by ensuring the necessary information is included.

- (iii)- Pilot case study synthesis methods

The first step in the pilot (Phase 2) was to undertake a scoping exercise to identify how UK practice-based case studies were typically collected, curated and displayed, and whether any synthesis had been undertaken. The initial list was drawn up by using the Public Health England Practice Examples list, suggestions from What Works Centre for Wellbeing and the project advisory group.

Twenty UK case study collections (sixteen websites, four reports) were included in the scoping exercise and all resources used to collect case studies). Key learning points included:

- How case studies had been collected was generally not reported
- Most narratives covered the successes or outcomes achieved through the work
- Only a minority of case study collections used a standard template or reported the process of quality assurance of case studies
- How further synthesis had been carried out, if at all, was not described.

Based on the methods review and scoping of existing case study collections, a method for synthesising practice-based case studies was developed and piloted (Phase 2 & 3). The method involved:

- *Gathering a sample of practice-based community wellbeing case studies* –existing collections from the scoping exercise were searched to identify a sample of practice-based case studies. We also collaborated with Locality, our civil society partner, to develop some new case studies reporting on community hubs promoting wellbeing. This additional element provided an opportunity to develop a new template that incorporated points of learning from the methods review.
- *Screening and selection.* Screening was undertaken against three criteria: (i) Relevance to the topic of places and spaces (ii) Content - sufficient information reported and (iii) Intervention – Community hubs or Green & Blue Space community wellbeing projects. In total, 24 case studies were selected; 20 identified through website searches/existing collections and four new Locality case studies.
- *Data extraction* – data were extracted using a template based on commonly reported information fields from the scoping of existing collections and the methods review.

- *Cross-case analysis and synthesis* – Framework analysis was used to manage the complexity of the community wellbeing practice-based case studies. This involved a staged process starting with 'within-case' data coding, developing a matrix of themes, and finally producing an overarching thematic framework. A final narrative account was agreed.

(iv) - Case study synthesis results – community hubs and green space projects

In total, 24 practice-based case studies were included in the synthesis. Seventeen were case studies of community hubs, including three Locality case studies, and seven were case studies of green space wellbeing projects (no blue space projects were identified). Attributes were mapped and this showed considerable diversity in the volume and focus of information contained within the sample.

Results from the thematic analysis were grouped around three major categories (Table ii):

- ***Purpose & approach***. Reporting themes relating to the 'why and what' of project development and delivery and how projects responded to community need.
- ***Outcomes***. Reported outcomes at individual-level, community-level and organisational-level, plus unanticipated outcomes.
- ***What works & what supports***. Reporting major cross cutting themes around the mechanisms and processes that support change and what learning had been gathered.

Table (ii): Summary of case study synthesis results.

Theme	Community hubs (n=17)	Green spaces (n=7)
Purpose & approach	Usually developed in response to local need. Most common aims/goals concerned increasing individual wellbeing. Also achieving long-term social change, empowerment and better community infrastructure. Multiple activities were developed, often with a common theme (i.e. food, art). Informal gathering spaces were provided alongside more structured activities. Activities were commonly organised/delivered by a range of stakeholders. Building capacity within	All projects/programmes were developed in response to local need, particularly to address wellbeing inequalities and promote equity. Stated aims were broad, encompassing improving individual and community wellbeing, access to natural environment. Three cases had empowerment goals. Multiple and layered activities using green space were developed in response to community need. Learning processes were prominent: developing understanding through

	the community to deliver activities was a cross-cutting theme. A variety of learning techniques were used to help develop and sustain projects, including piloting projects, formal evaluations, and informal monitoring/reflection. Associated challenges were evidencing outcomes across a diversity of activities, lack of capacity to undertake research/evaluation, and lack of appropriate measures.	experience and gathering insights from those involved. Facilitating the involvement of target groups supported learning – for projects/programmes and individuals.
Outcomes	Individual level outcomes included: ● Learning and skills development ● Increasing opportunities for social interaction ● Mental health benefits ● Physical health benefits & healthy lifestyle changes. Community level outcomes included: ● Increased opportunities to join in ● Community empowerment (through provision of advice/information) ● Upskilling of staff and volunteers ● New community groups forming. Organisational level outcomes included: ● Increased networking and partnership working ● Increased organisational profile. ● Additional funding. Unanticipated outcomes: ● Increased pastoral care in the community ● New skills training programmes ● The benefits of peer-led support becoming widely recognised ● Development of an asset-transfer programme.	Individual level outcomes included: ● Wellbeing outcomes, including increased social interactions and confidence, gaining employment and a sense of purpose, and other mental health benefits ● Learning outcomes, including gaining new knowledge and skills ● Wellbeing benefits could 'spill over' into everyday life and triggered a transformative change in some people's lives. ● Physical health outcomes were not a strong theme. Community level outcomes included: ● Increased opportunities for social activities and volunteering ● Increased community capacity ● Empowerment with participants developing their own activities/leading groups. Organisational level outcomes included : ● Strengthened organisational capacity to deliver and improved project delivery ● Strengthened or new partnerships

		• Increased influence or organisational profile.
What works & what supports	Building connections to improve knowledge, increase capacity and to develop stronger networks. Creating spaces for social interaction. Importance of secure, long-term funding. Utilising the skills and commitment of volunteers Working collaboratively with communities, co-production, being 'person-centred'. Skills, knowledge, commitment, and values of staff. Learning and adapting to community need.	Building connections, between both participants and organisations/ professionals. Inter-sectoral partnerships to support implementation, and to address specific barriers experienced by communities. Taking an asset-based approach, building on local assets. Learning and adapting through research, fostering social connections, community participation and co-production. Few barriers were reported, but these included constrained community engagement, weather and outdoor hazards, limited funding, and lack of access to research.

- (v) - Quality appraisal

In line with other reviews of evidence, the quality of included case studies was assessed. Drawing on domain-based assessment of risk of bias in systematic reviews, a list of quality criteria was adapted from a small number of papers examining the quality of public health case studies, along with input from the advisory group. An assessment tool was developed covering: Integrity, Completeness, Transparency, Responsibility, Format and inclusion of Learning.

No case study fulfilled all the criteria and the quality of case studies varied considerably. In general, case studies provided good descriptions of projects/programmes, settings, outcomes and key learning, and were written well. Conversely, descriptions of why projects/programmes came into being and ran as they did were poor, as were the descriptions of the research methods/evidence underpinning the case studies. Due to the need for further methodological development, quality appraisal results were not incorporated into the synthesis.

- (vi) - Project review

The study design included a review phase (phase 4). Many design choices needed to be made throughout the study and these were documented to aid transparency. Deliberations between

researchers and the advisory group reflected a shared position on the value of practice-based case studies as a legitimate form of evidence. Reflections on the process and learning came from three sources:

- *Advisory group discussions* – the advisory group made a significant contribution to the project helping to establish the scope of the work and the topic for piloting. Support for the inclusion of different types of evidence in decision making was a consistent theme in discussions. The advisory group recommended that an outcome of the project should be guidance about what 'good' looks like to help practitioners collect better case studies.
- *Locality case studies* – Working with Locality to collect case studies added value to the project including informing the design of the data collection template. Locality liaised with their membership to collect case studies and gathered some feedback on the process. This showed that the template for collecting case studies was a practical tool. It is helpful for researchers and practitioners to develop a shared understanding of definitions and inclusion criteria.
- *Research team reflections* – The research team provided a reflexive account of the study and their position/knowledge base as researchers. Significant issues that arose were: agreeing the project scope, establishing a definition of 'practice-based case study', designing usable data collection and data extraction templates, the overlap within the data extraction and coding processes, and the use of framework analysis rather than an alternative approaches to synthesis.

(vii) - Discussion

This study has confirmed the potential value in gathering, reviewing and disseminating practice-based knowledge as a complementary form of evidence to research-based evidence. The primary aim was to scope, develop and pilot a method of review and synthesis for practice-based projects. As there were no established 'best methods', a process that was both feasible and appropriate was devised. These methods for synthesising practice-based case study evidence were tested with a sample of practice-based case studies on 'places and spaces' wellbeing interventions. This produced a set of crosscutting themes - Table (iii). The strongest themes emerged over mechanisms of change such as empowerment, learning and capacity building. Further development of methods with stakeholder testing and comparison of alternative analysis and synthesis methods is suggested.

Table (iii) Cross cutting themes from synthesis of community hubs and green space case studies (n=24)

- Community wellbeing projects helped address social exclusion and reach groups that face barriers to good wellbeing.
- The synthesis illuminated how different projects responded to community need, identified community assets and involved people in priority setting.
- Developing a multi-layered approach was important in delivering a range of community-based activities, many of which involve social or fun activities.
- A strong theme across both groups was that participation in community-based activity led to increases in individual wellbeing, particularly improved confidence and reduced social isolation.
- Many wellbeing projects reported positive organisational outcomes including partnerships, new funding sources, greater capacity and better project delivery.
- Learning often occurred as a developmental cycle involving organisations, stakeholders and community members and was an adaptive mechanism that led to positive outcomes.
- Community wellbeing case studies typically described strengthening partnerships and developing new connections as one of the critical factors of success.
- Whether in a community hub setting or in the natural environment, creating spaces where people can come together led to better community wellbeing.
- Empowerment was a cross cutting theme highlighting the importance of relationships and deepening engagement with the target communities.
- The importance of funding and how that linked to sustainability, where were examples of challenges and opportunities that led to growth.

Strengths and limitations of study methods

- The methods review, despite not being comprehensive, highlighted many knowledge gaps around how to gather, curate and analyse practice-based evidence.
- Website searching was time consuming as many sources of practice-based case studies did not have good search/retrieval systems.
- There was a strong public health/health bias in the list of case study collections. There is scope for major funding bodies to develop their libraries/collections.
- Categorisation of community-centred approaches is challenging and some conceptual work around definitions and approaches needs to undertaken prior to any synthesis.
- The case study template developed through this study proved to be a pragmatic tool to aid systematic reporting by those in practice. There needs to be a balance between structure and allowing a rich and creative story to be presented.
- Purposeful sampling was used to produce a manageable sample for the pilot. No conclusions were made about how many case studies should be included in a synthesis.
- There was a rigorous process of analysis and synthesis leading to an analytic framework. This could be tested with other community welling case studies.

- Further research is needed to develop and test a quality appraisal framework and criteria for practice-based case studies.

Strengths and limitations of the evidence on community hubs and green space interventions

- Practice-based evidence can be distinguished from research-based evidence as there is a greater emphasis on experiential learning and local context.
- There was variation in the volume and type of information contained in the sample of case studies.
- There was less evidence on what does not work and no accounts from people who did not engage. Research-based evidence may be less open to bias or positive reporting.
- The summarised nature of the case study format meant that we could not draw conclusions about the strength of evidence on outcomes. There was richer data on processes and mechanisms and also unintended outcomes.
- The findings of the case study synthesis were mapped to the related systematic review of community infrastructure (Bagnall et al., 2018). No contradictions were seen between the findings of both studies. Case study findings added to the systematic review by contributing some knowledge towards highlighted evidence gaps, including on processes of implementation and delivery, and the community context.

(viii) - Conclusion & recommendations

This study has developed a better understanding of what practice-based case studies are, what they offer, and how such information should be processed. A working definition of a practice-based case study was developed. The methods review and pilot study also led to a better understanding of what a 'good' practice-based community wellbeing case study should cover and the attributes that might indicate a case study is of good quality.

The pilot involved a staged approach to identifying and developing methods for gathering, selecting and synthesising practice-based case studies, which could be used elsewhere:

I. Identification or development of a conceptual framework that helps define, categorise and select interventions of interest including projects, services or programmes.
II. Identification of websites and case study collections.
III. Searching and selection of case studies that group round a topic or intervention approach.
IV. Organisation of the case study data using a template with common fields/domains. Further case studies could be collected using this template.

V. Use of cross case analysis with matrices to develop the analysis and synthesis. This enabled patterns in the data to be discovered at the same time as keeping the contextual information.

VI. Development of an overarching framework that explained the data and could be adapted as more case studies are analysed.

VII. Reporting themes with quotations alongside contextual information.

The pilot synthesis of case studies makes a distinct contribution to the evidence base on how community wellbeing can be built through community hubs or green space interventions to improve social relations. There were clear themes around the importance of coproduction, learning, safe spaces and collaborative working. Our overall conclusions are that the rich accounts within practice-based case studies are an important source of evidence and that synthesis can help to illuminate effective aspects of community practice. Practitioner and community perspectives are central to those stories.

Recommendations for developing practice-based case studies

- The What Works Centre for Wellbeing has a key role in promoting the value of practice-based evidence and how good quality practice-based case studies can be collected, reviewed and disseminated.
- Community-based organisations should consider using a structured template when preparing a practice-based case study. Policy and research organisations that issue 'calls for practice' could also use case study templates to capture practice-based learning.
- More attention should be given to archiving and tagging collections of case studies to facilitate searching and retrieval. Having a repository of practice-based case studies on community wellbeing could be of value.
- Collecting a set of case studies on a common topic opens up opportunities for synthesis. This study has produced various templates which can be used to gather and process practice-based case studies.

Recommendations for the development of community wellbeing interventions (community hubs/using green spaces)

- Community-based organisations should consider how they facilitate learning. Gathering community insights and engaging with stakeholders are key mechanisms in the development and success of places and spaces community wellbeing interventions.
- Organisations should create safe spaces and a broad range of activities that bring people together to engage with populations experiencing isolation and disadvantage.

- Collaborative working with local organisations and community groups is a key way of building sustainable action and improving community wellbeing.
- Organisations should document and evaluate organisational as well as individual and community outcomes. Delivering wellbeing interventions may build capacity both in the community and within the organisation.

Recommendations for funding bodies

- Commissioners and funders should develop grant programmes that allow for development of community wellbeing projects over time and in co-production with communities.
- Funders should recognise the value of social activities that bring people together as the foundation for developing meaningful and inclusive local change.
- Funders should consider commissioning and using practice-based case studies to provide insight into the questions of 'how' and 'why' community-based projects work.
- Policy makers and funding bodies should advocate for the use of reporting frameworks that that allow stories to be captured in a systematic way with sufficient detail. The case study template developed for this study or similar templates could be used.

Recommendations for research

- The pilot has shown that it is possible to synthesise practice-based evidence in a systematic way. We recommend that this approach should be complementary to systematic review methodologies, as part of a compendium of methods.
- There is scope for development of a conceptual framework for processing practice-based evidence on wellbeing.
- Further development and testing of alternative approaches to analysis and synthesis is needed.
- More research is needed to develop a quality assessment tool, considering which domains to assess and whether relative weighting should be applied to domains. Stakeholder groups who produce and utilise practice-based case studies should be involved in this process.

1 Introduction

There is considerable interest in the knowledge and learning that can be obtained from practice-based case studies describing the context, processes and impacts of wellbeing projects. Despite recognition that this type of evidence is a key way of transferring knowledge in the third sector and has value for policy makers and practitioners, there is no consensus on how to synthesise evidence across multiple case studies. This gap in knowledge has led to this study on 'Community Wellbeing Case Study Synthesis', which has been conducted as part of the Communities of Place (CoP) Evidence Programme, for the What Works Centre for Wellbeing. The 'Community Wellbeing Case Study Synthesis' study has two areas of focus: (i) development of a method to synthesise learning and outcomes from community-based wellbeing projects and (ii) collection and review of a sample of projects that are focused on promoting wellbeing through a place or neighbourhood. In effect, we have aimed to provide a 'proof of concept', laying the foundations for synthesising learning from community wellbeing practice. This report details the rationale, methods and results from this pilot study.

1.1 Background and rationale

Practice-based case studies are widely recognised as an important source of knowledge and learning. They represent an alternative, and complementary, form of evidence to scientific or research-based evidence (Ng and de Colombani, 2015, UK Health Forum, 2015, Zwald et al., 2013, UK Health Forum, 2016). Case studies from practice settings are used across many different sectors including education, health services, management and social policy research to illuminate aspects of implementation and outcomes in real life settings (Ebneyamini and Sadeghi Moghadam, 2018, Goodrick, 2014, Yin, 2017). They typically provide in-depth insights into how interventions work in specific contexts and the complex interrelationships between different intervention components over time (Van Wynsberghe and Khan, 2007, Crowe et al., 2011, HM Treasury, 2011). Contextual information is particularly helpful for practitioners wishing to learn about how to apply and adapt different approaches in other contexts (Simpson et al., 2013, Korjonen et al., 2016). Policy makers and funders may also use case studies to provide insight into the questions of 'how' and 'why' projects or programmes work in highly complex settings (HM Treasury, 2011).

In the public health field, there is a growing literature supporting the development and use of practice-based case studies (Shankardass et al., 2014, Simpson et al., 2013, UK Health Forum, 2016, Korjonen et al., 2016, Davies, 2019, Zwald et al., 2013). Case studies are seen to offer:

- rich descriptions of a local context and the complexity of multisectoral, multilevel action
- communication of early or interim results, also unintended consequences
- a summary of successes, challenges and learning
- a knowledge translation tool to support better implementation
- a way of disseminating key information on a programme to a wide audience.

Notwithstanding the value of case studies in practice, there are recognised challenges around definitions and meanings (Van Wynsberghe and Khan, 2007, UK Health Forum, 2015), types of case study and design choices (Boblin et al., 2013, Ebneyamini and Sadeghi Moghadam, 2018, Crowe et al., 2011), verifying the quality and validity of practice-based evidence (Ng and de Colombani, 2015, Simpson et al., 2013, Zwald et al., 2013), and effective reporting formats (UK Health Forum, 2016, Zwald et al., 2013). There is a major gap on methodologies for synthesising this type of evidence (Simpson et al., 2013). Synthesis may be useful for policy makers as it allows pooling of data from individual case studies (Simpson et al., 2013) and, through comparison, identification of key dimensions of programmes or policy change across different contexts (Goodrick, 2014, Gilson, 2014, Wallace, 2019).

There is interest in developing robust methodologies to gather and review case studies of community wellbeing practice, which is the focus of this study, as this has the potential to complement the formal evidence base captured by systematic reviews (South, 2019). George et al. (2018) argue that community-based interventions should be seen as "*social processes dynamically evolving with social context*" (p.3).The What Works Centre for Wellbeing Community Wellbeing Evidence Programme, in its development phase and later in two public hearings held in Oct 2017 and May 2018, revealed a wealth of contextual information and learning about approaches to promote wellbeing undertaken through community projects and organisations (Gamsu et al., 2019). Such practice-based, experiential evidence from community projects tends to be under-reported and under-utilised (Savage et al., 2009), yet may provide a rich source of data on how community wellbeing can be built at a neighbourhood level (McClean and McNeice, 2012, South, 2019).

The What Works Centre for Wellbeing has an interest in what can be learnt from wellbeing practice examples that provide vital, but typically missing, information on context, implementation and local impacts. This study will begin to address these knowledge gaps in terms of (i) synthesising practice-

based case study evidence on community wellbeing and (ii) identifying the most robust methods to collate, review and synthesise that evidence. In particular, this review builds on and complements the recent systematic review that synthesised research on interventions to boost social relations through improvements in community infrastructure (places and spaces) (Bagnall et al., 2018).

1.2 Study Aims

- To conduct a scoping review and qualitative synthesis of the methods, approaches, reported outcomes of and learning from community-based practice in supporting community wellbeing, with a focus on projects aiming to improve community infrastructure (places and spaces).
- To scope, develop and pilot a robust method of qualitative review and synthesis for these practice-based projects.

1.2.1 Research questions:

- How do community projects aimed at improving wellbeing contribute to the success of the areas they serve? What outcomes result and for whom?
- What can be learnt about project engagement, implementation and sustainability from case studies of community wellbeing projects in context?
- What are the best methods of identifying, reviewing, synthesising and reporting methods and approaches of community-based practice?

1.3 Study Scope and design

The study scope was practice-based evidence from community-based projects (including projects, initiatives, services or programmes) that target wellbeing in the UK. We defined these as:

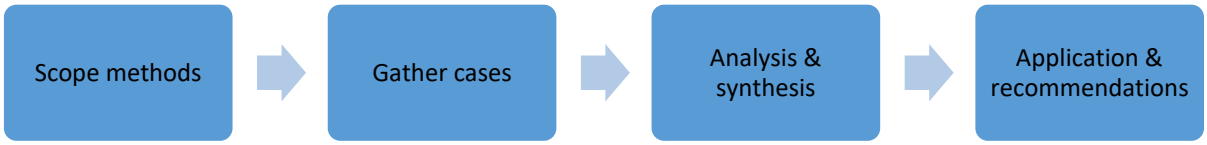
> Community-based projects developed and/or delivered by community hubs or community-based organisations that explicitly address wellbeing outcomes in neighbourhoods. Projects need to actively involve community members in design delivery and/or evaluation (as opposed to using community merely as a setting) and can involve geographical communities or specific communities of interest experiencing disadvantage.

While there are many areas where case study synthesis might usefully contribute to the evidence base on community and individual wellbeing, it is important to identify and test valid methods for doing this first. In order to develop the 'proof of concept', this pilot study focused on community-based interventions that aim to improve social relations and community wellbeing through better community infrastructure (places and spaces). This aimed to build on the evidence from the systematic review of this topic (Bagnall et al., 2018). The study was based on a scoping review

methodology to identify potential community wellbeing projects and also appropriate review/synthesis methods. There were 4 connected phases (Figure 1):

(i) Methods review – to scope and select appropriate methods for collection and synthesis
(ii) Gathering a collection of practice-based case studies
(iii) Analysis and synthesis of sample (using agreed methods)
(iv) Application & recommendations - review of methods and recommendations for future development, implementation and dissemination.

Figure 1: Study design and phases.



We drew on scoping review methodologies (The Joanna Briggs Institute, 2015, Arksey and O'Malley, 2005) to approach this pilot in a staged way. A study protocol was developed which set out the proposed methods and defined terms (South et al., 2019). The study included a review of methods to identify significant issues for the production and synthesis of wellbeing case studies (see Chapter 2). Overall, the research process was exploratory and inductive in nature. At each stage, we reflected on what had been learnt and tried to use findings to guide design choices in the following stages. The advisory group was critical to this process and provided a sounding board that enabled us to sharpen the focus and identify significant issues.

The main objective was to conduct a synthesis on a sample of case studies already in the public domain, as this was the major knowledge gap. Understanding the best methods to produce case studies in wellbeing practice is a related issue as the quality of analysis is partially dependent on the quality of the original case study. We had the opportunity through the partnership with Locality to develop some additional, new case studies drawn from the experiences of community-based anchor organisations in the Locality network (see https://locality.org.uk/).

1.4 Defining terms

The notion of 'evidence' - what counts as evidence and how it is best generated, validated and reviewed and what conclusions can be drawn – is contested territory (Hansen, 2014, Puttick and Ludlow, 2013). While case studies are found in many reviews, there are very few guidelines for use

of practice-based evidence. It is important therefore to make our position clear on epistemology and define, where possible, some of the key terms we use in this report.

1.4.1 Case study

The term 'case study' covers multiple types of case study, ranging from in-depth research studies through to exemplars of good practice or illustrative promotional stories (McClean and McNeice, 2012, Simpson et al., 2013, UK Health Forum, 2015, Yin, 1994, Ng and de Colombani, 2015). This study is concerned with practice-based case studies that report learning from community-based activity in a reasonably systematic way, often developed for the purpose of disseminating transferable learning from local programme implementation. Our initial working definition of a case study was drawn from the HM Treasury Magenta book on evaluation:

> *''[...] an in-depth, possibly longer term investigation of a single or very limited number of people, event, context, organisation or policy. A case study might be used when seeking to understand a significant or novel situation and to provide particularly rich data."* (HM Treasury, 2011).

1.4.2 Practice-based evidence

As discussed further in Chapter 2, there is a distinction to be drawn between research-based case studies, which investigate a phenomenon (e.g. a programme, a role, or a policy) within specific contexts using accepted research methods of data collection and analysis, and practice-based case studies, which emerge from the experiential knowledge of stakeholders involved in activities in real life settings. As the study has progressed, we have needed both to recognise the similarities and also the differences between research-based and practice-based knowledge (Hansen, 2014). Ng and de Colonbani (2015) describe practice-based evidence as emerging from "*a field assessment of an intervention in a real-life setting*". For Simpson, Kelly et al.(2013), case studies are a way to collect practice-based evidence in a systematic way. They go on to say that case studies can be a way of gathering tacit knowledge "*particularly that which has been created through implementation and learning from practice*". Zwald et al. (2013) also discuss the distinctive features of what they term 'stories from the field':

> *"Distinct from quantitative epidemiologic studies or evaluation methods, stories rich in detail can capture results of collaboration with individuals and organizations; communicate successes, barriers, and lessons learned; and describe both intended and unintended consequences that span varying stages of the initiative, which are often challenging to convey with numbers only."* (Zwald et al., 2013).

For the purposes of this report, and drawing on those understandings of practice-based evidence, we have developed an interim definition of practice-based case-studies:

> Practice-based case studies report on the evidence generated from the implementation of an intervention in a real-life practice setting and include the learning from those involved in the development and delivery of that intervention. Such case studies typically provide a narrative explaining how the intervention developed in that context and what happened. They are most often developed by practitioners involved in an intervention, but can also be developed in collaboration with funders, third sector organisations or researchers aiming to capture practice-based knowledge.

1.4.3 Evidence typologies and hierarchies

This study touches on the question of what counts as evidence. We have approached this with a broad view of the value of different evidence sources. The 'evidence hierarchy' of study designs put forward by Sackett and Wennberg (1997), in which the randomised controlled trial is at the top and other study designs are deemed to be less reliable, whilst still relevant in decision making about the effectiveness of interventions, is acknowledged to be difficult to apply to social or public health problems (Petticrew and Roberts, 2003). There is a widely held view that, rather than a rigid hierarchy, a typology of evidence is more useful, as different study designs may be suitable for answering different types of questions (Muir Gray, 1996). A methodological study reported that population level interventions were less likely than individual level interventions to have been studied using the most rigorous designs (according to the evidence hierarchy), but these less rigorous designs afforded additional information about the interventions and challenged some of the outcomes reported in the 'better' study designs (Ogilvie et al., 2005). Given this, many researchers agree that it is preferable to include and review the best available evidence rather than simply stating that no evidence is available (Thomson et al., 2004). An alternative approach is shift from questions of validity to asking as Aguinaldo does: 'What is this research valid for?' (Aguinaldo, 2004). For community wellbeing projects, developed in local contexts with attention to community needs, we started with the assumption that practice-based case studies would be an important source of evidence and one that complemented the formal evidence base.

1.4.4 Grey literature

'Grey' literature refers to evidence which is unpublished or has been published in a form other than a peer-reviewed journal article. This could include conference abstracts, PhD theses, slide sets, or, most commonly for policy-related topics, reports. Many existing practice-based case studies would

come under the definition of grey literature, as generally, they are not published in peer reviewed journals; however, they represent a specific form of grey literature, as they are often presented in a narrative form and contain experiential knowledge derived from implementation and practice (Simpson et al., 2013, Zwald et al., 2013).

Guidance on conducting systematic reviews, including the What Works Centre for Wellbeing's Methods Guide (Snape et al., 2019), the Cochrane Handbook (Higgins et al., 2019), the guidance on Methodological Expectations for Cochrane Interventions Reviews, the Centre for Reviews & Dissemination (Centre for Reviews and Dissemination, 2009), and the PRISMA guidance on conduct and reporting of systematic reviews (Moher et al., 2009), agree that grey literature should be treated in exactly the same way as literature from peer-reviewed journals when conducting systematic reviews. Failure to search for and include grey literature increases the likelihood that a review will suffer from reporting bias, which occurs because studies reporting positive findings are more likely to be published in peer-reviewed journals. This bias is particularly significant for community-based research, where the gap between what happens in practice and what is written up for publication in peer reviewed journals is wide (Bagnall et al., 2017, Savage et al., 2009). The Public Health England and NHS England report (2015) on community-centred approaches identified evidence gaps, including a publication bias towards professionally led interventions "*as many small, successful community-led interventions have not undertaken formal evaluations and therefore not published reports either as 'grey literature' or in peer-reviewed academic journals*". Bagnall (2018) noted that searching for 'grey' literature in the form of organisational reports may not be enough to identify the full range of community-led health and well-being initiatives taking place, and review teams need to go further in their efforts to identify these initiatives. This understanding of the value, and the limitations of, grey literature for community wellbeing interventions has influenced the specific focus on practice-based case studies in this study.

1.5 Report structure

The report presents the key findings from each of the four phases of the study. Chapter 2 reports on the literature review of methods for case study generation, analysis and synthesis. It describes the methods used for the rapid literature review and presents the main findings. The learning points from the review are also highlighted, as these influenced later stages. The following two chapters report on the pilot case study synthesis, which was conducted on a sample of community-based (places and spaces) interventions that aim to improve social relations and community wellbeing through better community infrastructure. The methods for the pilot are described in detail in Chapter 3 starting from initial searches to identify case studies, through to how data were analysed and reported. Chapter 4 presents the findings from the analysis and synthesis of 24 'places and

spaces' community wellbeing interventions; 17 interventions based around community hubs and seven interventions focused on green & blue spaces. There is also an account of the process of developing the new Locality case studies gathered by a small number of community anchor organisations. An exploratory quality appraisal process was piloted and the methods and results are discussed in Chapter 5. The final review phase of the study is reported in Chapter 6. This draws on advisory group discussions, which were key to shaping the study, reflections from Locality on the new case studies, and reflections from the academic team on the design choices which were significant during the pilot. Chapter 7 is a critical discussion of the overall study, looking at the strengths and limitations of the methods and the synthesis findings. The final chapter contains the study conclusions and recommendations for community wellbeing interventions, for further research and for the production of new case studies.

2 Methods Review

The aim of this chapter is to review published academic and non-academic literature concerning methodologies for synthesising practice-based case study evidence in order to inform our approach to synthesising practice-based case study evidence.

The review methodology is briefly explained followed by a summary of the included studies. Themes emerging from the review are then presented. These are: definitions and types of 'case study'; advantages and limitations of case study methods; approaches to synthesising case studies; appraising the quality of case studies; and ethical issues relating to case studies. Throughout, we try to distinguish between literature that is specific to practice-based case study evidence and where we have drawn on literature intended primarily for research-based case studies. We conclude each section with a short 'key learning' statement, which summarises significant points that inform our approach to synthesising practice-based case studies.

The chapter concludes with a brief discussion of emergent research gaps, limitations of the review, and what the review adds to our understanding.

2.1 Review methods

We conducted a rapid iterative review to identify the most relevant methodological papers for the research question (Gough et al., 2012). Backward and forward citation searches were carried out on twenty-one key academic and non-academic papers identified by the project advisory group and a key word search was carried out in six relevant academic journals (see Appendix 1 for full search strategy).

Inclusion criteria were:

- Methodological papers and guidance on synthesis of case studies gathered from practice-based evidence.
- Methodological papers and guidance about cross-case synthesis, including from methodological research literature (E.g. Miles et al., 2014, Yin, 1994, Yin, 2017).
- No date restriction.

The literature search was carried out by one member of the research team (KS) and a long-list of 248 articles was produced. The whole research team (KS, JS, CF, AMB) then assessed the long-list, excluding 172 articles, to produce a short-list of 76 of the most relevant articles based solely on their titles. One member of the research team (KS) then read the abstracts/summaries for each of the 76 articles, selecting 40 of the most relevant for inclusion in this reviewsk

2.2 Review findings

2.2.1 About the included articles

In total, 40 articles were included in this review. Table 1 provides a summary of the included studies. There was limited information identified in this review about the use of practice-based case studies in a wellbeing context and no articles identified about synthesising practice-based case study evidence.

The majority of included studies (n=23) concerned research-based case studies. Seven articles related to practice-based case studies and six covered both research and practice-based case studies. In four articles it is unclear whether the focus was on 'practice' or 'research' evidence.

The included articles approached 'case study' from a variety of fields/a range of topics. 16 articles were about health, including public health (n=9), arts and health (n=2), evidence-based practice in health (n=1), health policy (n=1), health inequalities (n=1), and women's health (n=1). 12 articles were about research methods, including evaluation methods (n=4), synthesis (n=3), definitions (n=3), quality assessment (n=1), and data utilisation (n=1). Other fields/topics were management (n=4), community & systems change (n=1), education (n=1), market research (n=1), peace studies (n=1), political science (n=1), social science (n=1), and social work (n=1).

Ten of the 40 included articles covered practice (or practice & research) case studies in a health context. Five of these provided guidance on how to produce different kinds of practice-based case study (Centers for Disease Control and Prevention, 2007, Centers for Disease Control and Prevention, 2008, McCree et al., undated, Lewis et al., 2004, UK Health Forum, 2016). One set out a framework for selecting 'best practice' in public health (Ng and de Colombani, 2015) and one set out methods for synthesising knowledge about public policy (Morestin et al., 2010). The remaining three have a wider concern, reviewing the role of practice-based case studies in public health (Korjonen et al., 2016, Ammerman et al., 2014, Davies, 2019). However, whilst these three articles advocate the necessity of practice-based evidence to understand public health interventions, their understanding of 'practice-based' appears to be limited to evidence that is generated *in* practice – i.e. through observational and evaluation studies as opposed to randomised controlled trials (RCTs) – rather than evidence that is produced *by* practice.

Simpson et al (2013) describe 'practice-based evidence' as evidence from the implementation of an intervention and the learning generated from this in practice Unlike evidence produced under more clinical models, practice-based evidence typically comes with the contextual information about how a project has been delivered to guide decisions about how a programme or intervention would fare

in other (similar or dissimilar) settings (Korjonen et al., 2016). For Simpson et al. (2013), case studies are a way to collect practice-based evidence in a systematic way.

There were no 'off the shelf' definitions of practice-based case studies, so that led us to develop a working definition that encapsulated key features of importance to this study (see 1.4.2). None of the included articles were about synthesising practice-based case study evidence. This meant that we have had to draw on, and adapt, themes, ideas and concepts from identified articles about both research case studies and from different disciplines. This is reflective of much of the work already done in this area (e.g. Davies, 2019, Korjonen et al., 2016, UK Health Forum, 2016), which also draws on learning related to research-based case studies.

Table 1: Summary of included articles

Article	Topic / field	Summary
Practice-based evidence		
Adams et al (2017)	Management	Suggests how 'grey literature' can be used in systematic reviews to increase relevance and impact.
Centres for Disease Control and Prevention (2007)	Health (public health)	To help public health program administrators understand what a 'success story' is, why it is important, and how to tell their story.
Centres for Disease Control and Prevention (2008)	Health (public health)	Guidance of writing a 'success story'.
Lewis et al (2004)	Health (women's health)	Reviews the rationale for developing success stories and describes the process used to gather information.
McCree et al (undated)	Health (arts and health)	Discusses issues relating to case studies in arts and health evaluation.
Puttick (2011)	Research methods (use of data)	Ten steps to transform the use of evidence.
UK Health Forum (2016)	Health (public health)	Guidelines on how to write a public health case study.
Research-based evidence		
Boblin et al (2013)	Health (evidence based practice)	Explores using Stake's qualitative case-study approach to explore implementation of evidence-based practice.
Chatterji (2008)	Education	Discusses why and how the criteria for study selection for synthesis need to be broadened (beyond RCTs) when education programmes are investigated for effects.
Denyer & Transfield (2006)	Management	Describes the qualitative synthesis and use of existing management research to inform management practice.
Edneyami et al (2018)	Management	Reviews the use of case study research for both practical and theoretical issues.
Fancourt & Joss (2015)	Health (arts and health)	Outlines the rationale behind the AESOP framework and explains how it should be used.
Flyvberg (2006)	Research methods (definition)	Examines five common misunderstandings about case-study research.

Gerring (2004)	Political science	Aims to clarify the meaning, and explain the utility of the case study method.
Gibbert et al (2008)	Management	Investigates the methodological sophistication of case studies as a tool for generating and testing theory.
Goodrick (2014)	Health	Methodological brief on comparative case studies.
Guetterman & Fetters (2018)	Research methods (definition)	Describes key methodological features of mixed methods and case study research.
Hoon (2013)	Research methods (synthesis)	Provides the research design of a meta-synthesis of qualitative case studies.
Khan & van Wynsberghe (2008)	Research methods (synthesis)	Presents theories of how people learn from collections of cases and discusses existing techniques for cross-case analysis.
Lee & Chavis (2010)	Community & systems change	Argues for a reconsideration of case study research by funders, policymakers, researchers, and evaluators and advance the cross-case methodology as the emerging standard for community and systems change research and evaluation.
Lee et al (2010)	Social work	To develop guidelines to assist practitioners and researchers in evaluating and developing rigorous case studies.
Levy (2008)	Peace studies	Role of case studies in developing causal explanations.
Lincoln & Guba (2002)	Research methods (quality assessment)	Discusses criteria for judging the quality of case study 'products' rather than quality of process.
Shankardass (2015)	Health (policy)	Presents a methodology for explanatory case studies to examine the implementation of Health in All Policies.
Simpson et al (2013)	Health (health inequalities)	Using case studies as a source of data to understand what constitutes effective practice in tackling socially determined health inequalities.
Singh (2013)	Market research	Discusses issues relating to case studies in non-profit organisations.
Stewart (2012)	Management	Describes and classifies different approaches to multiple case study research.
Thomas (2011)	Social science	A typology for the case study following a definition wherein various layers of classificatory principle are disaggregated.
van Wynsberger & Khan (2007)	Research methods (definition)	Proposes a more precise and encompassing definition of case study than is usually found.
West & Oldfather (1995)	Research methods (synthesis)	Provides rationale for pooled case comparison and situates the method within a framework of other approaches.
Practice and research based evidence		
Ammerman et al (2014)	Health (public health)	Outlines the need for practice-based evidence; describes approaches; and offers recommendations for making practice-based research the norm in public health.
Davis (2019)	Health (public health)	Review of literature on the role of case study in public health.
Korjonen et al (2016)	Health (public health)	Aim of the study was to define, explore and make recommendations around the nature and use of case studies in public health.
Morestin et al (2010)	Health (public health)	Methods for synthesising knowledge about public policies.

Neale et al (2006)	Research methods (evaluation)	A guide for designing and conducting a case study for evaluation.
Ng & Colombani (2015)	Health (public health)	Framework for selecting best practices in public health.
Unclear evidence type		
HM Government (2011)	Research methods (evaluation)	Guidelines for government departments for best practice for evaluations.
Parkhurst & Abeysinghe (2016)	Health (public health)	Illustrates the limitations of a single evidence hierarchy to guide health policy choices, while simultaneously providing new conceptualisations suited to achieve health sector goals.
Spencer et al (2003)	Research methods (evaluation)	Develops a framework guide assessment of the quality of qualitative research evaluations.
United States General Accounting Office (1990)	Research methods (evaluation)	Describes good practice and principles of applying case studies to evaluation.

KEY LEARNING

Relatively little has been written about practice-based case studies, particularly in a health and wellbeing context, and we did not identify any articles about synthesising practice-based case studies.

We have needed to draw on, and adapt, themes, ideas and concepts about both research-based case studies and case studies from non-health disciplines.

2.2.2 What is a case study?

Within the identified articles relating to both research-based and practice-based case studies, there is a consensus that a 'case study' involves an up-close, in-depth, and detailed examination of a subject (the case) and its related contextual conditions. Simons (2009) concludes that what unites all definitions is a commitment to studying the complexity that is involved in real-world situations. From a research perspective, De Leeuw et al. (2015) suggest a case study is designed to provide a narrative relating to the issue under consideration within its real-life boundaries. From a practice perspective, guidance from the UK Health Forum (2016) talks about case studies capturing real life context. Guidance on evaluative research methods provided by HM Treasury (2011) defines a case study as:

> *"An in-depth, possibly longer term investigation of a single or very limited number of people, events, context, organisation or policy. A case study might be used when seeking to understand a significant or novel situation and to provide particularly rich data."* (HM Treasury, 2011).

This consensus may come from different authors drawing on similar sources. Many of the identified practice-based articles take their definition of 'case study' from research-based literature. For example, in their review of literature on the role of case studies in public health, Davies (2019) reference the research-focused work of Yin (1994), Luck (2006), Lee (2010) and Stake (1995) in producing their definition of case study as "*a detailed investigation of a particular contemporary phenomenon, undertaken within the real life context*".

- *Different types of case study*

These core features of a case study – in-depth, detailed, single subject, contextual factors – can be interpreted and applied in different ways. Across the review articles, different types of case study were described by authors. Common issues that the presented typologies dealt with included the role of theory, whether the case study is evaluative or descriptive, and whether the case is examined in isolation or alongside others.

There is a debate within the included research-based case study articles about the epistemological status of case studies. Gerring (2004) suggests that the case study exists *"in a curious methodological limbo".* On the one hand, the case study is seen as an all-encompassing research methodology or research strategy. On the other hand, the case study is seen only as a research method for collecting a particular type of (qualitative) data. Simpson et al. (2013), for example, suggest the case study is an established data collection tool used within qualitative research methods to generate insight.

Within the practice-based case study articles, there is a distinction between the case study as an approach to data collection and as an output. The UK Health Forum (2016) suggest that in a practice context case studies are usually an output from a project, or service, which summarise what took place and describes an event or an intervention. Korjonen et al. (2016) similarly distinguish between the formal case study method used to gain a deeper understanding of a specific phenomenon and informal case studies that describe something that has happened in a particular context. The idea of an 'informal' case study reflects a common theme of practice-based case studies to tell a story about what happened during, and because of, an intervention or activity. The Centers for Disease Control and Prevention (2007), Centers for Disease Control and Prevention (2008) and Lewis et al. (2004) both use the term 'success story' and produce guidance to help programme administrators tell their story effectively. A 'success story' is:

> *"A narrative—usually between one and two pages—highlighting the achievements and progress of a program/activity. A success story can document program improvement over time and demonstrate the value of program activities."* (Centers for Disease Control and Prevention, 2008).

One example about practice-based case studies that provides a detailed typology is Davies (2019), based on a project by Public Health Wales. The report uses Yin's (1994) distinction between exploratory, explanatory, and descriptive case studies. Exploratory case studies are those looking for patterns in data, possibly to generate or inform new theory. Explanatory case studies investigate a particular issue or phenomenon to understand why or how effects have occurred. Finally, descriptive case studies describe the effects of particular activities, possibly using a specific theory to aid understanding.

KEY LEARNING

'Case study' is something of an umbrella term. Commonly agreed features of case studies are that it involves an in-depth and detailed examination of one subject/phenomenon. In a practice context, case studies are commonly a description (rather than seeking to understand how or why something occurred) and often used to demonstrate or report successes and/or disseminate learning.

2.2.3 Strengths of case studies

The included articles – both practice and research-based – described the strengths of case studies. While different 'types' of case study have particular strengths and weaknesses; there were some cross-cutting themes.

- *Understanding context and complexity*

Case studies can surpass other forms of evidence in providing information and insights in the complexity of human life (Flyvbjerg, 2006, Ammerman et al., 2014, Thomas, 2011). They do this through producing 'thick' descriptions (Korjonen et al., 2016) that go beyond mere facts and surface appearance to present detail, context, and subjective assessments of lived experiences. These mechanisms are distinct for each setting and would otherwise remain hidden.

In a practice context, case studies can illuminate the positive and negative outcomes that can happen at the local level and describe any unintended consequences which arise as a result of a project or programme (HM Treasury, 2011). They are able to go beyond numbers in relation to an indicator and explore causes of outcomes within practice (Simpson et al., 2013). The UK Health Forum (2016) suggest case studies can provide more detailed information than other forms of evidence as a result of the multiple methods that can be used to collect and report data.

More than just identifying effects, case studies can bring to light the mechanisms operating within or alongside practice which lead to the success or failure of an intervention, serving to answer questions about 'how' and 'why' (Chatterji, 2008, Shankardass et al., 2014). This aligns to a realist

approach to evaluation based on the Context + Mechanism + Outcome (CMO) configuration (Denyer and Tranfield, 2006, Blamey and Mackenzie, 2007). Korjonen et al. (2016) also argue that case studies of practice-based evidence are able to provide the information about the context within which an outcome may have been achieved. This contextual data is valuable to other practitioners when aiming to replicate a programme or intervention as it provides crucial information about the population and setting as well as barriers and enablers affecting implementation. Case studies describing practice-based evidence may also therefore be particularly useful when examining complex interventions. Combining these two information streams – internal mechanisms and external context – can illuminate decisions or sets of decisions, why they were taken, how they were implemented, and with what results within particular contexts (Ebneyamini and Sadeghi Moghadam, 2018). Conversely, where there is a focus on reporting successes, practice-based case studies may not present sufficient detailed information.

- *Practitioner/lay perspective*

Case studies are typically carried out in close proximity to those people being studied and therefore represent an approach that is ideally suited to creating knowledge relevant for practitioners (Gibbert et al., 2008). They are a mechanism for ensuring that tacit knowledge, developed through practice, is systematically collected (Simpson et al., 2013). Case studies can capture local stories within local conditions, showcasing unique experiences (De Leeuw et al., 2015). Korjonen et al. (2016) argue that because case studies of practice-based evidence incorporate lay perspectives *"they are more honest and represent local expertise and knowledge"* and therefore can be more valuable to some public health groups than 'scientific' evidence. Caution may be needed, however, where descriptive case studies are primarily developed to showcase a success story rather than to share learning (Lewis et al., 2004), as these may present a very selective view.

- *Sharing stories*

As was suggested previously, practice-based case studies are commonly used to describe and share stories, particularly of successes. In a public health field, case studies are seen as a way to share stories about programme accomplishments, evaluate programs and communicate results to funders, show how programmes work, report how programs have influenced individuals or organizations, and describe the efforts of people to bring about change (Lewis et al., 2004, Davies, 2019). Case studies are an effective medium for this for two reasons. Firstly, the case study can showcase relevant information about practice (i.e. about context) which may not be possible in more traditional academic literature but which may be highly pertinent to the practitioner in the field (Korjonen et al., 2016). Secondly, along with the presentation of essential contextual information, the narrative format of case studies is often more digestible to the reader than typical scientific papers (Korjonen

et al., 2016). Case studies can be easily shared with policy makers, project funders and the media to demonstrate the work done through the implementation of a project or programme and increase its visibility to decision makers. However, there should always be careful consideration given to the details which may have been left out of this narrative (Goodrick, 2014).

KEY LEARNING

Case studies can capture lay perspectives and provide a 'thick' description of not just programme outcomes but of implementation processes and context. The narrative form of case studies can make them easy to understand and share. However, the propensity of practice-based case studies to be descriptions of successes raises questions about whether sufficient information to inform practice is always included.

2.2.4 Limitations of case studies

The scoping review found that case studies of all types are often undervalued, held in low regard, or simply ignored, particularly when it comes to policy decisions (Gerring, 2004). Case studies are often taken as testimony or dismissed as anecdotes rather than 'evidence' in the more traditional sense (Simpson et al., 2013). There is often a legitimate concern that case studies lack rigour; that data may not have been collected systematically and that findings may be biased (Neale et al., 2006, HM Treasury, 2012). Where case studies are designed to promote work to decision makers, consideration should be given to the details which may have been excluded (Goodrick, 2014). While case studies offer a chance to celebrate success (Centers for Disease Control and Prevention, 2008), superficial accounts may undermine the credibility of case studies as a source of practice-based evidence.

Simpson et al. (2013) reviewed a number of case studies as part of an effort to understand how best to use case-studies to recognise effective practice at a system level in tackling socially determined health inequalities. Reoccurring problems they identified were: case studies were often not focused on describing the complexity of either the problem or the causes (Simpson et al., 2013); case studies were often about the intervention rather than the processes that surrounded the intervention (Simpson et al., 2013); often assumptions were made about the nature of the problem and its causes rather than making a presentation of evidence to support this problem statement and the subsequent solution (Simpson et al., 2013); and there was often limited information about effectiveness in relation to impact on inequalities and therefore relevance for uptake by policy makers (Simpson et al., 2013).

The limitations of case studies may, however, lie with the quality of individual case studies rather than the method itself (Simpson et al., 2013). In part, these issues may be due to word limits and the reporting structure. We discuss what makes a 'good' case study in section 2.2.4.

KEY LEARNING

Case studies are often valued less than other forms of evidence in health and policy decisions. Common problems with health-related case studies include not sufficiently describing the problem, context, processes, or outcomes. There is a balance to be struck in writing a case-study between providing the necessary 'thick' description and accessibility.

2.2.5 Synthesis of case studies – why?

Vast quantities of information are gathered via both research-based and practice-based case studies (Puttick, 2011). Charitable funders, for example, routinely require monitoring and evaluation from grant recipients. These case studies tend to remain standalone works, archived on websites or in filling cabinets. The potential to mine these sources again and draw this information together to inform policy or practice has generally been neglected, with their potential cumulative advantage for advancing knowledge lost (Hoon, 2013, Khan and VanWynsberghe, 2008). As Puttick (2011) suggests:

> *"Many billions of data points exist…that when assembled together could shed light on how effectively different public services perform…but many of these currently languish on internal databases and locked in filing cabinets."* (Puttick, 2011).

Moving from treating case studies as single entities to combining them in a synthesis provides opportunities to produce more robust findings. By comparing studies, cases can be examined in light of one another, revealing otherwise hidden contextual differences (West and Oldfather, 1995, Lee and Chavis, 2012). Moreover, whilst individual case studies may reach different conclusions about apparently similar phenomena, looking across multiple cases reveals underlying similarities and differences in the findings in the contexts within which those findings arose (Hoon, 2013).

A concern when synthesising case study data is that much of the meaningful contextual detail underpinning each case study will be obscured (Khan and VanWynsberghe, 2008). Cross-case comparisons have typically failed to bring readers *"to a sense of place, time, and culture"* (West and Oldfather, 1995). However, Ayres et al. (2003) suggest that losing some contextual detail is consistent with the goals of cross-case analysis as *"the origin of each unit is less important than its membership in a group of like units".* It may be that the tension between keeping the rich, contextual knowledge contained in case studies and drawing conclusions across multiple cases can be managed through systematic processes for organisation of data. For example, extensive

description of cross-site analysis can be provided through the use of matrices (Miles and Huberman, 1994).

None of the articles included in this review provided specific information about synthesising practice-based case studies.

- *Which case studies are suitable for synthesis?*

Not all case studies can be brought together in a synthesis. A major problem confronting any multiple-case research design is the potential heterogeneity in the cases (Hoon, 2013, Levy, 2008). Purposive sampling is therefore thought to be more appropriate than randomised sampling in order to identifying cases that are sufficiently comparable (Goodrick, 2014, McClean and McNeice, 2012). Clearly detailing the criteria for deciding which case studies to include is needed to help maintain a systematic and consistent approach (Shankardass et al., 2014). While not all cases will meet all the criteria, none should be in contradiction to it in order to be included in the sample (Ng and de Colombani, 2015). The selection process should be made transparent as this will help inform readers of any potential bias to be accounted for.

Based on this scoping review, areas of consideration for selection criteria are:

- *Case studies with a common focus*

This may be, for example, the setting or context in which a programme took place, the participants in a programme, or the intended outcomes. Cases may be included for their similarities in this area or for their differences, contrast or variance (Stewart, 2012). Even where the situations described by case studies appear dissimilar, cases might be still considered to be about the same 'thing' if they allow the reader to draw inferences that may have applicability to their own context (Lincoln and Guba, 2002). Defining the unit of analysis is also important for comparison across cases. For example, cases describing a programme implemented at a local level (micro) may not be comparable to a case study reporting different approaches to service delivery (meso) or those comparing different national programmes (macro). Some case studies may include data relevant to all these levels, with insight into multiple contextual factors (Shankardass et al., 2014).

- *Case studies containing sufficient information on core topics*

Individual case studies should provide sufficient detail to describe the complexity around the case study under scrutiny so that the nature of the problem and the solutions put in place are made clear (Goodrick, 2014, Shankardass et al., 2014). Detail about the intervention or project as well as providing detail on the contextual factors relating to the unique setting in which it was delivered are

both essential so as to facilitate the understanding of how the context may have had an impact on the delivery and the outcomes (Shankardass et al., 2014). How each case study describes the features of the project or context which contribute to its sustainability is also useful information (Goodrick, 2014). There may need to be a trade-off between the number of examples collected and the depth of detail contained within them (Goodrick, 2014).

- *Case studies that involve community members and other stakeholders in production*

The value of 'involving' community members and other stakeholders is variously described in the identified literature. Ng and de Colombani (2005) and Shankardass et al (2014), for example, both suggest that case studies capturing the voices of stakeholders and the wider community can offer the greatest insights. An extension of this argument is that case studies which have been co-produced with community members and stakeholders as co-authors/co-researchers might offer even greater insight and should be prioritised for inclusion in a synthesis. However, notwithstanding issues related to bias as a result of involving stakeholders and community members in case study production, we found no literature to back up this suggestion. Therefore, it may be more appropriate to view 'stakeholder involvement' as a quality criterion to be assessed as part of the synthesis process rather than a prerequisite of what a case study needs in order to be included at all.

- *Case studies that report outcomes and impact*

The inclusion of all practice examples showing positive or negative outcomes against an objective should be included for synthesis as this will support any assessment of effectiveness (Ng and de Colombani, 2015). Case studies do not have to report positive results as there is also much to be learned from unintended consequences or reports of the 'counterfactual' (Ng and de Colombani, 2015). These may provide the opportunity to test causal propositions about what makes an intervention or project potentially successful (Goodrick, 2014).

- *Case studies that report research methods*

Whilst research- and practice-based case studies commonly utilise qualitative research methods (Simpson et al., 2013, Hoon, 2013), a range of data collection methods can be used and a diversity of methods would not preclude a case study from synthesis. Stewart (2012) suggests that enough methodological information is needed to allow readers to judge the quality of the data collection and analysis, such as the number of interviews carried out, questions asked during interviews, and who carried out data collection and analysis. HM Treasury (2012) suggest that the research methods used to inform a case study should adhere to recognised methodological standards. Finally, Lee and

Chavis (2012) suggests training researchers and evaluators in the correct application and use of research methodologies is an important area of improvement for practice-based community and systems change research. However, it is inappropriate to judge practice-based case studies by the standards of more formal/professional research or evaluation. A practice-based, or an informal case study (Korjonen et al., 2016), can be treated as a primary documentary source in itself, whatever the methodological flaws. The notion of 'quality' in relation to practice-based case studies in discussed later in this chapter.

- *Practical considerations*

Practical considerations may constrain the availability of case studies for inclusion in a synthesis (Stewart, 2012). When inviting submissions of examples from practice, a low response rate should be anticipated as not all of those eligible to submit an example will follow up on the invitation (Simos et al., 2015). This may require those wishing to undertake a synthesis to be prepared to modify their plans where necessary.

KEY LEARNING

Synthesis provides opportunities to produce more robust findings and reveal otherwise hidden patterns. Not all case studies are appropriate to be included in a synthesis. Points to consider are whether case studies are sufficiently about the same topic and/or at the same unit of analysis and whether sufficient information is provided about the case-study context, programme outcomes/impact, and the research methodology used. The case studies that are needed for a synthesis may not always be available.

2.2.6 Approaches to synthesis

Case study synthesis looks for similarities, differences and patterns across a number of cases (Goodrick, 2014). None of the identified articles about practice-based case studies discussed approaches to synthesis. Those that were about both practice and research-based case studies and that discussed approaches to synthesis (e.g. Davies, 2019, Neale et al., 2006, Korjonen et al., 2016) were themselves based on methods from research literature. Similarly, identified articles about research-based case studies in a health context (e.g. Simpson et al., 2013) discuss methods of synthesis drawn from research literature. We recognise that there are numerous other approaches to synthesis – as well as many guides and reports – not picked up through our review and, therefore, not mentioned here. As such, what follows is an overview of some of the key points highlighted through our review concerning research-based case study synthesis and, where possible, a consideration of their application to practice-based case studies.

A wide range of techniques for synthesising case study data exists (Denyer and Tranfield, 2006). In addition, many existing methods of primary data analysis can also be utilised, particularly with regard to qualitative evidence (Simpson et al., 2013). Various authors have attempted to classify different approaches to case study synthesis (e.g. Yin, 1994, Stake, 2005, Rousseau et al., 2008, Merriam, 1998). Here we distinguish between approaches that *aggregate* data from individual case studies to be analysed together from approaches that analyse case studies individually before *comparing* across them. A further issue is whether a case study is reviewed as a form of qualitative evidence suitable for secondary analysis or as primary source of data, which can be pooled in a qualitative analysis.

Another important distinction is between synthesis approaches designed for mixed-methods data and approaches which might handle quantitative and qualitative separately before being brought together in a mixed-methods synthesis. This is not something we consider in great detail here as our assumption – informed by the literature and our previous experience – is that the majority, if not all, practice-based case studies will be qualitative and that any quantitative data will not be of sufficient quality to perform further analysis with. Future work may need to explore this issue further especially where our assumptions do not hold.

- *Pooled case comparison*

Aggregative syntheses include pooled-case comparison (West and Oldfather, 1995) and meta-analysis (Hoon, 2013). Pooled-case comparison involves pooling raw data from separate studies to create a new data set from which fresh categories and properties are derived. Both approaches are a means for comparing separate but similar studies, highlighting both the uniqueness and the commonality of participants' experiences (West and Oldfather, 1995). They can be used to produce time- and context-free generalisations that can affect cause-effect laws (Hoon, 2013). This stripping of context is a significant weakness of this approach, however, when the aim of the synthesis is to gain a deeper understanding of how or why something occurred.

A greater variety of *comparative* approaches to synthesis were described in the identified literature on case studies for this review. Four main approaches were found: narrative synthesis, meta-ethnography, realist synthesis and cross-case analysis. These are discussed in turn.

- *Narrative synthesis*

N*arrative synthesis* focuses on how case-studies can be narratively summarised and built up to produce a bigger picture of a phenomenon (Denyer and Tranfield, 2006). Narrative synthesis is an established method for synthesis in systematic reviews (Popay et al., 2006). For case studies, it is

largely a process of compiling descriptive data or examples from cases into a map. Rumrill Jr and Fitzgerald (2001, in Denyer & Transfield, 2006) suggest four objectives of a narrative synthesis: 1) to develop or advance theoretical models; 2) to identify, explain and provide a perspective on complicated or controversial issues; 3) to provide information that can assist practitioners in advancing 'best practice'; and 4) to present new perspectives on important or emergent issues. Narrative synthesis is a highly flexible approach (Adams et al., 2017, Denyer and Tranfield, 2006). Unlike meta-analysis where the nature and the quality of the case study data must be similar, narrative synthesis can accommodate differences between the questions, research design and the contexts of each of the individual studies. Narrative synthesis can provide deep and 'rich' information and enable the wholeness or integrity of the studies to be maintained, thus preserving the idiosyncratic nature of individual studies (Denyer and Tranfield, 2006). Preserving the richness of information also allows individual case study limitations to be compensated for through contextualisation and triangulation. Morestin et al. (2010) recommend narrative synthesis using thematic analysis as an approach to synthesising knowledge about public health policies. They suggest managing the information in a data extraction table through subdivisions devoted to a relevant analytical dimension. Each category can then be summarised looking for convergence and divergence between the different bodies of information. A weakness of narrative synthesis is that it is open to bias as those conducting the synthesis may quote only that which supports a particular position – it is not uncommon for two researchers reviewing the same question to report contradictory findings (Denyer and Tranfield, 2006).

- *Meta-ethnography*

Another approach is *meta-ethnography*. Meta-ethnography is an exploratory, inductive approach to synthesis that uses open codes emerging from the data as well as making constant comparison across cases (Hoon, 2013, Denyer and Tranfield, 2006). The process involves identifying 'metaphors' - key themes, perspectives, ideas, and concepts – from each individual case before linking them across cases interpretively to provide a holistic account of the phenomenon. Meta-ethnography assumes that the social and theoretical contexts in which substantive findings emerge should be preserved through synthesis (Denyer and Tranfield, 2006). Meta-ethnography is a unique form of synthesis that preserves the interpretative qualities of the original data by *"carefully peeling away the surface layers of studies to find their hearts and souls in a way that does least damage to them"* (Sandelowski et al., 1997, in Denyer & Transfield, 2006). Simpson et al. (2013) conducted a meta-ethnography of case studies to understand effective practice in tacking socially determined health inequalities. Their process was to move away from treating case studies as single entities to be used deductively by treating the included case studies as heterogeneous data to inductively derive key

themes and ideas. A major weakness of meta-ethnography is that any interpretation is only one possible reading of the included cases and it is quite feasible for another investigator to have an entirely different reading (Denyer and Tranfield, 2006).

- *Realist synthesis*

Realist synthesis is useful for exploring processes and theories underpinning an initiative and attempting to verify, falsify, or refine programme theory using the available evidence (Denyer and Tranfield, 2006). The focus of explanatory practice-based case studies may be on revealing how processes work and underlying mechanisms (Chatterji, 2008, Shankardass et al., 2014), often in a specific context (Korjonen et al., 2016). The task of realist synthesis is to inspect a programme theory in a range of contexts. The process involves describing and discussing each case study in relation to the emerging theory. The results take the form of a revised theory, designed to explain for whom, in what circumstances, in what respect, and why certain interventions work. Realist synthesis is best used when understanding the nature of the relationship between the contexts, mechanisms and outcomes is crucial (Denyer and Tranfield, 2006). Both realist synthesis and meta-ethnography can be used to distinguish important variables (themes, ideas, concepts) from confounding factors (Denyer and Tranfield, 2006). That is, if an attribute is consistently found across a wide range of studies the author may surmise that the attribute is pertinent.

- *Cross-case analysis*

The final comparative synthesis approach described here is *cross-case analysis*. Cross case-analysis is a broad approach involving analysis within individual case studies followed by searching for patterns across cases. Cross-case approaches are suggested as an appropriate method for synthesising existing case studies (Khan and VanWynsberghe, 2008) and for synthesising practice-based evidence (Morestin et al., 2010). Lee and Chavis (2012) suggest the use of a cross-case methodology to synthesise case studies in community and system change research and evaluation. Their proposal consists of five stages: 1) Developing a theory of change 2) Establishing a measurement framework, which makes clear the different methods and data sources 3) developing the cross-case study protocol and building a database 4) analysing and interpreting the findings 5) communicating the results.

There are multiple ways of carrying out cross-case analysis and a distinction is made between variable- and case-orientated approaches (Khan and VanWynsberghe, 2008, Ragin, 2004). Variable orientated approaches tend to pay greater attention to the variables across cases rather than the case itself. Variables are compared across cases in order to delineate pathways that may have led to

particular outcomes. The complexity and context of individual cases is not at the centre of a variable-orientated approach. In comparison, case-orientated approaches focus more on showing how a story unfolded in different contexts. The central question of interest is in what ways the cases are alike and commonalities across multiple instances of a phenomenon contribute towards generalisations. Given that cross-case analysis must reconcile the preservation of the uniqueness of the case while attempting to analyse the case across other cases (Silverstein, 1988, in Khan & VanWynsberghe, 2008), in practice much cross-case analysis is a mixture of variable- and case-orientated approaches (Khan and VanWynsberghe, 2008).

A common feature in cross-case analysis is the use of matrices to manage and facilitate the recording and comparison of emergent themes between cases. Stake (2006, in Khan & VanWynsberghe, 2008) describe three stages for doing cross-case analysis. The first and second involve identifying themes at different levels of abstraction within individual cases, while the third involves generating a case-ordered descriptive matrix that allows for comparison of the cases based on a number of factors. Ragin (1994, in Kahn & VanWynsberghe, 2008) describe arranging cases in a 'truth table' by variable in order to study common causes or outcomes. Similarly, in the 'stacking' cross-case analysis technique, a series of cases are displayed in a meta-matrix by fields of interest. Each case is condensed in a form that permits a systematic visualisation and comparison of all the cases at once (Miles and Huberman, 1994, in West & Oldfather, 1995). Lee and Chavis (2012) describe 'building a database' as part of their cross-case methodology in community and system change research and evaluation.

Morestin et al. (2010) recommend an approach for synthesising practice-based data to produce a narrative review using thematic analysis and managing the information in the data extraction table through subdivisions devoted to a relevant analytical dimension. Each category can then be summarised looking for convergence and divergence between the different bodies of information. A deliberative process can finalise the synthesis process where the knowledge generated from the synthesis can be discussed with stakeholders. This co-production approach is an essential step to make sure the synthesis of knowledge meets the needs of the end users. It may also help improve reliability and trustworthiness of analysis. Morestin, Gauvin et al. (2010) go on to suggest a number of dimensions for data extraction of practice-based evidence synthesis for developing policy. These cover effectiveness, unintended effects, equity, cost, feasibility and acceptability, although the dimensions are not rigid and more could be added (Morestin et al., 2010).

Overall, this section illustrates the range of potential methods for case study synthesis. It is clear that there is scant methodological guidance directly applicable to the analysis and synthesis of

practice-based case studies. Due the lack of literature dealing with practice-based evidence, we have identified some key points of learning (section 2.2.6), which then informed our approach to synthesis. This drew mostly on the systematic approaches described for cross-case analysis.

- *Managing multiple case-study data*

Once case studies have been collected it is necessary to find an appropriate way to manage and store them. An effective storage solution can aid in analysis process, particularly across multi-case studies. Storing the information in an organised archive also serves to make individual case study data more accessible and enhances the credibility of synthesis. Very little literature was identified on this topic. Khan and VanWynsberghe (2008) suggest applying 'tags' to different case studies. Tags are personal, adaptable and descriptive terms that can be applied to a body of information as meta-data. Tagging can facilitate cross-case comparison as one can quickly look at all the data marked with a particular tag.

KEY LEARNING

A wide range of methods for synthesising case studies have been developed, including adapting existing methods of primary qualitative data analysis. Matrices are commonly utilised to manage the complexity of data. There is no established 'best' method for synthesising practice-based case studies.

An approach that involves displaying cases in a matrix (data extraction table), subdivided by fields of interest, in a condensed form that permits a systematic visualisation and comparison of the cases (cross case analysis) would be appropriate for practice-based case studies developed in different contexts.

'Tagging' and storing case studies will help the synthesis process and make individual case studies more accessible.

2.2.7 Quality appraisal

When bringing together a number of sources of evidence it is important to know the relative quality of each piece of evidence. This helps to understand the strengths and weaknesses of both the individual pieces of evidence and the overall conclusions of the synthesis. What 'quality' means is not fixed and criteria for judging are heavily influenced by research paradigms and underpinning philosophical assumptions (Patton, 2002, in Spencer et al, 2003). A number of the identified (research-based) articles describe and debate the epistemological and ontological basis of case study research and what this means for judging quality (see Gibbert et al., 2008, Stewart, 2012, Chatterji, 2008). Issues of research quality were beyond the scope of this review- as the focus was on practice-based case studies as a specific form of evidence. Instead, we focus specifically on what the

identified articles say about what makes a good case study, in general, and consider what this means for practice-based case studies in particular.

Quality of evidence

When judged against positivist standards of internal validity, external validity, construct validity, reliability, and generalisability, case studies are commonly considered to be poor quality (Morestin et al., 2010). In the field of health inequalities research, for example, case study evidence is seen as poor quality in comparison to more 'scientific' evidence from experiments or quasi-experiments (Simpson et al., 2013). Following systematic procedures can help improve 'quality' in these domains (Lee et al., 2010, Davies, 2019). Triangulation of data, for example, can lead to increased internal and construct validity and systematic approaches to collecting and reporting the data can help to reduce a perceived lack of rigour (UK Health Forum, 2016). Case studies can address threats to internal validity, construct validity, external validity, and reliability through the use of a theory of change, methodological and data source triangulation, rules of evidence, and systematic case study protocols and databases to ensure consistent and reliable data collection (Lee and Chavis, 2012). The act of synthesis itself can also reduce, though not remove, the potential impact of bias or inaccuracy of individual cases and increase reliability of conclusions overall (Simpson et al., 2013). Findings from the synthesis of a number of individual cases may allow for translation to other settings and the generalisability of the findings from the synthesis of a number of practice examples may also be increased by linking back to theory (UK Health Forum, 2016).

Whilst practice-based case studies might be considered 'low quality' by some, they may still contain valuable information relating to implementation (Morestin et al., 2010). The identified articles also raise questions about the appropriateness of this traditional 'scientific' conceptualisation of quality for case study evidence and whether there is a misalignment with what case studies are trying to achieve. For example, while the quality of case studies may be downgraded for not being generalisable, this is not the intention of case studies; case studies explicitly set out to focus on a limited number of people or situations, making the findings unique to that setting (Shankardass et al., 2014, UK Health Forum, 2016). Instead, a measure of quality for different types of evidence should derive from the appropriate sciences that generate such evidence (Parkhurst and Abeysinghe, 2016).

Authenticity, credibility and translatability

Stewart (2012) proposes 'convincingness' (how convincing is a claim?) as an alternative criterion for judging the quality of case-studies and practice-based evidence. Convincingness is derived from the research design and the reliability of the instruments that are used in gathering data. Convincingness, according to Stewart (2012), is a more useful term than validity, which relates more to the technical robustness of measures and constructs rather than experience in the real world. Platt (1981, in Spencer et al, 2004) talks about establishing 'authenticity', arguing that 'quality' is derived from knowing if researchers witnessed the phenomenon under investigation first hand, are able to speak the native language, and the role they played in the society. Other authors use credibility (whether the evidence for the claim is convincing) and plausibility (how the claim fits with what is already known) as ways of thinking about validity (Spencer et al., 2004). Finally, whilst findings of case studies cannot be generalised in a probabilistic sense, they may still be relevant to other contexts. 'Comparability' is the degree to which the parts of a study are sufficiently well described and defined that other researchers can use the results of the study as a basis for comparison, whilst 'translatability' refers to a clear description of one's theoretical stance and research techniques (Coetz and Le Copte, 1984, in Spencer et al, 2004).

KEY LEARNING

Positivist ideas of Internal, external, and construct validity, and reliability are not appropriate measures of 'quality' for practice-based case studies, potentially leading to the exclusion of valuable information. Considering the convincingness, authenticity and plausibility of a case study may be more appropriate.

2.2.8 What makes a good case study?

Through the review, we identified a number of checklists, sets or questions, and guidance about quality for both practice- and research-based case studies. These checklists are aimed at both authors of case studies and users/readers:

- Eight questions to prompt case study readers to think about the example in a simple and structured way (Simpson et al., 2013).
- Twenty-one questions to support writing a good 'success story' (Centers for Disease Control and Prevention, 2007).
- Thirteen reporting standards for organisational case studies in the NHS (Rodgers et al., 2016, in Davies, 2019).
- Writing guidance around five features of a good case study in public health (UK Health Forum, 2016).

- Seven features of a good case study in public health (Davies, 2019).
- Eight areas of consideration for evaluating case study production (Lee et al., 2010).
- Nineteen questions to assess the quality of case studies (Stake, 1995, in Spencer et al, 2003).
- Seven characteristics of a good qualitative case study (Spencer et al., 2004).
- Five characteristics of a good evaluative case study (United States General Accounting Office, 1990).
- Four criteria to judge how well written a case study is (Lincoln and Guba, 2002).

Despite their different audiences and topics, these articles share some similar ideas for what makes a good case study. These are:

- *Context*

Case studies need to provide a description of the context in which the phenomenon they are about has occurred, such as the population, geographical area, and organisations involved (Korjonen et al., 2016). Where context is not sufficiently described, as well as affecting the quality of individual case studies, it can also affect synthesis (Simpson et al., 2013). Building on the description of context, good case studies might also provide a proposition or problem statement, hypothesis, or theory or mechanism against which the resulting information is presented. This can support understanding of what happened and why.

- *What happened*

A description of the intervention that took place is important (Davies, 2019, Rodgers et al., 2016, Simpson et al., 2013).

- *Methodology*

Describing how the case study was carried out is necessary. Too little information about how the case study was conducted leaves the reader having to act in 'good faith' (Korjonen et al., 2016). It needs to be clear when, how and why data was collected and analysed, and any limitations of the chosen approach are also useful (Neale et al., 2006). It also needs to be clear that the case study conformed to accepted research ethics principles and procedures.

- *Findings*

A clear description of the findings, including the outcomes and any impacts these have had on the individuals, communities, or organisations involved. Findings might also relate to processes around the intervention, such as challenges faced and solutions (Korjonen et al., 2016).

- *Presentation*

Case studies need to provide the necessary 'rich' description to allow readers to fully understand what happened. Good presentation includes avoiding the use of technical language/jargon and being comprehensible for a lay audience.

- *Transparency*

Case studies should be transparent about authorship, sponsors and funders, links and references to further data or information, conflicts of interest, limitations of the work, and provide contact details for further information (Korjonen et al., 2016).

Of the quality criteria identified here, some relate more to traditional research-based case studies, whilst others relate to practice-based case studies. Korjonen et al. (2016) suggest the perfect public health case study should report transparently the same type of information as a peer-reviewed paper, albeit in a much shorter format. Distinctions between different types of case studies necessitate a need to be flexible about the required content. For example, case studies that are promotional in nature, showcasing what has been done locally, may not need detailed methodologies (Korjonen et al., 2016). The guidance provided by the Centers for Disease Control and Prevention (2007) about writing 'success stories' does not mention including information about how the underlying data was gathered. Authors should be clear about the intended purpose of their case study, the intended audience, and the ways in which the case study will be used as this will guide their case study design and writing processes (Lewis et al., 2004).

KEY LEARNING

Given the purpose of practice-based case studies is typically to provide a description (of a success or learning), 'quality' should be assessed on the strength of the description, including both the accessibility of the information and how believable it is. The accessibility of the information relates to both how well written and presented a case study is and whether there is a 'thick' description of the programme (i.e. enough to understand what happened and why). How believable a case study is depends on knowing how the case study was undertaken.

A number of checklists have been produced that specify what should be included in a good quality practice-based case study, which we have adapted.

2.2.9 Reporting templates

To support the production of comparable case studies, a reporting template can be used. Templates can help standardise the information collected, supporting synthesis (De Leeuw et al., 2015).

Templates also support the production of good quality case studies, making clear the content that should be included (Korjonen et al., 2016).

Templates can also be used retrospectively to aid analysis and synthesis across multiple case-studies. This process involves a reviewer transferring relevant information from the original case study documents onto a template with pre-agreed fields. This process can be quite difficult, however, particularly when using practice-based evidence as sufficient information may not be reported in the original case studies (Simpson et al., 2013).

KEY LEARNING

Reporting and/or data extraction templates can be used to standardise information so that it is sufficiently comparable. Reporting templates can enhance the quality of practice-based case studies by ensuring the necessary information is included.

2.2.10 Ethical issues

Anonymity, confidentiality, and informed consent are key issues in any research activity. They are particularly significant in case studies given the detailed contextual information collected and the, often personal, narratives being told that have the potential to make individuals, organisations, and communities readily identifiable (Crowe, 2011; McDonnell, 2000).

In producing a case study, steps should be taken to ensure that the views of those that form the 'case' are presented fairly and clearly (HM Treasury, 2011, Ng and de Colombani, 2015). This raises the question about who is and is not part of the case. In practice-based case studies, this may be a whole community, an organisation delivering a project or intervention, participants in the intervention, or the workers and volunteers delivering the project or intervention. To minimise the risk of a breach of anonymity and confidentiality, the literature describes some methods, including anonymising names of individuals, places, or organisations, and fictionalising by abstracting key themes and writing a new story (Greenhalgh, 2005 in: Davies, 2019). There is also a requirement to find the balance between providing rich information and the identifiability of the participants of a project. Removing too much contextual information in order to protect participants can limit understanding of how problems were contextualised and solutions arrived at (Simpson et al., 2013). This must be discussed and negotiated with any modifications needed to protect identity agreed as part of process for granting permission for a project to be named as part of the reporting process (Goodrick, 2014, McClean and McNeice, 2012).

The process of synthesising case studies raises a further ethical issue: participants may have consented to take part in the original case study but are they happy for their data to be included in further analysis? Published case studies used for synthesis will already have been abstracted from

empirical data (where consent was obtained) and made anonymous, minimising the risk of breaching anonymity or confidentiality. Where such case studies are in the public domain, those conducting a synthesis are not putting case study participants at risk through their activity. Where those conducting a synthesis are collecting new case studies, participants must be informed of procedures taking place and give informed consent to take part.

KEY LEARNING

The aim to uncover detailed contextual and sometimes personal information in developing practice-based case studies means anonymity, confidentiality, and informed consent are very pertinent issues. There needs to be a balance between providing the necessary rich information and protecting participants.

2.3 Discussion and learning

The first phase of the study reviewed published academic and non-academic literature concerning methodologies for synthesising practice-based case study evidence. The findings provide some key points of learning (Table 2) to inform an approach to synthesising practice-based case studies on community wellbeing. In the next chapter, we describe the pilot of methods to gather and synthesise a sample of practice-based case studies about interventions to support community wellbeing.

There is a relative dearth of information about practice-based case studies. This was a rapid iterative review and therefore the breadth and depth of literature searches were limited. We relied on backward and forward citation searches of key documents and did not conduct extensive searches of, for example, databases of peer-reviewed journal articles. We identified some information about producing practice-based case studies and about the role of practice-based case study evidence in public health. There was no guidance on synthesising practice-based case studies, as opposed to research-based case studies. Some of the qualitative techniques outlined provide tools for analysis and may be transferable to the synthesis of practice-based evidence, however this review was limited in scope and the identified techniques (2.2.6) do not represent a comprehensive range of qualitative synthesis techniques.

Table2: Summary of learning points from the review

Theme	Key learning
What is a case study?	● 'Case study' is something of an umbrella term that can be used to refer to a range of different types of information. ● Commonly agreed features of case studies are that they involve an in-depth and detailed examination of one phenomenon. ● In a practice context, case studies are commonly a description (rather than seeking to investigate how or why something occurred) and often used to celebrate successes or disseminate learning.
Strengths of case studies.	● Case studies can capture lay perspectives and provide a 'thick' description of not just programme outcomes but of implementation processes and context. ● The narrative form of case studies can make them easy to understand and share. ● Practice-based case studies that celebrate successes may not contain sufficient information to inform practice and may only present positive aspects.
Limitations of case studies.	● Case studies are often valued less than other forms of evidence in health and policy decisions. ● Common weaknesses are not sufficiently describing the problem to be addressed, the context, processes or outcomes. ● There is a balance to be struck in writing a case study between accessibility, ethical considerations and providing the necessary 'thick' description.
Synthesis – which cases are suitable?	● Synthesis provides opportunities to produce more robust findings and reveal otherwise hidden details. ● Not all case studies are appropriate to be included in a synthesis. ● Points to consider for selection are whether case studies are sufficiently about the same thing (topic and unit of analysis), whether sufficient information is provided about the case-study context, programme outcomes/impact, and the research methodology used. ● The case studies that are needed for a synthesis may not always be available, particularly with regard to practice-based evidence.
Synthesis – approaches to synthesis.	● A wide range of methods for synthesising research-based case studies have been developed, including adapting existing methods of primary data analysis. ● Matrices/frameworks are commonly utilised to manage the complexity of qualitative data. ● There is no established 'best' method for synthesising practice-based case studies.

	● An approach that involves displaying cases in a matrix (data extraction table), subdivided by fields of interest, in a condensed form that permits a systematic visualisation and comparison of the cases a once seems the most appropriate.
Quality appraisal	● Research literature highlights different perspectives on whether notions of internal, external, and construct validity, and reliability can be applied to research-based case studies. ● Considering the convincingness, authenticity, and plausibility of a case study may be more appropriate for practice-based case studies. ● How believable a case study is depends on knowing how the case study was undertaken.
What makes a good case study	● Given that the purpose of practice-based case studies is typically to provide a description (of a success or learning), 'quality' should be assessed on the strength of the description, including both the accessibility of the information and how believable it is. ● Accessibility relates to both how well written and presented a case-study is and whether there is a 'thick' description of the programme (enough to understand what happened, when, how and why). ● Several checklists have been produced that specify what should be included in a 'good' practice-based case study.
Reporting templates	● Templates can be used throughout the process (reporting, data extraction, synthesis). ● Templates help to standardise information so that is it sufficiently comparable and enhance quality by ensuring the necessary information is included.

3 Pilot case study synthesis methods

This chapter describes our methods for gathering and synthesising practice-based case study evidence, which we piloted with a sample of practice-based community wellbeing case studies (phases 2 & 3). Design choices were based on learning from the methods review (Chapter 2), advisory group discussions, and previous experience of qualitative review and synthesis. The scope of the pilot synthesis was agreed with the advisory group, who felt that the study should reflect a breadth of community wellbeing topics and not just focus narrowly on public health, despite much of the literature on practice-based evidence being from that field.

The pilot focused on community-based interventions that aim to improve social relations and community wellbeing through better community infrastructure (places and spaces) (Bagnall et al., 2018). This built on the authors' earlier systematic review conducted for the What Works Centre for Wellbeing Community Wellbeing Evidence Programme (Bagnall et al., 2018) and it was intended that the findings from the pilot synthesis would complement those review findings. The final stages of the pilot involved just two intervention groups: (i) community hubs and (ii) green & blue spaces. Having two types of community wellbeing interventions provided a more varied and larger set of case studies and some contrast in terms of methods.

This chapter details the process, which involved:

- Scoping of potential websites and case study collections
- Gathering a sample of practice-based community wellbeing case studies
- Data extraction and coding of cases
- Cross-case analysis and synthesis
- Piloting a process of quality appraisal.

3.1 Scoping of websites and case study collections

We carried out a scoping exercise to identify how practice-based case studies were typically collected, curated and displayed, and whether any synthesis had been undertaken (Appendix 2). This was an important preliminary stage, which resulted in a set of sources that could then be searched for practice-based case studies on community wellbeing. It also confirmed the common domains used in case study reporting, which were aligned to the findings of the methods review (see 2.2.8). This scoping exercise was carried out on websites and individual reports with case-studies embedded in them. The initial list was drawn up by using the Public Health England Practice

Examples list of alternative collections (Public Health England, undated) and suggestions by the What Works Centre for Wellbeing, their affiliated organisations and the project advisory group.

Twenty case study collections (sixteen websites, four reports) were reviewed (see Appendix 3 for all resources included in the scoping exercise and all resources used to collect case studies). The collections reviewed contained case studies illustrating practice across a wide range of settings; from improving wellbeing through creative, environmental or social activities, to demonstrating how health commissioners have changed their practice to improve health outcomes, or how healthcare providers have improved their care processes. The following sections report on the results of the scoping exercise.

3.1.1 What information is presented in case studies?

The majority of websites (10/16) did not provide details of how case studies have been collected and/or selected for inclusion. Where information was included, this was either through the provision of a self-completion template or contact details for further information. The majority of case study collections embedded in wider reports (3/4) did not describe how they were collected.

Just under half of the online collections (6/16) provided a template to standardise the information included in their published case studies. A further six did not appear to have a template, but there was some standardisation of the information provided through commonly reported fields and a typical structuring of the case studies. The remaining four online collections appeared to have no consistent approach to the reporting of their case studies. There was no information available regarding the use of a standardised template in the reports, which contained a collection of case studies, although common reporting fields were also identified.

None of the collections had an explicit focus on unexpected outcomes or described what had not worked within a project. Most of the narratives covered the successes or outcomes achieved through the work. This reinforces the view that practice-based case studies are commonly descriptions of successes. On the other hand, sections commonly titled 'key learning' or 'challenges' did describe some of the issues to be overcome throughout the implementation of the project or the constraints within which they found themselves.

Across the twenty identified case study collections, we mapped the most commonly reported fields (and sub fields) of information (Table 3). Although there was variation in the terminology used in the different collections of practice-based case studies, this involved listing the fields of information reported in each and then grouping similar fields. These collapsed fields were discussed with the steering group and form the basis of our data collection and data extraction templates (described below). Table 3 shows the original fields and the collapsed (grouped) fields. The use of common

fields formed a foundation for synthesis across the individual case studies as part of the data extraction process.

Table 3: Commonly reported information fields across case study collections.

Field name(s)	Collapsed field
Title	*Title*
Summary – overview – synopsis.	*Overview* - Brief summary of case study.
Setting – population – situation – stage – background – introduction.	*Setting* - Local area - Population - Organisational details.
Organisation – organisational details.	
Why did we take action? – What is the problem this intervention solves? – Challenge/problem – clinical/policy priority addressed – the challenge? – Why was the programme developed? – Situation/problem – Where did we start?	*Purpose* - What is the challenge/problem? - What are the stated aims of the project/intervention?
Aims – aims and objectives – ambition.	
What did we do? – Strategy – solution – actions taken – approach – implementation – the solution? – Description – how was project implemented – How was the programme implemented? – What action was taken? – Description of activity – innovation – project description.	*Description of the project/intervention* - Start & end dates - Funding - Other resources.
Timescale – start/end dates.	
Funding – funding and resources.	
Project management.	
Stage of implementation – project developments.	
Why is this co-production?	*Why was this approach chosen?* - Evidence base - Other reasons for implementing project/intervention.
Why this approach? – Evidence base – relationship to implementation of NICE guidance – reason for implementing project.	
Details of project participants - participants.	*Who took part?* - Numbers of participants - Demographic information.
Evaluation – evaluation methods.	*Data collection* - How was the project evaluated? - How was data collected for the case study?
Outcomes – impact – expected impact – impacts/outcomes – the impact – Project outcomes – what happened as a result? – findings – outcomes and evidence – outputs and outcomes.	*Project outcomes*

	- What happened as a result of the project/intervention? - Impact on participants, community, organisation, wider. - Any outputs? - Were there expected outcomes and / or unexpected outcomes?
Learning – lessons learnt – any learning as a result of this experience?	*Enablers and barriers to success* - Factors that supported positive outcomes. - Factors that prevented positive outcomes.
What would councils/health organisations need to have in place to enable this? – Key success factors – critical success factors.	
What would kill it? – challenges – Key challenges and barriers – challenges and lessons learnt.	
Key advice – key learning – key successes – key findings – key learning points – Key lessons learnt.	*Key learning* - For participants, community, organisation etc.
Next steps – next steps – plans for the future - sustainability – what does it look like in practice? – developing opportunities.	*Next steps* - How sustainable is project/intervention? - Plans for the future.
Further Information – further reading – where to go for more information – find out more – supporting material.	*Further information & key contacts* - Supporting material - Further reading - Contact details.
Contacts.	

A process of quality assurance of case studies prior to publication was only clear on two of the online collections (NICE; Public Health England) and both relate to the robustness (quality and accuracy) of the information submitted. Quality assessment was not described in any collection of case studies embedded within a wider report. This is not to say that quality assessment had not occurred, rather it was not reported in the published version.

None of the online collections appeared to have undertaken further synthesis of their case studies. Two of the four reports bring together the individual case studies to provide higher level findings supporting the aims of the report, though this process was not described.

3.2 Gathering a sample of practice-based community wellbeing case studies

Two approaches were used to gather practice-based case studies in order to offer a point of comparison. These were searching pre-existing collections or repositories of published case studies identified by the What Works Centre for Wellbeing and the advisory group, and the generation of a small number of practice-based case studies using the template emerging from the scoping exercise and collected via Locality, an intermediary partner organisation. As this was a pilot study, we purposefully limited the size of the sample to around 20 case studies in order to test the methods.

3.2.1 Searching and selection of published case studies

The websites and publications containing public health/health and wellbeing case studies used in the scoping exercise described in Section 3.1 were further supplemented by examples from the What Works Centre for Wellbeing and the advisory group. A final total of seventeen online collections of case studies and eleven reports with case studies embedded within them were recommended (see Appendix 3 for further details). Each website or publication was then searched to produce a long list of potential practice-based case studies suitable for further screening for inclusion in the synthesis process.

The criterion to be met for inclusion at this stage was the topic of the case study. That is, a focus on community-based interventions that aim to improve social relations and community wellbeing through better community infrastructure as defined in the Places & Spaces review (Bagnall et al., 2018). This included public and/or 'bumping' places designed for people to meet, such as streets, squares, parks, play areas, village halls and community centres. It also included places where people meet informally or are used as meeting places, such as cafes, pubs, libraries, schools and churches. Services that can facilitate access to places to meet, including urban design, landscape architecture, place-making and public art, transport, public health organisations, subsidised housing sites, and bus routes, were also included (Bagnall et al., 2018).

- *Website searching*

Each website was searched in an iterative way dependent on the level of functionality within the website, particularly the presence or absence of a search function, and the amount of detail provided about the case studies listed on the landing page. Some websites without a search function had their content structured by theme with no separate publications page. This made it time consuming to locate any relevant content as each one needed to be scanned in detail.

Where a website was searched by hand, the relevant sections of the site, such as the landing page, 'Resources' or 'Publications', were reviewed in detail. Case studies which met the inclusion criteria were identified by the title and any additional information which was provided on the website.

Where a website had a free-text search function, the following search terms were used:

- “wellbeing”
- “community wellbeing”
- “social relation”.

Each of the search terms was entered in turn and the items returned were reviewed in detail. A note was made of the number of ‘hits’ returned for each search term. On several websites the items returned for each of the search terms would include duplicates which could not be removed in advance so were screened multiple times.

In order to keep the search process manageable in terms of the resource requirements upper limitations were set in place. This included: time, where a single website would not be searched for longer than 3.5 hours; volume, where the number of hits screened would be limited to the first 100 (or 10 pages); and number of case studies collected; where the searching a single website would stop once a maximum number of case studies had been reached. See the search record in Appendix 4. This was in line with Godin, Stapleton et al. (2015) who recommend the management of large numbers of items retrieved during website searching to be limited, as the first 100 items, or first ten pages, are likely to be those with highest relevance.

Where websites provided sufficient detail describing a case study along with the title, a decision was made about the extent to which it met the inclusion criteria for relevance. Where only the title or very limited information was provided, the case study was downloaded or opened via a separate window for it to be assessed in greater detail.

Gathering practice-based case studies from some websites was less systematic than the gathering of case studies from others. This was a result of the variation in the level of detail provided about the case studies on the individual websites and the lack of consistency in the level of detail provided within practice-based case studies collected from the same website. Appendix 5 contains the details of the search process undertaken for each website.

- *Hand searching publications*

Each publication with a collection of case studies was searched by hand. An individual case study included within a publication was screened on the title and the full information provided. Where a case study was identified as relevant for inclusion it was printed to PDF as a separate document. Some publications were not retrievable from the link provided. Where possible an online search was conducted to find the report and when successful the report was screened in full. It was not possible to retrieve one publication. A log was kept, which detailed the number of case studies included for

review in each report and the number collected. See the detailed search record for each report in Appendix 5.

3.2.2 Locality case studies

In addition to the published case studies, which were identified through the process of searching and selection described above, it was agreed that we would work in partnership with Locality to support the development of a small number of new case studies. These were to be drawn from community-based organisations in the Locality network and would illuminate the experiences of those organisations in promoting wellbeing (see Box 1). This additional element provided an opportunity to develop a template and use a systematic process that incorporated some of the points of learning highlighted in the methods review (see 2.3 & Table 2). The research team worked closely with Ruth Breidenbach-Roe, Policy Manager, Locality, to undertake this part of the study. Reflections on this process can be found in the Chapter 6 Project Review.

Box 1: Developing new case studies with Locality

Locality is a national network organisation and key civil society partner in the What Works Centre for Wellbeing Communities of Place evidence programme with a database of, and contact with, over 600 community anchor organisations who are Locality members. Locality provided a route to gather practice-based case studies that were not already published.

The first stage was to develop a data collection template jointly with Locality (see Appendix 6). This was based on our learning from the scoping work (3.1) and methods review (2.3) and Locality's previous experience working with community organisations. Using a template could facilitate a standardised approach to data collection for the case studies gathered through the Locality network.

Locality then sent a call to their Health and Wellbeing network inviting voluntary submission of a case study using the template. Submissions were invited from projects which were:

- Aimed at improving people's wellbeing in a community or neighbourhood by connecting people and improving social relationships
- Based around 'community hubs' or other buildings or spaces designed to bring people together.

Members of the Locality network who were interested in submitting a case study discussed the process with the policy team and a small budget was provided as compensation for the resource requirements of gathering all the information necessary to complete the data collection template. It was not a requirement for network members to collect new data for their submission. Four practice-based case studies were gathered via the Locality network and feedback on the process was provided by respondents.

3.2.3 Screening

A sample of around 20 case studies was anticipated for the pilot synthesis, comprising 15 pre-existing or published case studies and five Locality case studies. Screening was undertaken against three criteria (i) Relevance to the topic of places and spaces (ii) Content - sufficient information reported and (iii) intervention. This allowed a manageable number of case studies to go into the synthesis. It also avoided a very heterogeneous sample that would present changes for cross-case analysis (Hoon, 2013, Levy, 2008).

(i) Relevance of the case study to the topic of places and spaces wellbeing interventions. For the published case studies, the long list of 61 case studies retrieved was initially screened on topic by a member of the research team not involved in the collection process. Where a case study was not related to the topic of places and spaces, it was excluded from the synthesis and a record kept about reason for exclusion.

(ii) Case studies were then screened on content. Where a case study did not contain sufficient information relating to the intervention outcomes and/or the key learning generated, it was excluded, and a record kept of the reason for exclusion. This exclusion criterion was used to ensure the case study reported sufficient information to allow cross case analysis (Goodrick, 2014, Shankardass et al., 2014). An assessment on the overall quality of case studies was not done at this stage (see Chapter 5).

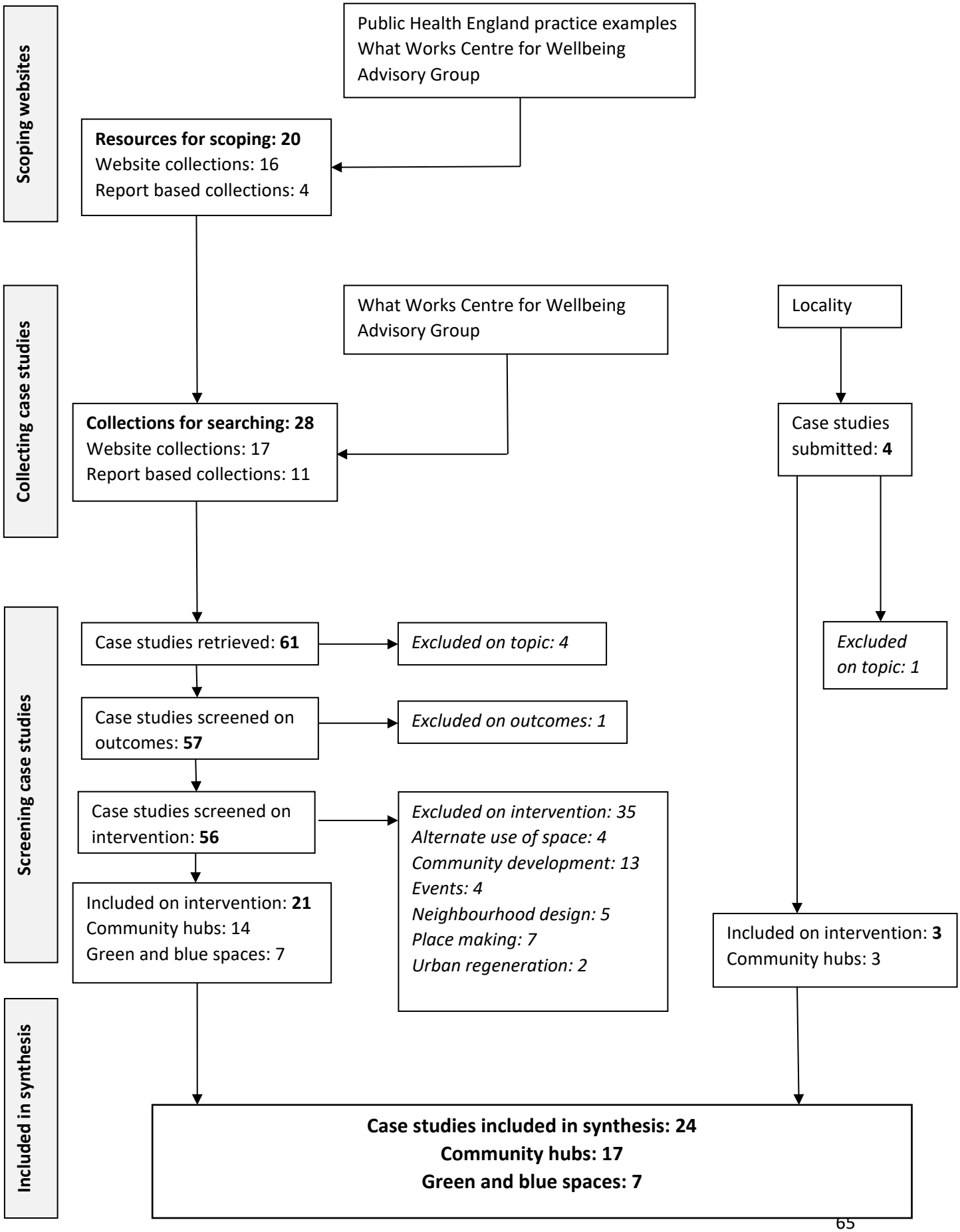
(iii) The case studies taken forward were then re-screened by the intervention types identified in the places and spaces review (Bagnall et al 2018). These were:

- Alternative use of space
- Community development
- Community hubs
- Events
- Green & Blue spaces
- Local neighbourhood design
- Place-making
- Urban regeneration.

Each case study was allocated an indicative intervention type on entry to a database by one member of the research team. A second reviewer then reviewed this classification. Disagreements were discussed with a third reviewer and consensus reached. After discussion with the advisory group, we decided to focus on case studies describing community hubs and green and blue spaces interventions in order to keep the sample size manageable for a pilot synthesis.

For the Locality case studies, the four case studies received were screened on topic and one was excluded as the research team agreed it did not fully fit the criteria for a community hub. The process of collecting and screening case studies is illustrated in Figure 2.

Figure 2: Study flow chart



3.3 Data extraction

3.3.1 Pilot data extraction

We developed a data extraction template based on the commonly reported information fields identified in the scoping of existing collections of case studies (Appendix 2) and Methods review (2.2.8). The final set of data extraction fields can be found in Appendix 7.

An initial sample of three community hubs case studies were selected to pilot the data extraction process. To test the process on case studies with varying levels of detail and structure, the three cases were selected from different online sources: Public Health England Library - The Hop50+ Community Space and Cafe; Arts and Health South West - Southbourne Creative Hub and Public Health Wales / Co-production Wales - Age Well - Hwyliog Môn- A youth club for the over 50s.

Two members of the research team worked independently to complete the pilot data extraction process. The data extraction form was set up in Excel. All the issues arising from this pilot data extraction were discussed and resolved and a two-step process for data extraction was established. The first phase involved broad collation of the information included in each case study under original field headings used in the data collection template. This phase would involve copying and pasting sections of text from the original document so as to retain the detail and wider context of each segment extracted.

In the second phase of the pilot process, modifications to the original form were made to better structure the information and facilitate the synthesis without resulting in an unwieldy number of fields in the tool. For example, the original 'Impact / Outcomes: changes to participants, wider community, organisation' field received subheadings of 'Reach / uptake', 'Individual', 'Community' and 'Organisational' levels in the second phase. There was also the addition of new fields such as 'What works' as an extension to the field recording the key learning described in the case study and 'Other information' to capture any important details may otherwise be missed. The second phase also further distilled the text extracted from the case studies through summarising and paraphrasing and highlighting key words, which may indicate themes, using bold text. Verbatim quotes, where included, were formatted in italics to differentiate them from the summary text.

Using the refined data extraction process, a further sample of three additional community hub case studies were independently data extracted by the two members of the research team to consolidate the process and the findings discussed in order to ensure consistency of approach. These were: Enabling State in Practice - Durham County Council: Macrae House - Transformative change through asset transfer; Arts and Health South West - Happy Crafters Miners Court Residents Association and Public Health England Library - Time Union at Coventry City Council's award-winning Pod.

3.3.2 Full data extraction

Data extraction was then completed on the remaining eight community hub case studies found in the searches, the Locality case studies, and the seven green and blue spaces case studies by two members of the research team working independently using the two-step process.

3.4 Cross-case analysis and synthesis

The methods review emphasised the value of cross-case analysis for managing and understanding the complexity of multiple research-based case studies (see 2.3). We considered that cross-case analysis, and the use of matrices (Khan and VanWynsberghe, 2008, Morestin et al., 2010), would be suited for the structured and summarised information contained within most practice-based case studies that were selected for this review. It would also allow for identification of patterns between cases without losing the contextual details that might happen if data were pooled (see 2.2.6). We decided to use Framework Analysis, a well-recognised qualitative analysis method used in applied research, to guide the coding and development of matrices across the two data sets (community hubs and green & blue space interventions) (Gale et al., 2013, Ritchie et al., 2003). As such, we then piloted an approach to Framework Analysis using thematic coding that is split into three phases: 1) applying the data extraction template; 2) developing a matrix of themes; 3) final thematic framework. We felt that the Framework method of analysis provided a structured, rigorous process that was fitting with the principles of cross case analysis and synthesis identified in the Methods Review (2.26). In particular, matrices with key fields allowed for variable by variable analysis but retaining the links to individual cases (Khan and VanWynsberghe, 2008).

Our approach was developed using the green & blue spaces case studies and then tested with the community hubs case studies.

3.4.1 Chart 1: Using the data extraction template

The first phase of our analysis involved within-case analysis using the extracted data displayed in a table (matrix) with a line for each case study and columns for each field from the data extraction template (Appendix 7). Within each category/field of the data extraction framework (e.g. 'Approach'), we made summary statements representing lines of the coded data and highlighted phrases and themes (in line with framework analysis) to help with developing higher order themes. Key phrases and short extracts of quotes from the case studies were included. This process effectively linked the systematic data extraction process with the production of a chart with all data coded in a field (column) and summarised. This is in line with the early stages of Framework Analysis (Gale et al., 2013) . The framework and coded data were checked by three researchers involved in qualitative analysis (CF, KS, JS).

3.4.2 Chart 2: Matrix of themes

The next stage involved developing a thematic matrix of the whole data set. This was the first stage of synthesising data from across case studies.

The summary statements were grouped, and a number of sub-themes identified. These were given labels and later numbered (e.g. *A12: Learning about the environment)*. Thematic labels could be applied in more than one part of the framework where there were cross cutting themes. However, at this stage, the matrix was still loosely based on the original framework used in data extraction and Stage 1. See Appendix 8 for example from the thematic framework. The process of grouping, forming themes and recoding data was an iterative process and was continued until the themes represented a good fit with the data set. In this stage, individual case studies were included as separate columns in the matrix to prevent the themes being stripped of context (Simpson et al., 2013). A final column in the matrix was created listing themes and interpretive memos.

3.4.3 Chart 3: Synthesis

The final stage was the creation of the overall thematic framework. This brought together and organised the major themes and sub themes from the case study analysis into three sections:

- ***Purpose & approach***. This covered the 'why and what' of project development and delivery with two categories and sub themes on:
    - Challenge & response - linking need to activities
    - Building social value – cross cutting themes around the underlying logic.

- ***Outcomes***. This covered reported outcomes:
    - Individual-level
    - Community-level
    - Organisational-level
    - Reach (who participated).

- ***What works & what supports***. This brought together themes on learning, what works and transferable approaches resulting in a set of four cross cutting themes:
    - Building connections
    - Recognising assets & addressing barriers in context
    - Capacity to deliver
    - Learning & adaptation.

Chart 3 represented an analytic hierarchy with higher order themes (interpretive) and sub themes. It displayed the results of the cross-case analysis and the patterns identified (see 2.2.6). Descriptive information on project setting, funding etc was not included in this chart (see Appendix 8 for an example of the chart).

This process was piloted first with the Green & Blue Space case studies (n=7) by 1 researcher (JS). Results were checked by two researchers (KS, CF). After presentation of method, charts and interim, results to the advisory group, we applied the method to the Community Hubs interventions. This was undertaken by two researchers (KS, CF).

3.4.4 Write up

Chart 3 was then used to guide the narrative write up of the cross-case analysis for both the Community Hubs (n=17) and Green & Blue Spaces (n=7) intervention groups. The synthesis for each intervention was not brought together into a qualitative meta-analysis because these were only two of the eight potential intervention groups in Places and Spaces review (Bagnall et al., 2018) . Also, it was not clear at this stage if the specific features of each intervention approach were too different to permit an overall synthesis or meta-analysis (see 2.2.5). Cross cutting themes are however discussed in Chapter 7.

The narrative account of the synthesis included:

- An overview of the case study set – some of this came from original fields and was factual in tone –a map of the included case studies
- Comment on major themes and contextual detail on the individual cases (from Chart 2) organised according the final chart
- Summary tables.

4 Pilot case study synthesis results

This chapter presents the results of our pilot synthesis of practice-based case studies. The research questions guiding this pilot were:

- How do community projects aimed at improving wellbeing contribute to the success of the areas they serve? What outcomes result and for whom?
- What can be learnt about project engagement, implementation and sustainability from case studies of community wellbeing projects in context?

We agreed with the advisory group that the topic should follow the 'places & spaces review' (Bagnall et al., 2018) where eight intervention groups of community-based interventions to improve social relations and wellbeing in 'places and spaces' were identified. In order to pilot the synthesis methods, we selected two of these groups: (i) places and spaces interventions using community hubs to improve community wellbeing and (ii) places and spaces interventions using green & blue spaces to improve community wellbeing.

In presenting the results, we first report on the attributes of the included case studies (4.1) to give an overview of the sample. The following sections report on the themes and sub themes derived from first the community hub case studies (4.2) and then the green space interventions (4.3). Themes are presented according to the final analytic framework which used three major thematic categories (see Chart 3 - Appendix 8):

- ***Purpose & approach***. Reporting themes relating to the 'why and what' of project development and delivery and how projects respond to community need
- ***Outcomes***. Reported outcomes at individual-level, community-level and organisational-level
- ***What works & what supports***. Reporting major cross cutting themes:
    - Building connections
    - Recognising assets & addressing barriers in context
    - Capacity to deliver
    - Learning & adaptation.

Results for community hubs and green space case studies are presented in turn with examples and quotations. This helps retain a sense of the unique stories and contexts that are deemed so important to practice-based case studies. Appendix 9 provides tables with summary thematic content for transparency.

4.1 Map of community wellbeing 'places and spaces' case studies

The synthesis included 24 practice-based case studies (see Table 4). Seventeen case studies (including three Locality case studies) described interventions involving community hubs and seven described interventions using green & blue spaces. All included case studies described specific projects or programmes developed in practice. Whilst the scope and scale of these varied, we use the term 'project' as an umbrella term to describe interventions, projects, programmes. This section describes the types of case studies, sources and main features.

4.1.1 Sources of case studies

Twenty one case studies came from existing collections, including websites (n=19) and reports with case studies embedded within them (n=2). The most common website (source) for included case studies was the Public Health England Library (n=7), followed by Arts & Health South West (n=4), What Works Wellbeing (n=3), Public Health Wales/Co-Production Wales (n=2), NICE Shared Learning Case Studies (n=1), the Local Government Association (n=1), and eWIN-NHS Workforce Information Network (n=1). Three new case studies were collected by our partner organisation, Locality.

4.1.2 Geography of case studies

The vast majority of included case studies were based in England (n=19). Three were based in Wales, one in Scotland and none were based in Northern Ireland. One case study straddled the England-Wales border.

4.1.3 Target populations

The included case studies described projects that are universal (n=9) and that target specific population groups (n=15). Of those that targeted a specific population group, the largest proportion focused on older people (n=6), followed by people with mental health needs (n=2) and Black, Asian, and Minority Ethnic (BAME) communities (n=2). One case study targeted both older people and people with mental health needs. Other population groups were mums-to-be (n=1), those experiencing social deprivation (n=1), female asylum seekers (n=1), and prisoners (n=1).

Table 4: Summary of case studies included in the synthesis.

Name	Short name	Source	Intervention type	Location	Target population
1. Age Well - Hwyliog Môn- A youth club for the over 50s	Age Well	Public Health Wales / Co-production Wales - website	Community Hub	Anglesey, Wales	Older people
2. Auntie Pam's	Auntie Pam's	Public Health England Library - website	Community Hub	Kirklees, England	Mums-to-be
3. Blackburn with 4 Darwen Integrated Wellbeing Service	Integrated Wellbeing Service	NICE Shared learning Case Studies - website	Community Hub	Blackburn, England	Universal
4. Cook2Learn	Cook2Learn	Carnegie Library Lab - report	Community Hub	North Somerset, England	Universal
5. Durham County Council: Macrae House - transformative change through asset transfer	Macrae House	Enabling State in Practice - report	Community Hub	Murton, England	Universal
6. Happy Crafters Miners Court Residents Association	Happy Crafters	Arts and Health South West - website	Community Hub	Cornwall, England	Older People
7. Skelmersdale International (Welcoming and valuing new arrivals)	Skelmersdale International	Public Health England Library - website	Community Hub	Skelmersdale, England	BAME ('new arrivals')
8. Southbourne Creative Hub	Southbourne Creative Hub	Arts and Health South West - website	Community Hub	Southbourne, England	Older people; mental health
9. Studio Upstairs	Studio Upstairs	Arts and Health South West - website	Community Hub	Bristol, England	Mental health
10. The Hop50+ Community Space and Cafe	The Hop50+	Public Health England Library - website	Community Hub	Brighton, England	Older people
11. The Hub @ Castlepoint	The Hub	Public Health England Library - website	Community Hub	London, England	Social deprivation
12. Time Union at Coventry City Council's award winning Pod.	Time Union	Public Health England Library - website	Community Hub	Coventry, England	Mental Health

13. WAST Manchester (Women Asylum Seekers Together)	WAST Manchester	Public Health England Library - website	Community Hub	Manchester, England	Female asylum seekers
14. Wealden District Council	Wealden District Council	Local Government Association - website	Community Hub	Wealden, England	Older people
15. Come outside! Welsh natural resources improve wellbeing	Come outside!	What Works Wellbeing - website	Green & Blue Spaces	South Wales Valleys, Wales	Universal
16. Greener on the Outside of Prison (GOOP)	GOOP	What Works Wellbeing -website	Green & Blue Spaces	North West, England	Prisoners
17. Llyn Parc Mawr Community Woodland Group.	Llyn Parc Mawr	Public Health Wales / Co-production Wales - website	Green & Blue Spaces	Newborough, Wales	Universal
18. mindSCAPE	mindSCAPE	Arts and Health South West - website	Green & Blue Spaces	Wye Valley, England/ Wales	Older people
19. Nature4Health	Nature4 Health	eWIN - NHS Workforce Information Network - website	Green & Blue Spaces	Mersey Forest, England	Universal
20. Sheffield Environmental Movement	Sheffield Environmental Movement	What Works Wellbeing - website	Green & Blue Spaces	Sheffield, England	BAME; refugees
21. Urban Forests	Urban Forests	What Works Wellbeing - website	Green & Blue Spaces	Falkirk, Scotland	Older people
22. Community Connectors Project	Community Connectors	Locality	Community Hub	Sefton, England	Universal
23. Harkton Hub[1]	Harkton Hub	Locality	Community Hub	England	Universal
24. Hebden Bridge Community Association Staying Well	Hebden Bridge Community Association	Locality	Community Hub	Hebden Bridge, England	Universal

[1] 'Harkton Hub' is a pseudonym created to protect the anonymity of some aspects of the case study.

4.1.4 Coverage of data extraction fields

There was considerable diversity in the volume and focus of information contained within each of the included case studies. Table 5 indicates the fields in which case studies reported information about the projects/programmes. It identifies those fields which were present in all case studies, coloured green, those which were present in over half of the case studies, coloured amber, and those, coloured red, which were found in less than half of the case studies. This does not indicate the quality of information provided, merely that some information pertinent to that domain was given or was absent. It also does not account for the source of any information and takes the authors' presentation of information within any section at face value. Further details of the content of the main fields can be found in the summary tables in Appendix 9.

Table 5: Coverage of data extraction fields covered in included case studies.

Data extraction field	Percentage of fields reported		
	Community Hubs	Green & Blue Spaces	Overall
Setting	100%	71%	90%
Purpose: Problem / need	100%	86%	95%
Aim / Goal	100%	100%	100%
Description: When	93%	71%	86%
What	100%	100%	100%
Who	100%	86%	95%
How funded	93%	100%	95%
Approach taken	93%	86%	90%
Who took part	100%	57%	86%
Data collection	86%	71%	81%
Impact: Reach	86%	29%	67%
Individual	100%	100%	100%
Community	86%	57%	76%
Organisational	93%	86%	90%
Unintended consequences	64%	43%	57%

Availability of additional project reports / publications	14%	0%	10%
Enablers	93%	71%	86%
Barriers	79%	57%	71%
Key learning	93%	57%	81%
What works	86%	100%	90%
Next steps	43%	71%	52%
Sustainability	21%	0%	14%
Further information	79%	29%	62%
Key: *Red: less than 50% coverage* *Amber: Between 50% and 99% coverage* *Green: 100% coverage*			

4.2 Results - Community hub case studies

4.2.1 Overview

Seventeen case studies were identified as 'community hubs', providing multiple activities and services, which are open to the wider community and that address health or the wider determinants of health. The majority of case studies (n=13) operated their community hub from a fixed location(s), whilst a minority (n=4) moved between different community venues (Table 6). These different venues included cinemas, cafes, libraries, and residential homes.

Table 6: Location of community hubs included in synthesis.

Fixed location(s)	Range of venues
The Hop50+ Southbourne Creative hub Age Well Macrae House Harkton Hub Studio Upstairs The Hub Skelmersdale International Integrated Wellbeing Service WAST Manchester Auntie Pam's	Community Connectors Wealden District Council Happy Crafters Cook2Learn

Hebden Bridge Community Association Time Union	

4.2.2 Purpose and approach

The community hub case studies described how projects had developed in response to local need. The case studies described high levels of social, economic, cultural, and health inequalities in which the projects/programmes developed. Health inequalities were a significant theme across the case studies. This included high levels of mental health need (Age Well; The Hub), below average life expectancy (Integrated Wellbeing Service), prevalence of long-term conditions (Integrated Wellbeing Service), and high infant mortality compared to the national average (Auntie Pam's). Poverty and deprivation were explicitly mentioned in two case studies (Integrated Wellbeing Service ; The Hub). Alongside this, one case study (Age Well) described the impact of broader austerity policies on the community, particularly in terms of cuts to existing provision of community centres in the area. Four case studies described working with a range of minority groups within the wider community (Age Well; Skelmersdale International; WAST Manchester; The Hub). Language barriers, mobile populations and stigma surrounding refugees/asylum seekers were identified as challenges in these contexts (Skelmersdale International; WAST Manchester). Issues concerning ageing (The Hop50+; Wealden District Council; Happy Crafters) and disability (Southbourne Creative Hub) were described. See Appendix 9 for more details.

Social isolation was another significant cross-cutting theme. This was described in terms of residents experiencing loneliness, needing to reduce isolation, threats to social connections, residents not leaving their homes, and vulnerable and socially isolated people. A challenge related to community infrastructure was a theme. Challenges included: poor quality housing (The Hub), a lack of transport (Age Well), cuts to local authority provisions (Age Well), and existing provision being underutilised (Macrae House). One case study (Community Connectors) described the high incidence of 'inappropriate use' of statutory health services in the community. Two case studies described challenges associated with rural communities (Hebden Bridge Community Association ; Happy Crafters) and two identified inequalities experienced specifically by women (WAST Manchester; Auntie Pam's).

A range of project aims and goals were described in the case studies, the most common of which concerned increasing individual wellbeing. This was an aim of all the case studies and included building friendships/addressing social isolation, maintaining/promoting independence, promoting activities, learning and gaining skills, improved physical and mental health, establishing a sense of

belonging, and improving resilience. Many cases described multiple individual wellbeing objectives. For example, The Hop50+ aimed to:

> *"…build friendships and make connections that can transform older people's lives as well as providing opportunity for people to benefit from activity, exercise, creativity and learning. Customers are supported to be as independent as possible; to keep healthy and well, and to be socially less isolated."* (Quotation from The Hop50+).

Similarly, the Happy Crafters project aimed to:

> *"…enable older people to try something new, achieve and be part of a community, and through developing communal activities, give participants a reason to leave their homes regularly."* (Quotation from Happy Crafters).

Community wellbeing objectives were less common than individual wellbeing objectives, but were seen across the case studies. Four projects had various aims concerning the provision of better community infrastructure, including providing local facilities for older people (Age Well), a place for people to access 'early help' at their point of need (The Hub), identifying and signposting to local assets (Skelmersdale International), and developing health champions (Integrated Wellbeing Service). Two projects (Southbourne Creative Hub; Age Well) had objectives to be accessible. The Age Well programme, for example, "(aimed) to create a sense of family and community rather than simply providing a 'service'".

Achieving long-term societal change was a theme across a small number of case studies; Southbourne Creative Hub, for example, sought to increase understanding of the value of arts for health and wellbeing. Southbourne Creative Hub also aimed to support different groups coming together, including different age groups and people with intellectual disabilities. Both Time Union and Studio Upstairs aimed to reduce stigma around mental health.

Three case studies included organisational-level goals. The Macrae House project aimed to provide alternative resources for community resources and to support local groups to develop business plans to ensure sustainability. Cook2Learn, through running cooking classes in public libraries, aimed to promote public libraries as community spaces to raise awareness of their value to communities. Finally, the Community Connectors project aimed to reduce inappropriate referrals to adult social care, prevent escalation to mental health crisis, and improve working between sectors.

A number of projects/programmes described within the case studies had explicit empowerment objectives. At a community level, the Macrae House project, for example, was part of an asset-transfer scheme. The community empowerment objectives were described as:

> *"…asset transfer was seen as enabling communities to take control of services they valued, giving them the opportunity to innovate and access alternative resources for community buildings."* (Quotation from Macrae House).

The Time Union project aimed to develop community capacity and build resilience and recovery. At an individual level, case studies talked about giving a voice to marginalised women (WAST Manchester), helping people to live independently and access 'mainstream' (i.e. non-mental health) provisions/services (Studio Upstairs), and giving people nutritional knowledge, cooking skills, and literacy and numeracy skills to make healthier lifestyle choices (Cook2Learn).

Multiple activities were developed by the case study projects to meet community need. Activities were sometimes themed around, for example, arts for health (Southbourne Creative Hub) or cooking (Cook2learn). Case studies commonly described the significance of offering an informal, open space for the community to access, such as a community building, in addition to a range of more structured activities. WAST Manchester, for example, provided a women-only safe space in a 'dispersal area' for asylum seekers. Peer-led support groups and drop-ins where information, skills and experience sharing and access to a food bank were also provided. Both activities that had explicit learning objectives/outcomes and were purely for leisure were described across most case studies. For example, Studio Upstairs included a provision of space and art materials, as well as education and therapeutic support for people with mental health needs. Two case studies were involved in administering social prescribing programmes (Hebden Bridge Community Association; Wealden District Council), whilst another (Skelmersdale International) was involved in social prescribing as a place for people to be referred to. One project (Time Union) organised a time bank. Providing food was a cross-cutting theme to case study activities. Five case studies (Hebden Bridge Community Association; The Hop50+; Time Union; The Hub; Wealden District Council) provided a community café, whilst Skelmersdale International organised a 'pizza & film' night and WAST Manchester organised a food bank.

A number of case studies clearly differentiated their activities between the different settings in which they worked. For example, The Hop50+ organised groups at a local church, did outreach work (groups) in supported housing and community halls, and organised befrienders in peoples' homes. Similarly, Southbourne Creative Hub delivered activities for people with intellectual disabilities in local faith settings and arts-based activities in other community settings.

Activities being organised and/or delivered by a range of stakeholders was a common theme, including peer-led (WAST Manchester; The Hub; Auntie-Pam's; TheHop50+), volunteers (The Hub; Skelmersdale International; Wealden District Council; WAST Manchester) and professionals from

statutory, commercial, and voluntary and community organisations. Building capacity to deliver activities, particularly from within the community, was another cross-cutting theme. The Time Union, for example, utilised an intern and engaged citizens and partners to conduct a feasibility study, from which a Development Worker was appointed to develop the time bank.

A range of learning techniques were described within case studies by which projects were developed and sustained. Three case studies (Southbourne Creative Hub; Auntie Pam's; Wealden District Council) learnt 'through doing' in the form of pilot projects. Auntie Pam's, for example, completed a successful pilot focused on young mums with specific needs ahead of becoming a broader provision to include older mums and some dads, and to address broader needs such as housing or benefit issues. Other projects drew on a research-evidence base to inform their practice. The integrated wellbeing service developed in Blackburn and Darwin was informed by NICE guidelines and published literature concerning the benefits of being community led, whilst the initial business case for the Hebden Bridge Community Association project was informed by research findings demonstrating the impact of loneliness on health and wellbeing.

A number of case studies described formal evaluation and/or research that had been undertaken on the projects, either internally by themselves (Time Union; The Hub; WAST Manchester) or by external research organisations (Southbourne Creative Hub; Studio Upstairs; Hebden Bridge Community Association). Hebden Bridge Community Association for example, had commissioned evaluations by the University of Lincoln and the University of Sheffield. A range of research methods were used, including quantitative surveys, qualitative methods such as focus groups, and reviewing monitoring data, although specific detail about data collection and the types of data collected was generally lacking (see Appendix 9). A more common approach was to use routinely collected information to monitor the state of projects. Two case studies clearly described undertaking formal research/evaluation and using monitoring data. Happy Crafters case study reported that all participants provide feedback as a group at end of sessions and individually on a monthly basis to the Residents Association. They also conducted a survey of all beneficiaries from the Housing Association at the end of a two-year period. Progress in health and wellbeing was documented by participants.

Challenges associated with undertaking learning activities were highlighted. This included trying to evidence outcomes across a diversity of projects and participants (The Hop50+), lack of capacity to undertake research (Age Well), and a lack of appropriate measures (The Hub).

"We know we make a difference and have tried lot of approaches but realise that we could be more effective and efficient in this." (Quotation from The Hub).

4.2.3 Outcomes

The range of individual, community and organisational outcomes are detailed in Appendix 9. Quantitative data, such as survey results or rates or attendance, were reported by fifteen case studies and all presented qualitative data and verbatim quotes.

All the community hubs case studies reported reach and uptake. The scale of provision for the hubs ranged from a total of 40 participants attending eight workshops (Cook2Learn) to 5,242 contacts with a hub at year end from across a whole local authority (Integrated Wellbeing Service).

Five community hubs reported success in engaging with older adults (Age Well, Community Connectors Happy Crafters, Southbourne Creative Hub and Hebden Bridge Community Association) and one specifically engaged with those living with dementia (Wealden District Council). Three community hubs specifically engaged with men through targeted activities (Macrae House, Happy Crafters and The Hop50+) and two worked with those with lived experience of the mental health services (Studio Upstairs and Time Union). Refugees and asylum seekers were a group targeted by two community hubs (Skelmersdale International and WAST Manchester) and Auntie Pam's specifically targeted pregnant women and new mums. People living in deprived areas were targeted by two community hubs (Integrated Wellbeing Service and The Hub). One community hub worked across the whole community (Cook2Learn).

- *Individual level outcomes*

Fifteen of the seventeen community hubs case studies described outcomes at the individual level, with learning as a wellbeing outcome being the most common theme across the case studies. Nine community hubs reported that participants and volunteers increased their knowledge and skills, either in relation to a specific topic, such as English language (Skelmersdale International), or more generally, such as knowledge of what is available in their local area (Wealden District Council). Volunteers in one case study *'have learnt additional useful skills, gaining access to NVQs and going onto study midwifery degrees'* (Auntie Pam's*).* In addition to increases in knowledge and skills, four community hubs reported outcomes in relation to employability with the opportunities provided from volunteering leading onto paid employment.

Increasing opportunities for social interaction both directly through the activities and events provided at the hub (Community Connectors) or indirectly through the connections made

between people (Southbourne Creative Hub) was an outcome reported by seven of the community hubs, as were mental health benefits such as a reduction in stress and anxiety or improvement in self esteem and confidence:

> *"Most days, I cry to sleep, thinking 'why is my life like this?' I can't help myself. Then I met one lady who brought me here, to this group. Before coming here I was almost going crazy."* (Quotation from service user, WAST Manchester).

Physical health outcomes were reported by three of the community hubs including improvements in self care (Studio Upstairs) and lifestyles changes such as changes in diet and exercise:

> *"I wanted to try to be positive and manage my food and weight. I was introduced to a health trainer. I had a food diary of what I would eat, and then at my next appointment, we went through the good and bad things. Also, I wanted to do more exercise so I was referred to a local gym through my GP."* (Quotation from service user, Integrated Wellbeing Service).

Being involved with the community hubs and the sense of meaning or purpose that individuals have developed has, in some cases, led to significant life changes with Macrae House reporting that '*the personal journeys of those involved in the centre have, in many cases, been life changing'.* Others have simply enjoyed the creative activities they have become involved with at the community hubs (Happy Crafters).

- *Community level outcomes*

Thirteen of the seventeen community hubs case studies reported outcomes for the community with the most dominant theme being the increased opportunities to join in. These opportunities may arise directly from the events and activities provided by the community hubs; for example Southbourne Creative Hub was '*building a climate of increasingly successful community celebrations and an understanding that everyone has something to contribute'.* More indirect opportunities to join in were also described, evolving from the connections and relationships that are built up around the community hub:

> *"...but since then it has been local residents/volunteers who have given their time, utilised their gifts, skills and capacities to act, and motivated others to get involved*." (Quotation from Skelmersdale International).

The theme of empowerment was a theme that came out of five community hubs case studies. Empowerment came from both the provision of advice, information or resources (WAST Manchester) which enabled individuals or groups to find solutions for their needs (Macrae House) and by coming together to take collective action about the loss of a local service:

> *"The Age Well initiative was initially set up as a three-year project to explore the need and establish activities for the over 50s in Anglesey. When funding for the project came to an end the members decided unanimously to set up as a social enterprise in their own right."* (Quotation from Age Well).

Another community level outcome, described in five case studies, was the upskilling of the staff and volunteers involved in the community hub. For example, as volunteers became involved with an organisation, they *'flourished'* (The Hub), developing new administrative or creative and arts based skills (Happy Crafters, Southbourne Creative Hub).

In addition, new informal community groups formed as a result of the community hubs. For example, at The Hop50+ a new group emerged to attend the local Buddhist centre for a meditation class. The exchange of time and skills through time banking also led to the development of a micro-economy and the generation of social value both within a community and across a city (Time Union).

- *Organisational level outcomes*

Fifteen of the seventeen community hubs case studies reported outcomes for the organisation itself. A prominent theme in seven of the case studies was the increase in networking, and in particular, working in partnership with other organisation not just within the voluntary and community sector. For example, Cook2Learn developed *'new partnerships with North Somerset Health Trainers, Public Health and Community Learning'* leading to the *'creation of a more joined up 'One Council' approach through linking the 2017 library events calendar with Public Health and the Healthy Lifestyles team's promotions.'* These networks also provided the organisations with advice and practical help (Macrae House) as well as the opportunity for mutual referrals (Community Connectors).

Other outcomes for the community hubs reported by six of the case studies were an increase in organisational profile and commissions and funding:

> *"As a result of our continuing success and development we were awarded Creative Seed Funding by Bristol City Council to allow us to offer two six week terms of low-cost access to our services on a Friday."* (Quotation from Studio Upstairs).

Other community hubs became recognised as a key initiative for tackling health inequalities (Integrated Wellbeing Service) or improving community engagement (Auntie Pam's).

For two community hubs improvements in project delivery were reported as an organisational outcome. This included the use of consistent processes across the organisation, for example, in terms of providing knowledge of local services across the organisation rather than relying on an individual's local knowledge for onward referrals (Integrated Wellbeing Service).

Other organisational outcomes included a successful alignment with wider initiatives across the district (Hebden Bridge Community Association), and the development of community capacity through the use of social brokerage without the demands of coordinating formal volunteering (Time Union).

- *Unintended outcomes*

Eleven case studies reported unintended outcomes for the community hubs though none of these were negative. These included the expansion of friendship networks to the carers, family and friends of those engaging with a community hub (Age Well, The Hop50+) and the provision of pastoral care (Happy Crafters).

Skills training programme and other resources were developed (Auntie Pam's, Cook2Learn) and there was a growing recognition within other organisations of the benefits of peer-led support (WAST Manchester) and the development of an asset transfer programme as a result of the reduction in public spending from the transfer of an asset to the community (Macrae House).

4.2.4 What works & what supports

Building connections to improve knowledge, increase capacity and to develop stronger networks was a consistent theme across the community hub case studies. Intersectoral partnerships featured

frequently and case studies reported collaborating with local authorities, businesses, other voluntary and community sector organisations, and communities. Inter-sector collaboration supported the development, delivery, and sustainability of projects. Collaborating with partner organisations ensured referral pathways were clear and open in both The Hop50+ and Hebden Bridge Community Association. Joined-up working with the local partners motivated the community to engage with the asset transfer process in the Macrae House case study. Local businesses (Skelmersdale International; Southbourne Creative Hub) and elected members (Skelmersdale International) offered advice/resources in other case studies.

Building connections also referred to the importance of giving community members space to come together. In The Hop50+ case study, a key mechanism for achieving change was creating space and opportunities where people can make friends, identify goals and help to reduce social isolation. Promoting inclusivity was particularly powerful within communities at risk of marginalisation, such as asylum seekers and refugees (WAST Manchester), those with physical disabilities, mental health problems, and sensory impairments (Happy Crafters), adults with intellectual disabilities (Southbourne Creative Hub), and older people (Age Well). The Age Well project described their approach as:

> *"We aim to create a sense of family and community rather than simply providing a 'service'."* (Quotation from Age Well).

Building connections also enabled projects to more effectively utilise and support existing assets in communities. The Integrated Wellbeing Service discussed remodelling existing services rather than creating new forms of delivery. Wealden District Council described using existing community assets, such as pubs and care homes, as venues for activities:

> *"One care home has opened its doors to run a memory café, while another has expressed an interest in the film screenings. It benefits the residents of the care homes as well as the people living independently."* (Quotation from Wealden District Council).

Several barriers and challenges were described within case studies. Funding was a cross-cutting theme. Short-term funding meant time and effort was diverted from delivery to applying for funding, had led to staff losses and/or turnover, and undermined the sustainability of projects. One case study described the increasing competition for funding amongst local organisations (Hebden Bridge Community Association). The project was initiated with £1 million non-recurrent funding from a local Clinical Commissioning Group but no longer receives 'core' health funding. The local

authority continues to provide support (no specific detail provided) and the project's umbrella organisation subsidises the project through rental of office space and a café.

Staff continuity within organisations themselves and partners was also a challenge more generally (The Hub; Happy Crafters). Capturing learning/feedback from community members was another challenge along with onerous reporting requirements. Many case studies were increasingly in a position where they felt they had to do more with less. Age Well, for example, described not being able to build an evidence base around the project or provide training for members to make a business case and do evaluation to improve.

The importance of volunteers was a cross-cutting theme in the case studies. However, many projects/programmes were increasingly relying on volunteers in the absence of paid staff, which was not always appropriate. Challenges related to the reliability and turnover of volunteers (The Hub), volunteers lacking the skills to fulfil necessary – often leadership – roles (Age Well), and volunteers having vulnerabilities themselves (Community Connectors).

Barriers to engaging community members in projects/programmes was another common theme across case studies. Community members could be resistant to changing services (The Hop50+; Southbourne Creative Hub). Community members might also lack confidence to engage (Southbourne Creative Hub; Cook2learn). Language was a common barrier (The Hub; Skelmersdale International; WAST Manchester). Difficulties associated with working in/with rural communities were described in one case study (Wealden District Council).

Effective strategies to address challenges generally involved working collaboratively with communities to understand their needs in context. Being 'person-centred' and 'client led', which involved responding to the needs and trends of communities and offering relevant and engaging opportunities, was a common approach. Responding to both communities' preferences and needs and capabilities was a recurrent theme. Being flexible in terms of, for example, commitment and attendance was mentioned on multiple occasions (Community Connectors; The Hop50+; Harkton Hub). The Time Union case study described how people had responded well to the flexible nature of the service as:

> *"Time Union shows how local councils can back community timebanking without unduly imposing their outcomes or expectations on it. It feels a lot more like a piece of enabling social infrastructure, rather than a 'public sector intervention' into the lives of citizens and communities."* (Quotation from Time Union).

However, there was a recognition that taking into account the views of all customers and stakeholders is time consuming and it can be difficult to manage competing needs:

> *"In our early scoping work we often got confused messages and it was not always easy to understand what we were hearing and learning. We have invested our time and effort in this project to stick with this approach and understand what our user group needs. This has been a long haul but has been 'so worth it'."* (Quotation from Auntie Pam's).

Capacity to deliver projects was a consistent theme across the case studies. This related to the skills of project staff. Specific skills included communication (Integrated Wellbeing Service), having knowledge of the community and its resources (Community Connectors), and managers' knowledge and experience of business (The Hub). Having a team of staff working to the same values and ethos was another important factor, including a motivation to help and a sense of equality and compassion (Skelmersdale International). Local people interested in contributing to the project/programme through volunteering were also described across multiple case studies. The Macrae House case study described the pivotal role of local community members being interested in taking on the building via asset transfer and being motivated to take ownership of the project. In the Time Union case study, developing a 'critical mass' of support amongst the local community was necessary for the success of the project. Capacity to deliver also related to the broader social infrastructure. This included good transport links (TheHop50+), access to digital media (Community Connectors), local government policy (Macrae House), and the existence of referral routes (Hebden Bridge Community Association). The Community Connectors case study also described how their wider organisation supported the development and maintenance of other local community groups, which benefited the project.

Processes of learning and adapting projects were a consistent theme across the included case studies. Case studies learnt through both formal evaluations and more informal feedback from stakeholders (Southbourne Creative Hub; Age Well; Happy Crafters; Time Union; Studio Upstairs; The Hub; Community Connectors; Harkton Hub; Hebden Bridge Community Association). This often required specific outreach work to engage people who otherwise may not engage. TheHop50+, for example, described a range of methods for engaging with stakeholders, including formal and informal, customer focus groups, staff workshops, and feedback postcards. The Hub specified a need to get better at evaluation and measuring impact. Community Connectors and Hebden Bridge Community Association described learning through an initial pilot phase of their programmes/projects. Processes of learning and adapting were used to refine projects/programmes

to community needs. As suggested in The Hop50+ case study, this process was about listening to what customers want and responding to these needs where possible.

Finally, the importance of community engagement and co-production was consistently highlighted across case studies. Co-production refers to working together with stakeholders as equal partners to produce the project, rather than the delivery organisation imposing a way of working. A range of approaches to co-production were described in the case studies, including collaborations with groups and artists from the wider community, delegating responsibility to community members (Happy Crafters), and relinquishing control of how projects/programmes develop (Auntie Pam's). It was suggested that co-production requires values of inclusivity and recognising everyone has a contribution to make (Happy Crafters; Skelmersdale International; Age Well). A benefit of co-production was said to be a greater understanding of, and responsiveness to, community needs (Community Connectors). Whether co-production would help or hinder sustainability was unclear. The Southbourne Creative Hub case study suggested financial security, skills of volunteers, and opportunities for staff development would be increased if the initiative was fully co-produced with reciprocal and equal relationships between the citizen members and professionals. At the same time, the same case study suggested co-production had drawbacks in terms of sustainability and the ability to access funding.

4.3 Results - green & blue spaces case studies

4.3.1 Overview

Seven case studies were identified as green & blue spaces interventions that focused on the use of the natural environment to improve social relations and support better community wellbeing. All focused on use of green rather than blue space and in reporting the results we refer to these now as 'green space' case studies. With the exception of one linked to horticulture settings connected to prisons (GOOP), all were based in the natural environment including woodland areas and national parks, see Appendix 9. Some projects targeted specific groups, such as offenders in prison (GOOP), those living independently with early stage dementia (mindSCAPE; Urban Forests) or other long term conditions (Nature4Health), or those from areas of socioeconomic disadvantage (Come Outside!; Llyn Parc Mawr). Although projects were working in very different contexts, all seven case studies were about improving engagement with natural environment to benefit wellbeing and addressing barriers to access. A range of activities were reported between and also within case studies. Activities, which were aimed at improving wellbeing and social cohesion, as well as bringing benefits to wildlife and the environment, included walking groups, horticulture, participatory arts and urban forest or woodland activities.

In terms of organisational features, all were collaborative projects involving individuals and/or organisations from different sectors. This could include health, environment, arts, leisure & recreation, local government, voluntary and community sector and academia. Funding for projects was predominately from grants from governmental organisations or charities. In some cases, activities were supported through mixed funding sources. Three projects were funded by the Big Lottery (GOOP; Nature4Health; mindSCAPE).

All case studies provided accounts of longer-term project development, and often described different phases of initiation, growth and implementation. This contrasts with research-based publications, where reporting on the longevity of a project is a rarer feature. In general, the green space case studies showed some evidence of scale either in terms of numbers participating or in the roll-out of the model to multiple groups. Examples included Come Outside!, which had worked with 70 groups enabling over 1600 people to access the natural environment, and MindSCAPE, where the awareness raising activities had reached over 500 people. The exception was the Urban Forests case study, which provided an in-depth account of a 10-week programme working with a small group of people with dementia and their families.

All green space case studies provided descriptions of the main activities and rationale as well as reflections on learning. It was a mixed picture in terms of the underpinning evidence for case studies. Four projects (Come Outside!; Nature4Health; Sheffield Environmental Movement; Urban Forests) described some information gathering or piloting to inform project development. Four case studies reported that an evaluation had taken place (Nature4Health; GOOP; mindSCAPE; Sheffield Environmental Movement), but few details were given except for Sheffield Environmental Movement where both quantitative and qualitative data were collected at baseline and follow up.

4.3.2 Purpose & approach

All seven case studies explained how projects/programmes were developed in response to local needs and context. There was a strong cross-cutting theme of projects being established to address wellbeing inequalities caused by area deprivation, social circumstances or health conditions. Case studies typically provided explanations and evidence of the level of need in specific groups and also why the wider determinants resulted in poor access to the natural environment. This was often juxtaposed with an understanding of local assets and of the benefits of green space for wellbeing. In some cases, the project rationale was closely related to an analysis of gaps and identified problems, including barriers to accessing green space for specific groups. For example, Sheffield Environmental Movement grew out of an understanding that low levels of engagement by minority ethnic communities with the Peak District National Park was due to deep seated structural and cultural barriers. A baseline survey of BAMER (Black, Asian, Minority Ethnic & Refugee) communities showed

that 99% of those surveyed had not been to the national park and there were low levels of awareness, and also fear for some groups, about how to access the countryside. An interviewee was quoted:

> "*Before I did not have time- on my day off I didn't want to go walking. Also, we didn't know these places existed. Never really thought about it."* (Quotation from service user, Sheffield Environmental Movement).

As Appendix 9 shows, stated aims and goals were broad and encompassed ambitions to improve individual and community wellbeing, to improve access to the natural environment and to build better community and organisational infrastructure. Empowerment was an explicit goal of the Llyn Parc Mawr Community Woodland Group and GOOP, although other case studies discussed the importance of people gaining confidence and better awareness. Some case studies identified longer term goals in terms of reducing inequalities in wellbeing (Come Outside!; mindSCAPE; Sheffield Environmental Movement), reducing reoffending (GOOP) and improved health and reducing demand in health care (Nature4Health).

Multiple and layered activities developed over time in response to community needs and ideas. An important theme was the need to build capacity to deliver the projects. This could be around training and skills development for professionals from different sectors and volunteers or building research capacity. Most case studies reported a drive to build relationships with other organisations and partners to help ensure the sustainability of the intervention:

> *"A need to have a coordinated approach from those involved in developing health programmes based in the natural environment to provide a focus for commissioners and enhance opportunities for collaboration."* (Quotation from Nature4Health).

Three cross cutting interpretive themes emerged from analysis in relation to project approach and rationale (Appendix 8). These themes were *learning*, *co-production* and *moving towards greater equity*.

Learning processes were prominent in case study reporting of ways of working. Developing understanding through experience and by gathering the insights of those involved, particularly community members, was important. For some projects, the cycle of learning, doing and shaping new activities was supported by an explicit process of action research (Nature4Health; Sheffield Environmental Movement; Urban Forests). Urban Forests, for example, was a participatory action research project where a researcher worked with forest rangers to develop a set of forest-based activities to support people with dementia to engage with the woodland.

Learning was not confined to a process of finding out, the theme encompassed a process of active participation, developing understanding and exploring the natural environment. This developmental process was also reflected in the community hubs analysis. This in turn opened up ideas and broadened experiences – for target communities and for professionals:

> "*In order to participate in this project, the community were helped to develop their knowledge and awareness about the natural resources in their area and to form their own organisation."* (Quotation from Llyn Parc Mawr).

> "*MindSCAPE delivers training for professional and family carers, enabling people to feel confident carrying out 'mindscape type' activities independently in their own homes/care settings*." (Quotation from mindSCAPE).

Two projects (Nature4Health; Sheffield Environmental Movement) included activities with schools to build knowledge and awareness of the natural environment.

Interaction with the natural environment was seen as offering opportunities for reflection and reconnection:

> *"Following each session, participants provide a subjective assessment of their knowledge and skills development, as well as any changes in their stress levels. This is often recorded in videos or short photo focused blogs that are then posted to the group website, giving an "in the moment" snapshot of their experience, what they enjoyed about the trip or activity and the impact on their lives.*" (Quotation from Sheffield Environmental Movement).

Facilitating the active involvement of target groups was important in all case studies and supported learning. For some projects, the process of deepening participation was linked to a theme of co-production in the design and delivery of activities (Llyn Parc Mawr; Urban Forests; Sheffield Environmental Movement). Co-production was an explicit aim of the Llyn Parc Mawr Community Woodland Group, which used an asset-based approach to build on skills and contributions of community members and then was moving towards asset transfer with the community running the woodland:

> "*Community members worked together to develop their ideas, building on existing activities and skills in order to meet the diverse needs of the project. The governance structure of the woodland group ensures everyone has an EQUAL SAY in the development of the organisation and the decisions that they make.*" (Quotation from Llyn Parc Mawr).

Two other projects (Sheffield Environmental Movement; Urban Forests) described the significance of recognising the assets in the community and drawing on lived experience to shape activities. GOOP stated an empowerment approach was used but little detail was given.

A further cross cutting theme was about achieving greater equity and this theme was present in all seven green space case studies. Actions to achieve greater equity were a response to an analysis of the problems and specifically to the need to address wellbeing inequalities. Two contrasting examples show the way project logic was responsive to need:

> *"It has been well documented in research that people living in areas that suffer high levels of social deprivation are less likely to use outdoor spaces for recreation. It is also well documented that, in these areas, health and wellbeing are compromised by a combination of factors such as unemployment, poverty, and low educational achievement – all working against the adoption of healthy lifestyles. How could we tie these two issues together and arrive at a solution whereby developing the use of local greenspace could lead to an increase in physical activity and a consequent improvement in health and wellbeing?"* (Quotation from Come Outside!).

> "*This work identified the fact that older people (particularly those with dementia and their carers) faced the greatest barriers to participation and were therefore the 'hardest to reach. The need for a specialist project for people with dementia sparked a consultation process whereby the AONB focused on the barriers people faced and how these could best be overcome."* (Quotation from mindSCAPE).

Aspirations to achieve greater equity for specific groups and communities was associated with the instigation of hands-on activities to reduce barriers and overcome challenges. Offering taster sessions in the natural environment were identified as one way to build awareness and confidence of excluded or disadvantaged groups:

> *"Taster sessions were organised to develop capacity, confidence and skills, gradually increasing physical activity levels – by stealth! Further training has provided opportunities for re-entering work and education."* (Quotation from Come Outside!).

Supporting the active engagement of disadvantaged groups was linked to the need for collaborations across different stakeholder groups and exploring ways to strengthen partnerships. The equity dimension was particularly emphasised in the two projects linked to access around national parks (Come Outside!; Sheffield Environmental Movement). Come Outside! discussed how more was needed to help communities to benefit from legal rights to access, whereas the Sheffield

Environmental Movement case study discussed social justice issues such as wellbeing inequalities, the history of the trespass movement and cultural severance caused by migration.

4.3.3 Outcomes

The green space case studies reported a range of outcomes, which were categorised into three levels: individual, community and organisational, see Appendix 9. Reporting tended to summarise or list outcomes or benefits rather than describe in detail. Most case studies provided either some quantitative evidence from surveys (GOOP; mindSCAPE; Sheffield Environmental Movement) or qualitative evidence with use of quotations to illustrate points (Come Outside!; Nature4Health; Sheffield Environmental Movement; Urban Forests).

- *Individual wellbeing outcomes*

All case studies reported individual wellbeing outcomes for participants including:

- Increased social interactions
- Increased confidence
- Gaining enjoyment
- Having a sense of meaning or purpose
- Other mental health benefits.

Evidence from the two projects working with people with dementia and their carers (mindSCAPE; Urban Forests) reported that participation in the natural environment and group activities had a significant impact on the health and wellbeing of participants. For example, the Urban Forest case study reflected on how the sensory experience of nature and the act of taking part led to a virtuous cycle of learning and finding greater purpose and sense of belonging. Some personal testimony from people with dementia was provided:

> "*The project has been superb, it has proved to be a great stress reliever and has enabled me to learn new skills and potentially take up a new hobby. Long may it continue.*" (Quotation from service user, mindSCAPE).
>
> *"I was learning and that was a really good thing about it, I was learning."* (Quotation from service user, Urban Forests).

Physical health outcomes were not a strong theme in the green space case studies, although Come Outside! reported some increased physical activity. In line with the learning theme discussed above, all case studies reported learning outcomes for participants including gaining new knowledge or skills, which could be in relation to environmental activities, or social and organisational skills. Two

case studies (Come Outside!; GOOP) reported training and participation in activities had increased employability.

The act of engaging with the natural environment could be very enjoyable and benefits from that intense, but transitory, experience could 'spill over' to affect wellbeing and confidence in other parts of life. The opening up of green spaces was a strong theme in the two case studies (Come Outside!; Sheffield Environmental Movement) about access to national parks:

> "*Before this summer my life was just routine and I'd forgotten about all the good stuff we used to do when I was a kid. Now I take my kids to the beach…we had a camp out in the garden the other night with a fire and a sing song, I'd forgotten you could have so much fun without having to spend money.*" (Quotation from service user, Come Outside!).
>
> "*There are places in the city: Peace Gardens, parks, library that are peaceful. But we do other things on trips- pottery, horse riding.*" (Quotation from service user, Sheffield Environmental Movement).

In some instances, participation in the project could trigger a transformative change in people's lives and examples were given in three case studies (Come Outside!; Nature4Health; Sheffield Environmental Movement);

> *"As you can tell the course changed my life. I would recommend it to anyone. I'm so grateful it was there and I saw the leaflet as without it I would only be stuck in the house not doing anything and increasingly isolated."* (Quotation from service user, Nature4Health).

- *Community wellbeing outcomes*

Five case studies reported wellbeing outcomes at a community-level (see Appendix 9). Examples of community wellbeing outcomes included:

- Increased opportunities for participation including volunteering and community-based social activities (e.g. Health Walks (Llyn Parc Mawr; Nature4Health; Sheffield Environmental Movement)
- Staff and volunteer capacity/skills (Llyn Parc Mawr; mindSCAPE)
- Empowerment outcomes with participants developing their own activities and/or leading groups (Come Outside!; Llyn Parc Mawr; Sheffield Environmental Movement)
- New groups forming and becoming self-sustaining (Come Outside!; Llyn Parc Mawr).

Community wellbeing outcomes were linked where deepening participation occurred through new groups, leading to volunteer roles for community members, greater community control and growing

social networks. For example, in Llyn Parc Mawr, initial engagement led to the community deciding to establish a new community woodland group. Volunteering was a key element with volunteers from the community giving over 300 hours of time. The community outcomes included benefits for the environment and stronger connections:

> "*Thanks to the considerable energy and enthusiasm of individuals in the community a new relationship is being forged between the community and their woodland.*" (Quotation from Llyn Parc Mawr).

MindSCAPE reported outcomes in terms of "*upskilling*" of volunteers and artists, which in turn supported the wider ambition for a more "Dementia friendly community" and growing a network of dementia champions. Within the project, people living with dementia formed close relationships and the mixture of participant-led programming with specialist input from artists was reported as "an *empowering experience for all*". Both Sheffield Environmental Movement and MindSCAPE reported participants self-organising their own activities outside of the project.

- *Organisational level outcomes*

Organisational level outcomes were reported in five of the seven case studies (see Appendix 9). Four of these discussed positive changes that strengthened organisational capacity to deliver. Nature4Health discussed the importance of an infrastructure and how the action research process had led to improved project delivery and products. Sheffield Environmental Movement also reported that data gathering from local organisations had successfully influenced work. Strengthening or new partnerships were highlighted in several case studies (Llyn Parc Mawr; mindSCAPE; Sheffield Environmental Movement) both as a critical factor and also as an outcome.

Having a growing influence or profile was an outcome referred to by some. GOOP reported improvements in the prison environment as an outcome, linked to improvements in the behaviour of people in prison. It also stated that:

> *"The GOOP project also produced positive impacts on prisons at an organisational level. The portfolio engaged with NHS health care delivery staff to demonstrate the benefits of project activities in providing sustainable, cost-effective services that produce a positive impact on participants' mental health and reduce self harming amongst participants."* (Quotation from GOOP).

Outcomes in relation to financial sustainability were reported by two case studies. Llyn Parc Mawr reported that the group was able to raise £20,000 to develop their plans to improve the natural environment and community wellbeing. The project had successfully drawn in non-cost resources in

terms of time and expertise from partner organisations. MindSCAPE reported gaining three new commissions as a result of the project and of the raised profile for the value of creative arts.

- *Unanticipated outcomes*

There were no negative outcomes reported in any of the green space case studies. Three projects studies reported unanticipated outcomes (Nature4Health; mindSCAPE; Sheffield Environmental Movement). Nature4Health reported that national interest in natural products had developed through project, while MindSCAPE stated that:

> "*These partnerships have raised the profile of the project, helping to promote the impact of creative activities in the natural environment to a wider audience."* (Quotation from mindSCAPE).

For Sheffield Environmental Movement, the experience of the 100 Black Men Walking initiative was made into a film and the walking group inspired the production of a play.

4.3.4 What works & what supports

The third major thematic category covered the emergent learning on ways of working that helped projects achieve desired outcomes. In the earlier stages of analysis, case study data had been organised under a number of codes including 'barriers and enabling factors', 'what works' (i.e. which project processes were highlighted as underpinning success) and stated 'learning points or advice for others'. There was much cross over between these themes both within and between case studies. The later stages of synthesis resulted in four higher level cross cutting themes that encapsulated the practice-based evidence around 'what works and what supports':

- Building connections
- Recognising assets in context and addressing barriers
- Learning and adaption
- Capacity to deliver.

The importance of building connections was a major theme across all the green space case studies. This could involve both strengthening the social connections between project participants (Llyn Parc Mawr; Nature4Health; Urban Forests) and building partnerships with professionals and external organisations (Come Outside!; GOOP; Llyn Parc Mawr; Nature4Health; mindSCAPE; Sheffield Environmental Movement). Nearly all case studies described developing or strengthening a social network as a critical factor for success as this led to increased knowledge and better connections with community members and/or professionals. Relationships were key at all levels and were linked

to enhanced experiences, deeper understanding of needs and increased capacity, e.g. having a network of volunteers. Networks were also linked to inclusion; for example, Urban Forests described the camaraderie between participants which supported participation.

The importance of intersectoral partnerships was emphasised in several case studies as a factor helping with implementation and increasing the profile of the project. Llyn Parc Mawr, for example, described the development of a supportive network of partner organisations being critical to the formation of a new community group. Involvement of over 40 partner organisations, service users, and carers in a consultation to develop the mindSCAPE project had resulted in a successful bid to the Big Lottery.

Partnership working with other organisations working with disadvantaged groups was identified as an enabling factor in the two projects focused on access to national parks (Come Outside!; Sheffield Environmental Movement). Brokering connections with other organisations enabled projects to reach out to and address barriers for communities facing barriers to accessing the natural environment. Sheffield Environmental Movement identified building trust and good networks as one of their success factors but cautioned that this required the time of a coordinator as well other types of investment. Come Outside! described the process of growing a network to help achieve their aims of widening participation:

> *"At first, the Programme concentrated on raising awareness and building enthusiasm, hoping to establish cross sector partnership working. Workshops were held in each Cluster, bring together professionals working in the health, community development, recreation and environment and youth sectors…. Using contacts established by working in local Communities First teams, Come Outside! then began to develop links with existing community groups – parenting, men's health, weight loss, homeless, substance abuse, mental health and wellbeing groups."* (Quotation from Come Outside!).

There was a strong theme around the importance of taking an asset-based approach that drew on existing social, cultural and environmental assets (Llyn Parc Mawr; Nature4Health; Sheffield Environmental Movement). Assets were generally described in the context of need and of historical barriers to recognising or mobilising those assets. Llyn Parc Mawr gave key advice to other projects about community involvement supported by the project officer:

> "*Asset based approaches provide a great starting point for co-production. Participants need to be given the given the opportunity to build on their strengths and increase their knowledge and capacity. In order to participate in this project, the community were helped to*

develop their knowledge and awareness about the natural resources in their area and to form their own organisation. This provided them with a platform and foundation through which they could begin to realise the potential benefits from the woodland for the community as a whole." (Quotation from Llyn Parc Mawr).

In general, addressing barriers for participation in green space required a tailored approach that directly addressed the needs of the specific group or groups but also built on local assets, including those brought by community members. Lack of recognition for the cultural knowledge held in BAMER communities was a particularly strong theme in Sheffield Environmental Movement. Historically, this had led to a lack of BAMER role models working and volunteering within the environmental sector. Developing bespoke activities matched to needs and local culture was seen as a critical factor in the Nature4Health programme as it increased the relevance for target communities. The importance of recognising the assets and insights brought by project participants alongside the tailoring of activities was also seen in the two projects working with people living with dementia (mindSCAPE; Urban Forests).

Relatively few barriers were reported in the green space case studies and most of these related to factors that constrained community engagement. Identified barriers included hard to reach target groups (Nature4Health), time needed to engage with local groups (Come Outside!; Sheffield Environmental Movement), weather and outdoor hazards (mindSCAPE), lack of employment opportunities in natural environment (Llyn Parc Mawr; Sheffield Environmental Movement), the limited funding for smaller organisations, and lack of access to research (Sheffield Environmental Movement).

Learning and adaptation was a cross cutting theme that was evident in the case study descriptions of approach, outcomes and processes. Effective learning was enabled by a range of mechanisms including research, fostering social connections and community participation. The Nature4Health case study was structured to include a long list of learning points from the programme. Action research was a key component of Nature4Health and was this approach was had led to improvements in delivery and products offered:

"Continued shared learning. The infrastructure developed allows organisations to participate in delivery, to learn, to improve delivery and increase the impact of their work." (Quotation from Nature4Health).

Learning was integral to the process of tailoring activities to the needs, assets and culture of target groups. Openness to new ideas and suggestions from participants was part of this; for example, Urban Forests worked with participants to design session plans. Some case studies emphasised a process of co-production to develop community activities and shared objectives (Llyn Parc Mawr; Sheffield Environmental Movement; Nature4Health). Social connections led to critical adaptations to project delivery as knowledge about needs and potential solutions were fed in:

> *"[SEM] work closely with community specific organisations to understand the different needs of particular groups, as well as using open discussion with participants about what they enjoy and want to participate in. In turn, they use this insight, from meaningful engagement, to design and deliver their work."* (Quotation from Sheffield Environmental Movement).

A key learning point from Llyn Parc Mawr was that communities should be encouraged to deepen their awareness of local natural resources and how those can benefit the whole community.

As well as themes on intrinsic processes, such as building social connections, some case studies highlighted their learning on organisational factors which influenced success (Nature4Health; Llyn Parc Mawr; Sheffield Environmental Movement). This was given emphasis in the Nature4Health case study, which provided an overview of learning from a regional programme. Organisational enabling factors included:

- Leadership (Llyn Parc Mawr)
- Commitment and enthusiasm of staff (Nature4Health)
- Training and skills development for volunteers (Nature4Health)
- Having an infrastructure to deliver work (Nature4Health)
- Funding for smaller organisations (Sheffield Environmental Movement)
- Monitoring and evaluation (Nature4Health).

Most of the case studies reported on projects that had been running over time and therefore had achieved some level of sustainability or scale. The exception was Urban Forests, which was a defined project that had tested the model with a single group, although it was reported that the model would be rolled out. There was little detail in any of the case studies identifying factors that had led to sustainability. GOOP provided some indication of how the project had scaled and been rolled out in other prisons supported by different funding sources. The importance of a coordinator post for the network of prison managers was highlighted. Llyn Parc Mawr described the future plans to create a sustainable community enterprise as a natural next step given the high levels of community involvement.

5 Quality Appraisal

5.1 Quality Appraisal Process

As discussed in the methods review (chapter 2), an assessment of the quality of a case study is essential for a practitioner to understand the relative strengths and weaknesses it contains and thus to what extent it may be transferrable to their context. A definition of what makes a 'good' case study varies and there are no agreed criteria for assessing quality of practice-based case studies. The advisory group recommended that this pilot study should involve a quality appraisal of the included case studies so that the pilot process was complete and in line with other reviews of qualitative evidence undertaken for the What Works Centre for Wellbeing.

The primary purpose of the quality appraisal was therefore a methodological one relating to our research question about the best methods for synthesis of practice-based projects. Our notion of 'quality' related to the value of practice-based evidence as a source of evidence to assist policy makers and practitioners develop and implement community wellbeing interventions in real life settings (Simpson et al., 2013, Zwald et al., 2013). As a relatively new area of study, we aimed to explore how a quality appraisal process might work within a synthesis of practice-based case studies.

This chapter reports how a process was developed and implemented, using criteria from two reviews of case studies of public health practice (Davies, 2019, UK Health Forum, 2016). The results offer some interesting perspectives on completeness of reporting of many published case studies; however, we did not incorporate these results into the synthesis as the quality appraisal process had not undergone any testing with stakeholders.

Our approach to quality appraisal was based on an understanding of domain-based assessment of risk of bias in systematic reviews. Early versions of validity assessment checklists were described as quality 'scales' which combined information on several features into a single score. However, research by Jüni et al. (1999) revealed that the type of quality scale used could significantly influence the interpretation of the results of a systematic review. The summary score combining these components was also difficult to interpret (Jüni et al., 2001), as different features may have more or less influence on the results. Domain-based (or component) tools, in which different types of bias are considered in turn, are recommended over quality scales because they contribute to a more transparent decision-making process. For example, the domains in the Cochrane Collaboration Risk of Bias assessment tool were selected to characterise mechanisms through which bias may be introduced into a trial, based on a combination of theoretical considerations and empirical evidence. The assessment process requires judgement and Cochrane review authors must be completely

transparent about the decisions made and provide reasons to support their judgement (Higgins et al., 2019) .

5.1.1 Tool development

No 'off the shelf' appraisal tool for practice-based evidence was found in the methods literature review (2.2.8 and Table 1), though four publications (Centers for Disease Control and Prevention, 2007, Davies, 2019, Korjonen et al., 2016, UK Health Forum, 2016) were identified that specifically addressed the quality of public health case studies (two of these – Korjenen et al. and UK Health Forum - related to the same project). Two publications, UK Health Forum (2016) and Davies (2019) were selected to provide a starting point for the development of an appraisal tool. Arguments that the quality of a case study should be judged on its credibility or 'convincingness' than more traditional notions of validity (Spencer et al., 2004, Stewart, 2012) are very pertinent for practice-based evidence. Therefore, any quality assessment framework needed to cover some of the key features of 'good' case studies, such as transparency and completeness of reporting (see 2.2.8).

The five domains covered by the UK Health Forum (2016) criteria were considered relevant for the appraisal of practice-based evidence. These were:

- Integrity
- Completeness
- Transparency
- Responsibility
- Format.

In addition, one domain from Davies (2019) was included; the identification of the learning in the case study. This was not explicitly covered by the UK Health Forum (2016) criteria but was important to include as the potential to learn from, along with the outcomes generated by, practice-based evidence was a key focus of this project. These were then merged into a single framework.

It was agreed that the quality appraisal tool should be structured as a series of questions with responses of: 'yes', 'no', 'can't tell' and 'not applicable' with a space to record evidence for the decision made or any comment from the appraiser.

A Word document covering these six domains was created and a pilot undertaken on three community hub case studies purposively selected to reflect a range of sources, provide a variety of structures, formats and lengths. These were Arts and Health South West – Southbourne Creative Hub, Public Health Wales / Co-Production Wales – Age Well Hwyliog Môn A Youth Club for the Over

50s and Public Health England – The Hub@Castlepoint. Two members of the research team then completed the quality appraisal independently and the issues arising from the process were discussed so as to refine the template.

Changes made to the template helped move the focus away from being a tool useful for those publishing case studies to one which could assess whether a published document contained information relevant for the development of practice. This resulted in changes such as the addition of criteria relating to descriptions about the setting and population of the intervention as well as a clear description of outcomes.

The wording of research orientated criteria such as 'Is the research hypothesis described?' was amended to reflect the fact that practice-based evidence does not always fit with research-based criteria for case studies. In this case the wording was changed to 'Are the aims / objectives of the intervention clear?'

One criterion, 'Are the facts presented in an unbiased way', was removed as although an important consideration for an author of a case study, it was felt that this was not sufficiently distinct from an earlier criterion which examined the accuracy, balance and objectivity of the writing for the purpose of quality appraisal.

The pilot was re-run and further discussion resulted in the removal of the criterion within the 'responsibility' domain relating to recommendations made as a result of the case study. As this was felt to be interrogating the same information within each case study as the domain relating to key learning these two were merged into a single criterion.

The final version of the quality appraisal tool was then applied to all 21 case studies found in the public domain and a summary matrix produced. See Appendix 10 for further information.

We agreed with the advisory group to not consider in great detail how to interpret the results of the quality appraisal, such as applying a score or bandings (i.e. good, satisfactory, poor), as this was beyond the scope of the project. The potential value of assessing quality of practice-based case studies merits consideration, alongside further development and testing of this initial quality appraisal tool.

5.2 Quality appraisal results

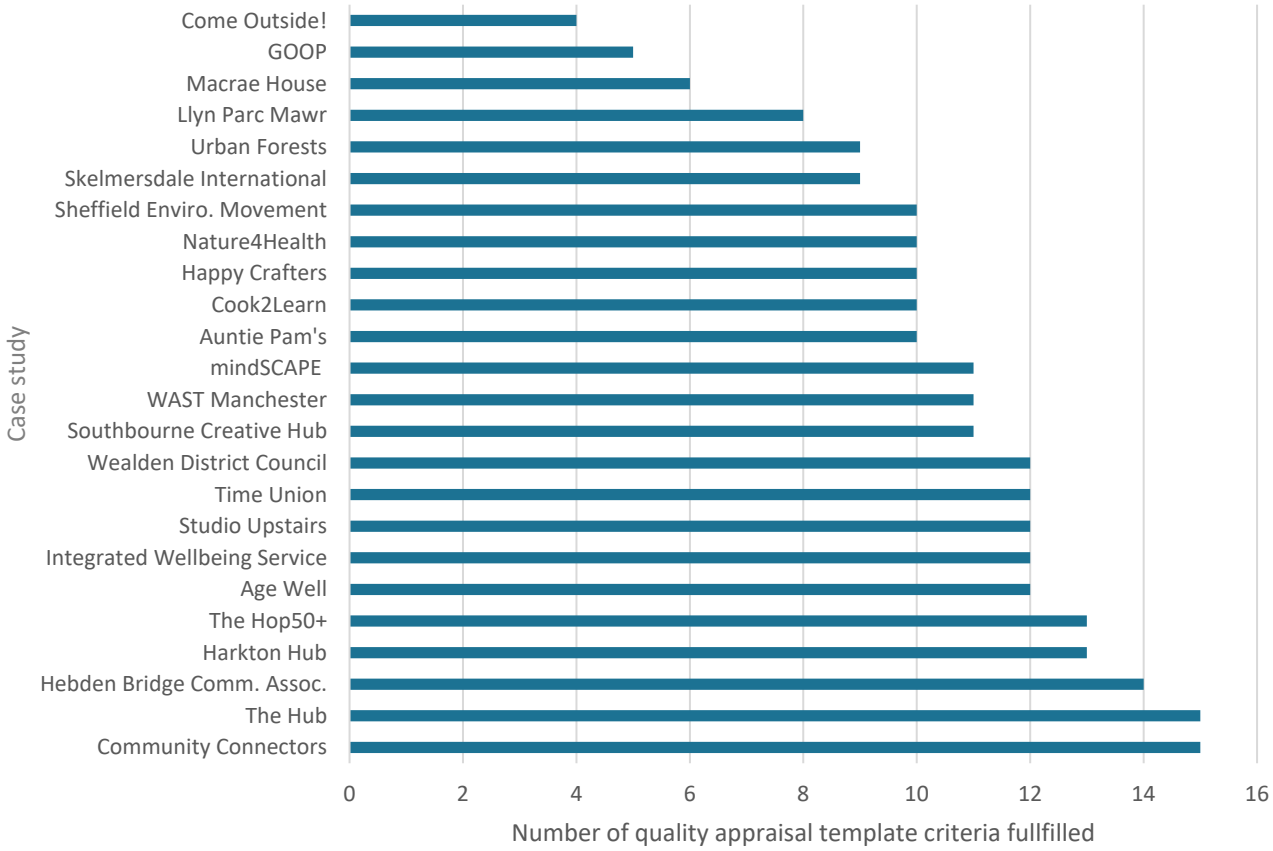
Quality appraisal was completed for all the included case studies. The results are presented as a matrix (see Appendix 11). Ticks on the matrix indicate where any relevant information was present

in the case study but not about the quantity or quality of the information. Our assessment also treats each field as equal and does not consider the potential relative importance of individual fields.

5.2.1 Individual case studies

Within this framework, The Community Connectors project and The Hub fulfilled the most fields (15/22). This is followed by Hebden Bridge Community Association (14/22), The Hop 50+ and Harkton Hub (13/22), and Age Well, Integrated Wellbeing Service, Studio Upstairs, Time Union, and Wealden District Council (12/22). Conversely, Come Outside! only fulfilled 4/22 fields, GOOP fulfilled 5/22 fields, and Macrae House fulfilled 6/22 fields (see Figure 3).

Figure 3: Number of quality appraisal template criteria fulfilled by individual case studies included in the synthesis.



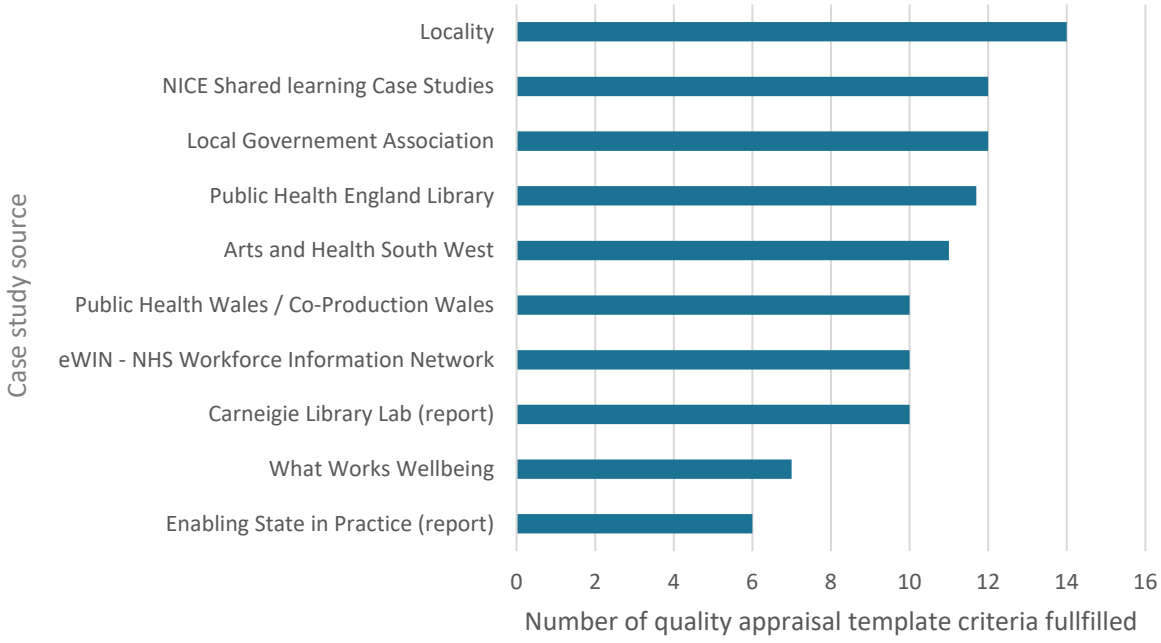
5.2.2 Sources of case studies

Looking at the case studies collectively by source, see Figure 4 for details, the Locality case studies on average fulfilled the most criteria (14/22). This is perhaps not surprising given that these case studies were specifically produced for this piece of work using a data collection template informed by the same thinking as the quality appraisal tool.

Of the case studies collected from existing collections, those from the NICE Shared Learning website and the Local Government Association website fulfilled the most criteria (12/22), although these both only represent one case study. Of the sources that yielded more than one included case study, Public Health England Library website's case studies (11.7/22) fulfilled the most criteria on average followed by the Arts and Health South West website's case studies (11/22). The four included case studies from the What Works Centre for Wellbeing website fulfilled 7/22 fields on average.

The variance in the Public Health England website case studies – from The Hub (15/22) to Skelmersdale International (9/22) – is perhaps surprising given that each is based on a standardised template.

Figure 4: Number of quality appraisal template criteria fulfilled by individual case studies, grouped by the source of case studies.



5.2.3 By fields

Looking at which fields of the quality appraisal template were reported on or not suggests the included case studies, collectively, were good at providing descriptions of projects/programmes, settings, outcomes, and key learning, and that case studies were written well. However, in general,

they did not describe well why projects/programmes occurred and ran as they did nor the research methodologies underpinning the case studies.

Of the twenty-two fields in the quality appraisal template, eight were reported by the majority of included case studies. In descending order these are:

- Is the intervention clearly described? (23/24 case studies)
- Are the outcomes of the intervention clear? (22/24 case studies)
- Is the writing accurate, balanced and objective? (20/24 case studies)
- Does the case study report key learning/make recommendations? (20/24 case studies)
- Is the setting clearly described? (19/24 case studies)
- Are the aims/objectives of the intervention clear? (19/24 case studies)
- Is the content in a suitable format for other practitioners? (19/24 case studies)
- Is there a clear structure? (18/24 case studies).

No case studies were assessed as publishing all results regardless of outcome, making the data collected accessible or providing a clear statement that peer review or evaluation of the case study has been undertaken. Though this may reflect the fact that the case studies included here were produced outside of the research tradition where these are accepted standards for high quality publications.

Only two case studies reported information about 'Are any potential conflicts of interest disclosed?' and 'Is there discussion of any limitations of the evaluation/research?'. Only four case studies reported information about 'Is it clear why the case study was written?' and 'Is the evidence base used?' Five case studies reported information about 'Is the research method clearly described?'.

The quality appraisal template used grouped the twenty-two fields into five categories (Integrity, Completeness, Transparency, Responsibility, Format). The category that was, on average, most readily fulfilled by the included case studies was 'format' (19/24 case studies), followed by 'completeness' (16/24 case studies). These results may be somewhat skewed by the Locality case studies which consistently fulfilled all of these fields due to use of a new template developed through this study (Appendix 6). The other categories were fulfilled less frequently: 'Integrity' (9/24 case studies), 'Responsibility' (8/24 case studies), and 'Transparency' (6/24 case studies). It is likely that some of these categories are more significant for assessing quality, and therefore the credibility of a practice-based case study, than others, but this would require further tool development and testing.

5.2.4 Limitations and wider implications

Limitations of the quality appraisal tool were noted. Firstly, the creation of a robust tool for appraising practice-based evidence would itself require considerable research and evaluation, a process beyond the scope of this project.

Secondly, the decision to restrict the appraisal of the case study to the content of the published document may be overly restrictive. For example, there may be information pertaining to peer evaluation processes or declarations of conflicts of interest on the website from where the case study was collected which are not declared within the published case study. As such, this information has been recorded as absent as part of the appraisal process whereas in fact it may be available.

A third limitation of the quality appraisal tool is that it would only be possible to assess whether all results were published irrespective of outcome (see criterion L in section 2: completeness) through access to a published protocol, which is unlikely to exist in the context of practice-based evidence. It was accepted that the response to this question would be 'can't tell'.

Finally, it was acknowledged that it was difficult to ascertain if a case study was written in a suitable format for other practitioners as this would always be a highly subjective judgment. The decision was made to assess this criterion on the basis of whether another practitioner could be reasonably expected to make a judgment on the transferability of the intervention described in the case study to their own setting based on the content of the published case study.

In summary, the development of the quality appraisal tool demonstrated that practice-based evidence can be appraised for quality in a meaningful way and that there is an opportunity to develop a robust and reliable tool. It is also recommended that authors of practice-based case studies ensure that all the information needed to judge their quality is included in the case study however briefly the coverage (see 2.2.9).

6 Project review – phase 4

The aim of this chapter is to reflect on the process of developing a pilot study to synthesise practice-based case studies and what we have learnt during the project. The study design included a review phase (phase 4). In effect, many design choices needed to be made throughout the study and we documented these to aid transparency. The reflections in this chapter are grouped around discussions occurring within the advisory group, from the Locality case studies, and our reflections as a research team. It was not possible in the time frame to undertake a more extensive and formal review of methods at the end of the project.

6.1 Summary of advisory group discussions

The advisory group met five times during the project. The advisory group brought together perspectives from academia, the third sector, and government, and these perspectives have been invaluable in shaping the study. Advisory group meetings involved the research team providing audio and written progress updates and raising points for discussion and advisory group members providing constructive feedback and guidance. Advisory group discussions had a significant role in shaping the purpose of the project, the research design and scope, and the potential outputs. The main themes from these discussions are described below.

6.1.1 Scope of project

The advisory group helped establish the scope of the project and agreed a need to maintain a focus to keep the work manageable. For example, the project would not produce a validated quality assessment checklist as this would require more work. The advisory group raised the importance of wellbeing work taking place in devolved nations. It was suggested, for example, that there is potential to do wider calls for case studies through Scotland and Northern Ireland , but this was not possible within the timeframe allocated for this pilot.

Advisory group discussions significantly shaped the topic for the pilot synthesis. The advisory group felt this should reflect a breadth of wellbeing topics and not just focus narrowly on health and public health. It was agreed that the topic of the pilot synthesis should be the same as one of the systematic reviews (Bagnall et al., 2018) already carried out as part of the Community Wellbeing Evidence Programme so that the findings of the pilot synthesis would complement those review findings. In this systematic review, evidence gaps were identified around health inequalities and details of processes and mechanisms. Having an agreed focus on community hubs helped target audiences and develop actions for practice. We have been mindful to avoid any overlap of case studies included in both the review on Places & Spaces and our synthesis. The advisory group

cautioned that an over-emphasis on community hubs could overlap too much with an ongoing systematic review into community businesses and that our outputs would be too specific to interventions based around community hubs. It was therefore agreed to also include 'Green & Blue Spaces' case studies in the pilot synthesis.

6.1.2 Valuing all kinds of evidence

How this project can support the inclusion of different types of evidence in decision making was a consistent theme across advisory group meetings. It was agreed that whilst case studies are often used to help make decisions, there is a huge body of existing practice-based case study evidence that is generally overlooked. Systematic reviews, which are the main way of synthesising evidence for the What Works Centre for Wellbeing (Snape et al., 2019), generally exclude such evidence. This means that detailed, and potentially valuable, information on context, processes, and implementation is not disseminated. The advisory group felt that this project could be a useful way to acknowledge the value of evidence coming from practice. Initial advisory group discussions highlighted the significance of case studies to policy makers, funders, third sector organisations and practitioners. This position was also shared by the research team (see 1.4) and confirmed by the methods review (2.2.3) It was helpful to be able to link to the work by Public Health Wales to improve practice-based wellbeing evidence on co-production. This considered case studies as a part of research evidence, as a different way of telling a story, and have produced a 'tool kit' for producing case studies on co-production.

6.1.3 Doing case studies better

The advisory group agreed that one of the main outcomes from this project should be to help people do practice-based case studies better. This includes both producing and reporting good practice-based case study evidence. The idea of 'quality' with regard to practice-based case studies was a consistent discussion point. The diversity of practice-based case studies that are produced was recognised, including the amount of description included, authorship, data collection methodologies, independence, and levels of quality assurance/control. The advisory group agreed that one of the roles of this project should be to understand, and produce guidance about, what 'good' looks like in this context. This orientation helped the research team identify the main learning points as the project progressed. These will be incorporated into later guidance on case studies produced by What Works Centre for Wellbeing.

6.1.4 Outputs

The potential outputs of the project were discussed at length with the advisory group in order to ensure the aim of better production and use of practice-based case studies was being met. It was

agreed that in the first instance the accumulated practice-based case studies and the results of the synthesis would be published on the What Works Centre for Wellbeing website. The methodology for synthesising practice-based case studies reported here will form part of a compendium of approaches within the What Works Centre for Wellbeing.

The advisory group were quick to point out different parts of the methodology were more relevant to different audiences and that this would need to be unpacked into practical tools. It was agreed that broadly there are two products; one for practitioners when reporting case studies and one for researchers/policy makers when pulling evidence together. In terms of guidance for practitioners, the advisory group agreed that we should be offering recommendations on what a well-balanced, well-structured case study involves. Providing some parameters in terms of the content of a 'good' case study would support practitioners to produce better evidence of their work, commissioners/funders in terms of what information they request, and policy makers to recognise the value of the evidence. However, the advisory group also cautioned not to impose a process that loses the creativity that can be inherent in case studies. We agreed to make clear that this project is about written case study materials, not visual. Guidance and encouragement of better data archiving, including repositories of grey literature, was welcomed by the advisory group.

6.1.5 Synthesis amongst a diversity of case studies

Advisory group discussions highlighted a number of fields of information that are most important to capture in a synthesis. These were:

- Rich, contextual data on implementation, including examples
- Barriers, facilitators and how barriers have been overcome
- Information about processes
- Who has commissioned and produced the case study, including where and when
- Unanticipated outcomes and negative outcomes/what has not worked
- Key words/tags.

These aspects were reflected in our Case Study Template (Appendix 6), data extraction template (Appendix 7) and our analysis (chapter 4). Questions were raised about what would happen when case studies in our synthesis did not report enough information across these fields. Typically, in-depth qualitative analysis would need more data and result in a much longer report; however, practice-based case studies do not tend to be long. We agreed that case studies would be excluded from our analysis if they did not contain information in enough of the fields or did not report anything about outcomes.

The advisory group cautioned that the diversity of 'types' of case studies (e.g. descriptive, evaluative, exploratory) needs to be recognised and so any guidance must advocate that the 'right' information to include in a case study depends on the purpose of the case study. Also, there needs to be a balance between rich descriptions and technical, structured reports.

6.2 Locality case studies

This section provides reflections on working with Locality to produce a small number of 'new' case studies. Working with Locality has added value to this pilot project. Locality informed the design and formatting of the data collection template. The research team produced an initial draft, which Locality piloted with a small number of member organisations and suggested some changes to introductory text and wording of questions to be clearer. Changes were incorporated into the final draft.

We anticipated including up to five Locality case studies and received four and included three in the final synthesis. The exclusion of one case study was due to the application of consistent criteria for a community hub for the purposes of the synthesis pilot. A small number of organisations wanted to submit a case study but were not able to do so in the study time frame. The case studies returned through Locality were detailed, containing information in all the fields in the data collection template. This shows that community-based organisations do hold practice-based information that others would find useful. On the other hand, those organisations completing a case study may have been nominated themselves for inclusion in this project because they have a wealth of information to share and are perhaps not representative of organisations working in the area of community wellbeing more generally.

Locality took responsibility for liaising with their members to gather case studies. This was beneficial for the research team in terms of saving time and effort. However, some of the suggestions for case studies did not fit well the inclusion criteria of the pilot (i.e. they were not about community hubs or green & blue spaces). The reason for the exclusion of one Locality case study reflected a mismatch between the need for very consistent criteria for this pilot study and the way that practice-based evidence is generated, often reflecting a holistic approach to wellbeing.

6.2.1 Locality perspective

Locality offered reflections on their involvement in the study and the development of case studies. The involvement of Locality members in this project was considered to be of value by Locality, not just to the small number of organisations that took part in completing the case study template, but also in the application of the wider learning from the research for community practitioners. A particular value was seen in being able to strengthen the position of case study material in health

research and with commissioners, given the prominence of case study data within community settings. The template was also considered to offer a valuable framework for policy research and has informed some of Locality's internal thinking about case study collection.

Overall, there were mutual benefits from collaborating on the development of case studies. Working with partner organisations allows researchers to utilise established networks and third sector organisations, such as Locality, can improve the rigour of how they capture success stories. There is a potential risk to the quality of the synthesis as researchers do not 'control' that process. This suggests that it would be helpful for all stakeholders (researchers and practitioners) to develop a shared understanding of definitions and inclusion criteria when a synthesis is proposed.

Locality members who completed the case study template provided some feedback on the process. There was support for the aims of the research and a recognition of the challenges that the project is seeking to address. Some members made specific comments about the importance of bridging 'academic health research' and 'community practice' worlds, capturing the messy complexity of community work, seeing this project as an important part of that.

Specific comments on the case study template were also provided. Overall, Locality members thought that the template was simple to follow and had logical structure and rationale. However, it was not immediately clear how we were defining 'case study', such as being inclusive of multiple types of evidence (qualitative and quantitative), not just case studies of individuals. This was cleared up via phone-calls between Locality and members and became clearer on more detailed reading. There could potentially be more room to reflect on the connectivity of outcomes to other programmes or to collaborations partnerships. Whilst there is scope for this in the 'Enablers' section, it could be established more clearly.

There were other Locality members very interested in taking part in the study but who had not yet collected evidence. Conversations about the study and seeing the template was reported as being valuable to their thinking on how they put measures in place to capture evidence from the start.

6.3 Research team reflections

To our knowledge, this is the first synthesis of practice-based case studies on community wellbeing. There was little available guidance on the best approach to take and numerous design choices were made and then reflected on. This section reports on aspects of the research process from the perspective of the research team. Significant issues included:

- *Agreeing scope*

Whilst the scope of this project was broadly understood within our team (and within the advisory group), we recognised that this was based on tacit knowledge about the field. A particular issue was our use of the term 'practice-based case study'. A common default when thinking about this collection of knowledge is 'best practice', which is the term commonly used in health and social care contexts (Ng and de Colombani, 2015). However, our understanding was broader than just examples of 'best practice'.

- *Establishing definitions of practice-based case study*

Clarifying our team's understanding of practice-based case study was important for focusing our literature review, developing our methods, refining inclusion criteria for the pilot synthesis, and for articulating the project and its outcomes to other people. We noted that there was a distinction between knowledge *in* practice and knowledge produced *by* practice. Knowledge produced in practice refers to knowledge that is being produced in a natural setting rather than through experimentation. Knowledge produced by practice means community organisations are involved in the production of the knowledge, including collecting information and producing outputs, and not knowledge that is produced solely by an external organisation providing professional research, evaluation or consultancy services. We considered that these two characteristics are perhaps continuums rather than dichotomous positions.

- *Collecting practice-based case studies*

We collected case studies for the pilot synthesis through searching organisational websites and reports identified through the advisory group and through Locality. Recognising that not everyone uses the term 'practice-based case study', we ensured our search captured all possible terms and synonyms. The process of collecting practice-based case studies was much more time intensive than then equivalent stage of a review of research evidence. Practice-based evidence is generally not stored in databases designed for mass searching and retrieval. We encountered issues with website search functionality, archiving, reports with no abstracts, filtering search results, duplicates, downloading results, and information spread over multiple documents. There was significant variation in the 'quality' of organisational websites across these domains.

- *Using templates*

We developed templates for collecting new case studies (Locality) and to extract data from the identified case studies. It was assumed that the use of templates would support the standardisation of information so that it is sufficiently comparable and enhance quality by ensuring the necessary information is included. The included case studies, whilst being about the same topics, varied in

format and the type and volume of information included and the templates did support consistent collection of information.

- *Data extraction & coding*

We encountered two challenges extracting data from each case study and populating our cross-case framework. Firstly, there was significant overlap between the 'learning' and 'enablers' fields and the 'what works' field. If a purely inductive process had been followed these replications would perhaps have been avoided. The second issue concerned the 'reach' field which was about engagement and whether the project is addressing inequalities of access. We identified some qualitative data as well as monitoring data; however, we often struggled to code meaningful information against this field.

- *Analysis and synthesis*

After much deliberation about analysis methods, the use of cross case analysis provided a good fit with the data. Structured case studies were fairly easy to code and summarise. There were a number of discussions about the balance between the detail of the case and drawing out common themes and patterns across the cases. We went back and forward between the thematic framework and the specifics of individual case studies. This process took longer than a typical qualitative analysis as we were not familiar with the data in the way researchers are in primary research. We discussed how the case studies were themselves public, summarised accounts, so a degree of interpretation had already taken place when they were produced, Again, this differs from primary research where analytic frameworks are developed from raw data.

6.4 Reflexivity and transparency

There have been some concerns within the team that this study and its results may still be dismissed by those with entrenched views on traditional evidence hierarchies who may view case studies as anecdotal evidence. The What Works Centre for Wellbeing has a key role in promoting the value of practice-based evidence to aid understanding of how effective community-based projects can be built. Our position as researchers is clarified in Chapter 1. The intention of this project has been to establish a method to allow the detailed contextual evidence contained within practice-based case studies to contribute to the overall evidence base/ knowledge. As a team, we hold knowledge about community practice and about the value of local level action which involves communities in building social action. This has undoubtedly helped us develop the analysis.

This section has reported on the deliberations and the positions taken during the study by different groups – researchers, advisory group and Locality as our civil society partner. What has been evident throughout these deliberations is that researchers and advisors hold a shared position on the value of practice-based case studies for understanding how to promote community wellbeing. As has been shown through the review (Chapter 4), practice-based case studies acknowledge and address the levels of complexity within which their applied practice operates. The real world, being a messy place to work, is not easily predicted and analysed using the same frames as formal research studies. This poses for challenges for researchers in uncovering some of the tacit assumptions about different forms of evidence. We believe that providing a reflexive account of how the research evolved aids transparency. The next chapter provides a more critical overview of the study methods and results.

7 Discussion

In this study, we have aimed to provide a 'proof of concept' for the review and synthesis of practice-based case studies on community wellbeing. There have been four interlinking phases as gradually, we have identified appropriate and robust methods for review and tested these with a sample of practice-based case studies on 'places and spaces' wellbeing interventions. This chapter provides a critical discussion of the overall study and major results from the pilot. It starts with the development of understanding about what is a practice-based case study before going on to a discussion of the strengths and limitations of methods developed for collection, review and synthesis of practice-based case study evidence. The following section provides an overview of the cross cutting themes on community hubs and green spaces, and then the limitations of the evidence presented. The final section discusses what the study adds and what may be transferable to other reviews of practice-based evidence.

7.1 Developing understandings of practice-based case studies

Overall, the study has confirmed the potential value in gathering, reviewing and disseminating practice-based knowledge. It fits with the ambitions of the What Works Centre for Wellbeing to develop wellbeing evidence and to support community-based organisations to collect local evidence. Advisory group discussions often centred on the value of good quality case studies for practitioners, funders and policy makers in comparison with other forms of evidence (chapter 6.1). The methods review (chapter 2) highlighted multiple benefits of practice-based case studies; these include providing rich descriptions of interventions in context (Korjonen et al., 2016) and useful detail on implementation (Ebneyamini and Sadeghi Moghadam, 2018); reporting tacit knowledge from practitioners and community members (Simpson et al., 2013) and a being means of sharing stories (Lewis et al., 2004). The methods review found that practice-based case studies share some similarities with research-based case studies, because they are context specific, take a holistic approach to understanding a project or programme, draw on multiple data sources and provide a narrative. Notwithstanding these common features, there are critical differences; practice-based case studies draw on the experiential knowledge of stakeholders, they are typically developed with the purpose of sharing successes or learning rather than answering research questions, there is often a focus on implementation (how an intervention works) rather than outcomes and they aim to tell a story that is relevant and accessible for others. This all suggests that practice-based case studies should be treated as a distinct and complementary form of evidence, and not as a weaker version of research-based evidence. Notwithstanding this point, we acknowledge that there are grey

areas and we have drawn on thinking about research-based case studies in terms of improving rigour of our methods.

One limitation is that we were unable to identify a definitive description of a practice-based case study. There are many types of case studies of practice and there are overlaps with case studies/evaluations in grey literature, descriptive case studies in published literature and also with promotional case studies. This pilot has used practice-based case studies of community-based interventions, projects or programmes. We acknowledge that the size of a case can vary; ranging from a case study of an individual to large scale case studies of organisations or policies. There are also a number of typologies/categorisations, but it is not clear how these apply to practice-based case studies on wellbeing. Our study was limited to taking a pragmatic approach, ultimately focusing on a particular type of case study in collections of practice. There is scope for development of a conceptual framework for processing practice-based evidence on wellbeing. This would include setting out the value and limitations of this type of evidence and how it relates to research-based evidence on wellbeing.

7.2 Study methods – strengths and limitations

A key research question for the study was 'What are the best methods of identifying, reviewing, synthesising and reporting methods and approaches of community-based practice?'. This was investigated by a rapid literature review, by scoping UK websites and collections of practice-based case studies relevant to wellbeing, and by piloting with a sample of case studies. There were no immediate answers to the question of what were the 'best methods' and so our study has evolved to select a set of methods that were both feasible and appropriate for dealing with practice-based evidence on wellbeing. The study design (Figure 1) included a review of methods and we drew on the key learning points from that review (see Table 2) to develop the methods for the pilot (Chapter 3), recognising that some of those learning points came from literature about research-based case studies. The advisory group played a major role in this process and discussions helped us focus on the specific value of practice-based case studies and how to deal best with this type of evidence (see Chapter 6).

Notwithstanding the acknowledged value of practice-based evidence, the literature review highlighted the many knowledge gaps around how to gather, curate and analyse practice-based evidence. The study was a rapid review and while we feel fairly confident that key papers were identified, as they were frequently cited, we may have missed relevant literature that has dealt with these issues. There is potential to do a more comprehensive scoping review on this topic. Also, a

survey of those policy makers and organisations who frequently gather or use practice-based case studies.

Identifying practice-based case studies in the public domain was an important part of Phase 2. We came up with a limited group of websites and collections. These comprised those listed on Public Health England (PHE) Knowledge & Library Services practice examples collection and those identified by the advisory group. There was a strong public health/health bias in this list because of the major role PHE has played in developing a library collection, putting in place systems and templates to collect practice-based evidence, and mapping links to other sources and collections (see Public Health England, undated)[2]. There is scope for other organisations and major funding bodies to develop their libraries/collections, which would broaden the range of available examples and counter a public health bias.

Web searching for the case studies was a very time-consuming business, partly because many websites have poor search facilities (see 5.3). Despite many hours searching, there are limitations with the search and a strong likelihood that there are relevant practice-based case studies that were not selected. Having a specialised information officer undertaking the search may have improved the hit rate. The implications are the need for a comprehensive search strategy combining web-based searches with other ways of identifying practice-based case studies e.g. surveys of major funder/s providers. There is also scope to develop better search facilities, use of labels/key terms and links between databases and case study collections.

The importance of using a structured and systematic process to develop practice-based case studies was highlighted in the literature review. Many of the templates and checklists for collecting practice-based case studies or practice examples have similar domains. Using a structured template or set of domains helps improve the rigour of the evidence and allows some comparison or meta-evaluation. Our study drew heavily on earlier work by the UK Health Forum (Korjonen et al. 2016, UK Health Forum, 2016, UK Health Forum, 2015), Public Health Wales (Davies, 2019) and Public Health England in developing templates and processes for identifying and handling information. Some of the processes were refined and tested again in the four Locality case studies. The template developed through this study proved to be a pragmatic tool to aid systematic reporting by those in practice. We were also able to adapt that template to produce the first analysis framework and we think that this is a strength of the study. However, there is scope for further development and testing of a reporting framework for practice-based evidence on wellbeing. The advisory group discussions

[2] One of the authors (JS) was involved in the project to develop PHE's practice examples.

highlighted the balance that needs to be structure between formal structured case studies and allowing a rich and creative story to be presented.

Quality of practice-based evidence is a major theme in the literature, which highlights threats to quality, objectivity and rigour when experiential evidence is reported. Quality appraisal was also a theme in advisory group discussions. Overall, there was little literature on how to assess quality, especially across multiple case studies. Our initial approach was an attempt to do a quality appraisal of the sample of case studies; however, this was only undertaken in a limited way as a 'first run' and we cannot make any claims about the validity of the process. Many definitional and methodological issues were raised during the quality appraisal and this is an area where there is scope for further research to develop and test a bespoke quality framework for practice-based case studies. This would need to involve different stakeholder groups and identify assumptions about the value of practice-based evidence and use appropriate criteria for assessing its quality. The initial quality assessment tool developed for this study, based on two reviews of public health case studies (Davies, 2019, UK Health Forum, 2016), could be developed further with iterative cycles of testing.

Our study was designed so that the findings of the literature would feed into the stages 2 & 3 (the pilot). However, the methods review found scant information on review and synthesis methods for practice-based case studies. Where it had been undertaken, traditional qualitative analysis methods tended to be used. This knowledge gap meant that we had to draw on accepted methods of qualitative analysis and synthesis that would suit a multiple case study design (Miles et al., 2014, Yin, 2017). The methods review highlighted a number of research strategies or approaches for the analysis of research-based case studies. We decided that cross-case analysis fitted best with the synthesis of a heterogeneous set of practice-based case studies that varied in depth and quality (Morestin et al., 2010). Other research strategies could have been used, but would have required further time to develop. In particular, a realist synthesis could have offered a useful approach because the focus on context, mechanisms and outcomes aligns to some of the content of good quality case studies (Denyer and Tranfield, 2006). Synthesis approaches used in mixed methods reviews that initially analyse different types of evidence separately before bringing the findings together may also be appropriate, such as the sequential approach used in Thomas & Harden (2008) or in qualitative comparative analysis (Thomas et al., 2014).

For data analysis methods, again there were few recommendations for practice-based evidence. We selected one method - Framework Analysis - as we felt that offered a systematic and rigorous process and fitted with case study evidence, which tended to be structured. Framework analysis is often used in policy and implementation research (Gale et al., 2013). We acknowledge that

Framework Analysis was not identified as a specific approach to synthesis in the Methods Review (chapter 2); however, it offered a well-recognised process for conducting cross case analysis according the principles outlined in Table 3 (see 2.3). Framework synthesis is a very similar approach commonly used in systematic reviews of qualitative evidence (Dixon-Woods, 2011). There are other qualitative analysis methods that could have been used, including those that may take a more inductive approach, but we did not have time or capacity to try others out. Therefore, we cannot make recommendations on which analysis methods should be used, only that Framework Analysis or synthesis is an appropriate method that led to clear results.

One limitation is that the team, having been involved in wellbeing reviews, may have been sensitised to the topic. A strength was the rigorous approach with checking between team members at all stages to ensure reliability of processes and that there was agreement on the summarising of themes in the framework matrix (which is part of Framework Analysis). This took a long time relative to qualitative analysis of primary data, partly because great care is needed with interpretation of secondary qualitative accounts that summarise what has occurred (see 5.3). Researchers need to balance collecting information against key fields, as represented by many case study templates, and a more inductive approach to analysis.

A primary aim of the study was to scope, develop and pilot a method of review and synthesis for practice-based projects (see 1.2) as a 'proof of concept'. There were limitations as we were only able to work through this process once. There is scope for further development of methods with stakeholder testing and for comparison of analysis and synthesis methods. Alternative methods, such as realist synthesis, may offer a means to synthesise evidence from different sources, for example, quantitative effectiveness studies and qualitative experiential evidence. This was not in scope in this study, but practice-based case studies could provide valuable complementary evidence for reviews.

Finally, the staged study design provided a robust process to gather and synthesise case studies by drawing on key literature and a piloting a method. As there are not agreed definitions or templates for doing a synthesis of practice-based evidence, the role of the advisory group, including our civil society partner Locality, was critical. We presented a record of issues and learning, including advisory group discussions, in Chapter 6. What Works Centre for Wellbeing could consider if all reviews should include an account of shared learning between research teams and advisors, and also other stakeholders where they shaped the final research. This would aid transparency and recognise the key role of advisors in a What Works Centre.

7.3 Synthesis of 'places and spaces' practice-based case studies

The pilot aimed to conduct a review and synthesis of a sample of practice-based case studies that report on 'places and spaces' interventions to build community wellbeing and improve social relations. Seventeen of the included case studies were on community hubs and seven were on green space interventions. The qualitative analysis focused on the two review questions:

- How do community projects aimed at improving wellbeing contribute to the success of the areas they serve? What outcomes result and for whom?
- What can be learnt about project engagement, implementation and sustainability from case studies of community wellbeing projects in context?

There were a number of common themes in and between both intervention categories (community hubs and green space). An overarching (or organising) framework was used to interpret the results, developed from the seven green space case studies and then applied for the community hub case studies. The three overarching themes were:

- *Purpose and approach*: covering themes that link the context, community needs and assets with the response and project rationale.
- *What works – what supports*: reflecting the experiential learning, and the barriers and supportive factors influencing effective and sustainable community action.
- *Outcomes*: individual, community and organisational and unanticipated outcomes.

7.3.1 Cross-cutting themes

This development of the analytic framework made some synthesis possible in relation to cross cutting themes for these two groups of interventions. The most prominent cross cutting themes were as follows:

- *A community-based response to inequalities and social exclusion.*

Case studies in both intervention groups had a strong theme around need, including area deprivation, health need, social isolation and individual/family disadvantage. Some case studies also emphasised the experience of marginalisation and stigma. There was a geographical spread, a mix of rural and urban projects and considerable diversity in the communities and population groups covered. Overall, results suggest that community wellbeing projects are an appropriate mechanism to reach groups that face barriers to good wellbeing.

- *Understanding needs and assets*

The synthesis illuminated how different projects responded to community need through a range of mechanisms. There were common features including: developing an understanding of local needs;

identifying community assets; involving people in project development and priority setting; and creating safe spaces – whether in a hub or in an outside activity. Addressing the inequalities of access to the natural environment was a particular feature of the green space projects and this group of case studies provided rich data on how communities experience these barriers, for example in accessing national parks, and how barriers can be surmounted. Findings from the green space projects illustrate the links between generating social value and environmental value through community activity.

- *A multi-layered approach*

Developing a multi-layered approach was deemed important in both community hubs and green space projects/programmes. While the shape and scope of activities differed between the two intervention groups, and indeed between individual case studies, the analysis showed that a range of community-based activities, many of which involve social or fun activities, was required. The community hubs case studies typically illuminated multiple layers of activity occurring within a hub. In addition, many community hub case studies described outreach activities or group activities in other settings linked to the hub.

- *Wellbeing outcomes*

A strong theme across both groups was that participation in community-based activity led to increases in individual wellbeing, particularly improved confidence, better social connections and reduced social isolation. Gaining skills or knowledge was also important. Community-level wellbeing outcomes included creation of more opportunities for participation and building community infrastructure and capacity, including volunteering. These outcomes are all aligned to the range of outcomes reported in the Places and Spaces review (Bagnall et al., 2018).

- *Stronger organisations*

Analysis showed that many wellbeing projects have positive organisational outcomes. These could include partnerships, new funding sources, greater capacity and better project delivery. These types of organisational outcomes were seen across both intervention approaches, but in particular, the strengthening of organisational position was emphasised in many community hub case studies. In general, the case studies provided an insight into organisational aspects and context, however, more information on sustainability and funding have been helpful in many cases.

- *The significance of learning as a mechanism of change*

Learning was a strong cross cutting theme and in essence occurred as an adaptive mechanism that made activity more effective and more tailored to need. Learning often occurred as a developmental cycle involving organisations, stakeholders and community members. While some case studies described drawing on research-based evidence to increase organisational knowledge,

most described ‘needs assessment’ as an integral part of practice, leading to better understanding of what should be done and uncovering individual and community assets in practice. Learning also led to individual outcomes in terms of increased skills and knowledge and awareness of staff, volunteers and community members.

- *Collaborative working is the foundation of success*

Collaboration and the development of strong local partnerships was a key learning point across the community hub and green space case studies. Community wellbeing case studies typically described strengthening partnerships and developing new connections as one of the critical factors of success. New partnerships could be also be identified as a positive outcome from the projects. What was evident through the case study narratives was the sense of development of collaborative working at different stages of a project and what resulted. These type of process issues tend to be poorly covered in systematic reviews and in research-based case studies.

- *Creating safe spaces*

Whether in a community hub setting or in the natural environment, creating spaces where people can come together to do new activities and meet people was a fundamental mechanism leading to better community wellbeing. In community hubs or green space case studies, analysis showed that the specific activity was rarely the critical choice. Instead, it was the creation of opportunities to join in and maintaining an inclusive ethos that had importance. These types of ‘low intensity’ activities, like knitting groups or fun days, can often be ‘under the radar’ in the formal evidence base (Savage et al., 2009, Bagnall et al., 2017). In contrast, the synthesis of practice-based case studies has shown how critical it is to have activities that bring people together. This also echoes findings from the Places and Spaces review.

- *Empowerment as a mechanism and outcome*

Empowerment was a cross cutting theme that related to all three categories of the overarching analytic framework. The case studies often reported on the importance of being community- or client-led. This required development of relationships and deepening engagement with the target communities. Some case studies, from both community hubs and green spaces, reported on the gradual transfer of power and assets e.g. development of a community-led steering group or transfer of a building to the community. The importance of power and empowerment is a key concept in community wellbeing, although there is a limited evidence base (Pennington et al., 2018). The sample of case studies did provide some evidence of the development of collective control and the benefits that resulted from it. At the same time, there were challenges with community engagement reported particularly in the community hub analysis. Co-production takes time to develop relationships and trust and the time span may affect the ability to access funding.

- *Funding and sustainability*

While there was some description of effective organisational processes and leadership, these were not prominent themes in the analysis. This may be because these issues are seen as 'business as usual' and not deemed worthy of reporting. One exception was the importance of funding and the links to sustainability, which emerged as theme across a number of case studies. There were both positive examples of work that had led to new funding sources and also for community hubs, a theme around the challenges of sustaining funding. The opportunities and challenges for the funding of community-based projects has been highlighted elsewhere (Department of Health et al., 2016).

7.4 Limitations and strengths of the evidence

This section adds to the discussion of methods above (7.1) by discussing the limitations and strengths of the sample of practice-based evidence and the synthesis results.

Categorisation of community-centred approaches is challenging as there is no agreed nomenclature and local projects develop in different ways (South et al., 2017). This is confirmed by the variety of projects gathered in this pilot. It also takes time to categorise and select projects representing intervention types. We are confident that the projects in the sample do represent 'places and spaces' interventions and that each group illuminated some of the features of the two different types of interventions. Having a clear typology from the systematic review on Places and Spaces was very helpful in achieving this (Bagnall et al., 2018). This suggests that some conceptual work around definitions and approaches or alternatively a scoping review should be undertaken prior to any synthesis of practice-based evidence. A scoping study focused on practice may have revealed a wider range of intervention types and examples fitting within these broad intervention categories.

Purposeful selection of a sample of case studies made synthesis possible. The sample size was decided on pragmatic grounds as being large enough to undertake a pilot synthesis and manageable in terms of the time taken to process studies. We cannot draw any conclusions about how many case studies should be included in a synthesis in order to develop robust results. This will depend on the availability of case studies and the quality /completeness of data. Nonetheless, using a robust qualitative analysis process can ensure higher order themes are derived from the data. A further issue is the heterogeneity of case studies. Initially, we were unsure of the extent to which results from an analysis of community hubs and green space interventions, or indeed other Places and Spaces interventions groups, could be sensibly brought together. We have remained cautious about over-extending the analysis and reported the main results for each intervention type (chapter 4). Also, the use of matrices kept the individual cases together with information on their contexts,

which is important if we are to retain the richness of the narratives. Overall, we have some confidence in presenting an overarching thematic framework and are able to highlight patterns and cross-cutting themes (3.4.3). This tripartite analytic framework (*Purpose and approach*; *What works-what supports; Outcome*) could have transferability in other reviews of practice-based evidence. The next stage would be testing the fit of this analytic framework with other community wellbeing case studies.

Practice-based evidence can be distinguished from research-based evidence as there is a greater emphasis on experiential learning and local context. Indeed, it is this reflection and learning that is of value to others in practice and policy. Notwithstanding the benefit of this tacit knowledge being presented, there are risks that case studies will have a positive bias to reporting successes (Centers for Disease Control and Prevention, 2008). This might pose a particular risk where case studies were produced to 'market' a project. While this group of case studies were not simply promotional studies, (they were selected from external collections and had to report outcomes and or learning), they represent an external (public account) of what occurred. Some difficulties and understanding of what does not work may not be presented and therefore does not feature strongly in our analysis. Also accounts from people who did not engage or felt excluded from activities are absent. The focus on reporting success, largely with those with those who engage, could undermine the validity of the findings from a synthesis of practice-based evidence. There may be more gained in synthesising research-based case studies, as these are likely to have a more objective and in-depth investigation of the issues. Overall, this supports the need to be aware of the strengths and limitations of all types of evidence and to use appropriate methods for review and synthesis.

This review has confirmed that a practice-based case study looks different (it is generally a story) and contains a different type of information than research-based case studies. The review adds to the knowledge from the places and spaces systematic review (Bagnall et al., 2018). In particular, it addresses identified evidence gaps around processes, mechanisms and health inequalities, particularly where community-based projects were working in partnership with disadvantaged groups. As anticipated, this case study review found less strong, detailed accounts of the outcomes from wellbeing projects, compared to the processes and mechanisms. Interestingly, unintended outcomes were often reported, mostly positive ones in relation to people's social networks or organisational links. Overall, given the strengths and limitations of evidence presented in these case studies, we suggest that there may be value in a synthesis that brings together different sources of knowledge – research-based and practice-based. Methods such as realist, sequential or convergent mixed methods or narrative synthesis could be used.

Our initial analysis showed considerable variation in the volume and type of information contained in the case studies in our sample (see Table 5). Notwithstanding that practice-based case studies are likely to reflect the diversity of practice; nonetheless, it is interesting to note the areas where there were often information gaps, such as sustainability. Only a minority reported on results from independent evaluation. The summarised nature of the case study format meant that it was not possible to draw conclusions about the strength of evidence on outcomes. A more in-depth review would have approached the case studies projects for further information and reports, which could then have been used to supplement the review evidence. Due to time constraints, we were unable to do this and we are not sure how practical this would be given some projects have probably closed or had significant staff changes. Also, it is not clear how supplementary material should be treated - as contextual detail or another source of evidence. This is a limitation of using secondary published evidence as reviewers are dependent on the quality of reporting. Use of structured templates and ensuring completeness of case studies can aid in producing case studies of sufficient depth for analysis and synthesis. Table 5 offers a further template to map the content of practice-based case studies that could be used by researchers and funders wanting to understand what information is reported.

7.4.1 What practice-based evidence adds

As Chapter 2 discussed, while both research and practice-based case studies will often lack generalisability, they offer a more rounded picture through an in-depth account of a specific situation or set of actions and this may be of value to others in policy and practice. In our pilot synthesis, the community hubs and green space case studies undoubtedly provided rich accounts of the journey of many projects and gave a sense of development, adaption and learning. Concerns that such accounts would be superficial were not borne out. A strong practitioner voice was evident across the sample, as was the inclusion of community perspectives. The strongest themes emerged over the mechanisms of change such as empowerment, learning and capacity building. This confirms the value of practice-based synthesis in making visible some of the key processes in places and spaces interventions. The qualitative analysis was conducted reasonably rigorously and the final results provide good evidence of what is important for the development of community wellbeing projects based on community hubs and use of green space. A further analysis of all eight intervention groups would provide a further opportunity to understand what works; however we have some confidence in the robustness of the results for these two types.

When we compared the findings of the case study synthesis to those of the related systematic review of community infrastructure (Bagnall et al., 2018), lots of synergies were seen. No contradictions were seen between the findings of the systematic review and the findings of the case

study synthesis, but the findings from the case study synthesis were able to augment the systematic review by contributing some knowledge towards highlighted evidence gaps (see Appendix 14 for tabulated comparison of synergies and gaps).

For all interventions, there were synergies between the case studies and systematic review in that a range of community infrastructure interventions contributed to boosting social relations and community wellbeing at individual and community levels, and common enablers for successful implementation and delivery were seen. More detail emerged in the case study synthesis around the processes of implementation and delivery, for example around co-production, collaborative working and safe spaces, and the inception, evolution and delivery of interventions in response to community context.

For community hubs, there were synergies between the two types of evidence synthesis in the findings for individual and community level outcomes. The case study synthesis offered additional detail around the range of activities and motivation for providing these, organisational outcomes, key implementation and delivery mechanisms, and unforeseen outcomes. Evidence gaps identified in the systematic review that the case-study synthesis was able to add some knowledge to were: further detail around contextual factors, intervention mechanisms, the 'reach' of community hubs into disadvantaged communities, financial costs and funding, and some information relating to sustainability about how community hubs planned to develop.

For green and blue spaces, there were synergies between the two types of evidence synthesis in the findings for individual and community level outcomes. The case study synthesis offered additional detail about activities, motivations and aims of the projects, and key mechanisms for implementation and delivery. Evidence gaps identified in the systematic review that the case study synthesis was able to add some knowledge to were: details of contextual factors, intervention costs, and key mechanisms.

8 Conclusions

There were two areas of focus for this study. Firstly, the development of a method to synthesise learning and outcomes from community-based wellbeing projects and, secondly, the review of a sample of projects that focus on promoting wellbeing through a place or community space. While there is much discussion on case studies as a research design, there is scant literature on how to gather, curate, analyse and synthesise practice-based studies. In that sense, this study has been exploring new territory and study results will hopefully contribute to wider debates on building the evidence base for individual and community wellbeing.

Notwithstanding that there are many areas of discussion about the status and range of practice-based evidence, the study has developed a better understanding what practice-based case studies are, what they offer and how such information should be processed. In particular, we have developed a working definition that describes the main characteristics of a practice-based case study as opposed to other forms of evidence.

> Practice-based case studies report on the evidence generated from the implementation of an intervention in a real-life practice setting and include the learning from those involved in the development and delivery of that intervention. Such case studies typically provide a narrative explaining how the intervention developed in that context and what happened. They are most often developed by practitioners involved in an intervention, but can also be developed in collaboration with funders, third sector organisations or researchers aiming to capture practice-based knowledge.

The methods review and pilot have also led to a better understanding of what a 'good' practice-based community wellbeing case study should cover and what attributes might indicate that a case study is of good quality. See 2.2.8 for a detailed discussion of this. Several checklists have been identified that specify what should be included in a good quality practice-based case study, which we have adapted in the pilot. We have not touched on whether case studies represent good or best practice as this is a separate issue.

The pilot involved identifying and developing methods for gathering, selection and synthesis. This can be distilled into a staged approach:

(i) Identify or develop a conceptual framework that helps define, categorise and select interventions of interest. These could include projects, initiatives, services or programmes.
(ii) Identify websites and case study collections.

(iii) Search and select case studies that group round a topic or intervention approach.

(iv) Organise the case study data using a template with common fields/domains. Any new case studies can be collected using this template.

(v) Use cross case analysis with matrices to develop the analysis and synthesis. This will enable patterns in the data to be discovered at the same time as keeping the contextual information.

(vi) Develop an overarching framework that explains the data and can be adapted as more case studies are analysed.

(vii) Report themes with quotations alongside contextual information.

This staged approach evolved in our study. Much of the learning is transferable to other areas where practice-based case study synthesis would be of value. The understanding of what makes a good case study has wider applicability. Templates developed in our study, in particular the data collection template (Appendix 6), data extraction template (Appendix 7/Table 5) and quality appraisal template (Appendix 10), could be used by others wanting to gather and analyse practice-based case studies. Further work is needed on methods for quality appraisal and how that could be integrated into a review and synthesis.

Ultimately, there is an art as well as a science to this. To be of use to others, practice-based case studies need that thick description that emerges from learning by doing in a local context. Vital information on context and explanations of mechanisms that lead to success or failure are valuable for practitioners and funders when aiming to replicate a programme. Any synthesis needs to acknowledge that evidence from practice is not always neatly packaged, rather can illuminate pertinent issues in how community wellbeing is successfully built. This needs to be balanced by the benefits of identifying common themes from case studies, which may be transferable in other contexts. Ensuring case studies, where appropriate, describe learning and processes or factors that enable change is helpful along with project reach in terms of who participated and how barriers to access were overcome.

This study makes a distinct contribution to the evidence base on how community wellbeing can be built with a focus on interventions that use community hubs and green spaces. There was a strong emphasis on processes and mechanisms and some clear themes emerged around local needs, coproduction, learning, safe spaces and collaborative working. We have shown that practice-based evidence can complement the evidence of effectiveness developed by systematic reviews. This is important as community-based interventions are less likely to be formally evaluated and therefore this evidence is often 'lost'.

Our overall conclusion is that the rich accounts within practice-based case studies are an important source of evidence and synthesis can help to illuminate the key processes underpinning community activities. Most case studies in this review provided interesting stories of development, adaption and learning, which served to throw a light on community practice. Practitioner insights and community perspectives were central to those stories. Furthermore, the synthesis of this practice-based evidence made visible critical processes such as empowerment, learning and capacity building in places and spaces interventions.

8.1 Recommendations

8.1.1 Recommendations for developing practice-based case studies

- The What Works Centre for Wellbeing has a key role in promoting the value of practice-based evidence, what its strengths and limitations are, and how good quality practice-based case studies can be collected, reviewed and disseminated.
- Community-based organisations should consider using a structured template when preparing a practice-based case study. There are various templates available, and also the template that we developed with Locality, which is a pragmatic tool suitable for community-based organisations who wish to report on their work (see Appendix 6).
- Authors of practice-based case studies should consider documenting wider evidence, for example from community engagement or user experience, which may inform how a project develops in the early stages.
- Policy and research organisations that issue 'calls for practice' could use case study templates to capture practice-based learning, in addition to research and evaluation reports. This will be particularly helpful for closing the evidence gap on tackling health inequalities as grass roots community-based initiatives are less likely to be formally evaluated.
- More attention should be given to archiving and tagging collections of case studies to facilitate searching and retrieval. This would help practitioners wanting to access learning from other projects and researchers wanting to do some synthesis. Having a centralised repository of practice-based case studies on community wellbeing could be of value.
- Collecting a set of case studies on a common topic opens up opportunities for synthesis. Table 5 could be used as a template for mapping what information is reported.

8.1.2 Recommendations for the development of community wellbeing interventions

Based on the results of the pilot synthesis of 24 community hubs and green space case studies:

- Learning and adaptation is a key mechanism in the development and success of places and spaces community wellbeing interventions. Effective learning for projects can be promoted through range of mechanisms including research, community participation and partnerships that lead to an exchange of knowledge between different groups. Organisations should consider how they facilitate learning, including gathering community insights and engaging with other stakeholders.
- Creating safe spaces and offering a broad range of activities that bring people together appear to be effective ways of engaging with populations experiencing isolation and disadvantage.
- Collaborative working with local organisations and community groups develops over time yet is a key means for building sustainable action and improving community wellbeing.
- Delivering wellbeing interventions may build capacity in the community and in the organisation. It is important to document and evaluate organisational outcomes as well as individual and community outcomes.

8.1.3 Recommendations for funding bodies

- Commissioners and funders should develop grant programmes that allow for development of community wellbeing projects over time and in co-production with communities.
- It is important to recognise the value of social activities that bring people together as the foundation for developing meaningful and inclusive local change, whether delivered through community hubs or green space projects.
- Funding bodies should consider commissioning and using practice-based case studies to provide insight into the questions of 'how' and 'why' community-based projects work in specific settings.
- Policy makers and funding bodies should advocate for the use of reporting frameworks that are accessible for funders and third sector bodies and that allow stories to be captured in a systematic way with sufficient detail. There is scope for some standardisation of key fields and funders could recommend grantees to use the case study template developed for this study or similar templates.

8.1.4 Recommendations for research

- The pilot has shown that it is possible to synthesise this evidence in a systematic way. We recommend that this approach should be seen as complementary to systematic review methodologies, as part of a compendium of methods.
- There is scope for development of a conceptual framework for processing practice-based evidence on wellbeing. This would include setting out the value and limitations of this type of evidence and how it relates to research-based evidence on wellbeing.
- Our approach to cross-case analysis was pragmatic, and we recommend further consideration (and potentially testing) of alternative and existing approaches to analysis and synthesis.
- There is a need for further research to develop a quality assessment tool, considering which domains to assess, whether anything should be added to what we already have, and whether relative weighting should be applied to domains. Stakeholder groups who produce, utilise and value practice-based case studies should be involved in this process.

8.2 Next steps

There is much of value that has come out of this study. The next stage will be a series of outputs, developed in collaboration with the What Works Centre for Wellbeing, that will translate the case study synthesis process and findings to products for different audiences. These will include some practical guidance/ toolkit for those commissioning and writing practice-based wellbeing case studies and a briefing that brings together the findings from the systematic review on 'Places and Spaces' review with the findings on what works in practice derived from this synthesis. The next stage for this study would be testing the fit of the analytic framework with other community wellbeing case studies.

We hope that the methods, templates and lists of case study collections developed for this study will be used by other researchers, funders and practitioners. The learning from the study will be incorporated into the What Works Wellbeing methods guidance. There is scope for further development of methods, particularly as case studies from practice appear to be a valued but underused source of evidence. We hope that this study provides a foundation to undertake some of that development.

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Appendix 1: Literature review search strategy.

We carried out an iterative search for methodological literature about:

- How do we synthesis evidence from practice-based evidence (e.g. case studies)?
- How do we assess the quality of practice-based evidence?

The literature search consisted of two parts – citation searches and hand searching selected publications – and was enacted in April 2019. Given the difficulty of searching for methodological literature, we decided to not search electronic databases; search terms, such as "case study" and "synthesis", would have produced an unmanageably large number of results for this study.

1. Backward/forward citation search of key documents

Backward/forward citation searches were carried out on 21 'key' documents identified by the advisory group and from our own personal libraries (see below). Starting from this point was a pragmatic decision to ensure both the relevance of results and that the number of results was manageable.

'Backward searching' involved searching document reference lists/bibliographies for other relevant documents. 'Forward searching' involved using Google Scholar to search for papers that had referenced a particular document. The forward search was limited to the first 10 pages of Google Scholar results

Backward/forward citation searches were carried out at two 'levels'; on the list of key documents and on documents identified as a result of the initial search.

Backward/forward citation searches were carried out by one researcher (KS). **Key methodological documents identified by the advisory group and from personal libraries**
1. Boblin et al (2013). *Using Stake's qualitative case study approach to explore implementation of evidence-based practice*. Qualitative Health Research, 23(9), pp.1267-1275. 2. Goodrick (2014). *Comparative case studies.* Methodological Briefs Impact Evaluation No.9. Florence, UNICEF Office of Research. 3. Crowe et al (2011). *The case study approach.* BMC British Medical Research Methodology, 11(1) 4. De Leeuw et al (2015). *European Health Cities Evaluations: Conceptual Framework and Methodology.* Health Promotion International, 30(s1), pp.i8-i17. 5. Edneyamini et al (2018). *Towards developing a framework for conducting case study research.* International Journal of Qualitative Research, 17, pp.1-11. 6. HM Treasury (2011). *The Magenta Book: Guidance for Evaluation.* London: HM Treasury. 7. Mclean, J. & McNeice, V. (2012). *Assets in action: illustrating asset-based approaches for health promotion.* Glasgow: Glasgow Centre for Population Health 8. Morestin et al (2010). *Methods for synthesising knowledge about public policies*. Quebec: National Collaborating Centre for Health Public Policy. 9. Ng, E. & de Colombani, P. (2015). *Framework for selecting best practices in public health: a systematic review.* Journal of Public Health Research, 4(3), pp.577.

10. Korjonen et al (2016). *The role of case studies as evidence in public health.* London: UK Health Forum.
11. Shankardass et al (2015). *Strengthening the implementation of Health in All policies: a methodology for realist explanatory case studies.* Health Policy & Planning, 30, pp. 462-473.
12. Simos et al (2015). *The role of health impact assessment in Phase V of the Health Cities European Network*. Health Promotion International, 30(S1), pp.71-85.
13. Simpson et al (2013). *Defining principals of good practice: Using case studies to inform health systems action on health inequalities.* Evaluation & Program Planning, 36(1), pp. 191-197.
14. Puttick, R. & Ludlow, J. (2012). *Standards of evidence for impact investing.* London: NESTA.
15. UK Health Forum (2016). *How to write a case study in public health: guidelines and template*. London: UK Health Forum.
16. Yazan, B. (2015). *Three approaches to case study methods in education: Yin, Merriam, and Stake*. The Qualitative Report, 20(2), pp.134-152.
17. Public Health Wales (in press). *Case study in public health: a toolkit for practice in health improvement.* Cardiff: Public Health Wales.
18. Ambrose-Oji et al (2015). *Community based forest enterprises in Britain: two organising typologies.*
19. Public Health Wales (2015). *Seeing is believing: co-production case studies from Wales*. Cardiff: Public Health Wales
20. Public Health England (2016). *Arts for health and wellbeing: an evaluation framework*. London: Public Health England.
21. McCree et al. *Creative & Credible: Writing and reporting case studies.* Bristol: University of West of England and Willis Newson.

2. 'Hand search' of key journals

A limited selection of methodological and subject specific journals were searched. We selected journals that we thought, from experience, may contain relevant articles about practice-based case studies and/or synthesising practice-based evidence. The journals searched were:

- International Journal of Social Research Methodology
- Methodological Innovations
- International Journal of Qualitative Methods
- Community Development Journal
- Perspectives in Public Health
- Journal of Enterprising Communities

The search terms we used to search journal websites were:

- "case stud*" OR "practice based evidence" OR "practice example" OR "cross case".

Where necessary, the search was limited to the first 100 results for each journal. No date or geographical restriction was applied.

This hand searching was carried out by one researcher (KS).

3. Study screening and selection

Inclusion criteria for the literature review were:

- Methodological papers and guidance on synthesis of case studies gathered from practice-based evidence;
- Methodological papers and guidance about cross-case synthesis, including from methodological research literature (E.g. Yin 1994, Miles, Huberman et al. 2014, Yin 2017);
- No date restriction.

Screening and selection were carried out in three phases.

Firstly, in carrying out the search activities, the researcher (KS) simultaneously screened the results against the inclusion criteria based on titles and abstracts. Papers thought to satisfy the inclusion criteria were added to a 'long list'. 248 papers were included at this stage.

Secondly, titles and abstracts of long-listed papers were scrutinised by four researchers (KS, AMB, JS, CF) and discussed at a team meeting. Only papers thought to satisfy the inclusion criteria by all reviewers were included on a 'short list' of papers taken forward for data extraction. 76 papers were included at this stage.

Thirdly, during data extraction (described below), papers were excluded if they contained no relevant information to help answer the review questions. 40 papers were included in the review.

4. Data extraction

Data extraction was carried out by one researcher (KS). No data extraction template was used. Instead, notes from each paper were recorded in a table in Microsoft Word.

- Appendix 2: Scoping tool for websites and reports.

Collection name	Purpose	Link	Date reviewed	Clear how collected? Y / N	Collection method	Quality assurance undertaken? Y / N	Method of quality assurance	Standardised template? Y / N	Template domains	Reporting of unexpected outcomes / what didn't	Availability of further information?	Further synthesis? Y / N	Synthesis method

Appendix 3: Collections of case studies in websites and reports.

	Collection name	Purpose	Link
1	**Public Health England Library****	To share learning from PH practitioners experience of implementation. Embed local, regional and national descriptions of practice or services.	https://phelibrary.koha-ptfs.co.uk/practice-examples/
2	**Cambridge Institute of Public Health****	Illustrate ways in which researchers have impacted health policy at local and international levels. Aim to encourage researchers to think about knowledge exchange.	https://www.iph.cam.ac.uk/public-health-policy/case-studies/
3	**Think Local Act Personal****	Transforming health and care through personalisation and community based support.	https://www.thinklocalactpersonal.org.uk/Latest/?s=20
4	**Social Care Institute for Excellence****	SCIE co-produces, shares and supports the use of the best available knowledge and evidence about what works in practice.	https://www.scie.org.uk/atoz/?f_az_subject_thesaurus_terms_s=case+studies&st=atoz
5	**AHSN Atlas of Solutions in Healthcare****	Case studies from 15 AHSNs sharing examples of how to spread high impact innovation across health and social care.	http://atlas.ahsnnetwork.com/
6	**Everyday interactions case studies - RSPH****	Provide examples of Everyday Interactions Impact Pathways in practice.	https://www.rsph.org.uk/our-work/policy/wider-public-health-workforce/measuring-public-health-impact/case-studies.html
7	**Implementing MECC****	Examples of Making Every Contact Count implementation.	https://www.makingeverycontactcount.co.uk/implementing/case-studies/
8	**Local Government Association****	Innovative programmes councils are involved in delivering.	https://www.local.gov.uk/case-studies
9	**NICE Shared Learning Case Studies****	Showing how guidance and standards can improve local health and social care services.	https://www.nice.org.uk/about/what-we-do/into-practice/shared-learning-case-studies
10	**What Works Wellbeing****	Best available evidence and practice examples from organisations trying to improve wellbeing.	https://whatworkswellbeing.org/evidence-into-action/
11	**NHS Health Check****	Aimed at commissioners and providers.	https://www.healthcheck.nhs.uk/commissioners_and_providers/evidence/case_studies/
12	**NHS RightCare Casebooks****	Examples of commissioning innovations.	https://www.england.nhs.uk/rightcare/products/casebooks/
13	**eWIN - NHS workforce information network****	Best practice relating to workforce development, efficiency and productivity.	http://www.ewin.nhs.uk/tools_and_resources?tid_1%5B%5D=61

14	**National Alliance for Arts Health and Wellbeing****	To provide a clear, focused voice to articulate the role creativity can play in health and wellbeing.	http://www.artshealthandwellbeing.org.uk/appg/inquiry-submissions
15	**Arts and Health South West (part of NAAHW)****	To provide a clear, focused voice to articulate the role creativity can play in health and wellbeing.	https://www.ahsw.org.uk/studies.aspx
16	**Public Health Wales / Co-production Wales****	To share good practice and knowledge in the public sector in Wales.	www.goodpractice.wales/SharedFiles/Download.aspx?pageid=96&mid=187&fileid=78
17	**The National Lottery Community Fund***	A library to offer access to evidence from evaluation and learning reports from projects in the community.	https://www.tnlcommunityfund.org.uk/insights/documents
Reports			
1	**'Growing Livelihoods' (Carnegie UK, 2018) ****	Overview of projects supporting small scale growers with a focus on cooperation and innovation.	https://d1ssu070pg2v9i.cloudfront.net/pex/carnegie_uk_trust/2018/10/02160234/Growing-Livelihoods-Final-Report-s.pdf
2	**'Click and Connect' (Pennycook, 2015)****	Add to the evidence base about the types of activities that hyperlocal news providers are undertaking and their impact.	https://www.carnegieuktrust.org.uk/publications/click-and-connect-case-studies-of-innovative-hyperlocal-news-providers/
3	**Carnegie Library Lab (Carnegie UK, 2018)****	How innovative projects in library sector have got on.	https://d1ssu070pg2v9i.cloudfront.net/pex/carnegie_uk_trust/2018/01/20121234/LOW-RES-3384-CLL-Cohort-2-Snapshot.pdf
4	**Enabling the State in Practice (Murphy & Wallace, 2016)****	Shows the current state of play of the 'enabling state'.	https://www.carnegieuktrust.org.uk/publications/enabling-state-practice-evidence-innovators/
5	**Appreciating Assets (O'Leary et al, 2011)***		https://www.carnegieuktrust.org.uk/publications/appreciating-assets/
6	**Rural communities: Legacy and Change (Flora & Flora, 2013)***		
7	**Using Community Capitals to develop assets for positive**		http://srdc.msstate.edu/fop/levelthree/trainarc/socialcapital/communitycapitalstodevelopassets-emeryfeyflora2006.pdf

	community change (Flora et al, 2006)*		
8	**Identifying and defining the dimensions of community capacity to provide a basis for measurement (Goodman et al, 1998)***		https://journals.sagepub.com/doi/pdf/10.1177/109019819802500303
9	**Asset Mapping (A Handbook)***		http://rural.gc.ca/conference/documents/mapping_e.phtml
10	**The abundant community (McKnight and Block, 2012)***		http://media.hudson.org.s3.amazonaws.com/files/publications/Abundant%20Community%20transcript.pdf
11	**A guide to government empowerment of local citizens and their associations (McKnight, 2019)***		https://resources.depaul.edu/abcd-institute/about/Documents/A%20Guide%20to%20Government%20Empowerment%20%20of%20Local%20Citizens%20and%20Their%20Associations.pdf

**Resource reviewed as part of scoping exercise and searched as part of case study collection process.

* Resourced searched as part of case study collection process.

Appendix 4: Case study collection search record

Source	Search process	Hits	Number collected
Public Health England Library	Hand search	41	11
Cambridge Institute of Public Health	Hand search	15	0
Think Local Act Personal	Hand search	48	3
Social Care Institute for Excellence	Hand search	36	0
AHSN Atlas of Solutions in Healthcare	Internal search function	0	0
RSPH Everyday Interactions case studies	Hand search	4	0
Making Every Contact Count	Hand search	23	0
Local Government Association	Internal search function	495	16
NICE Shared Learning Case Studies	Hand search	700	2
What Works Wellbeing	Internal search function	135	9
NHS Health Check	Hand search	24	0
NHS RightCare Casebooks	Hand search	19	0
eWIN - NHS Workforce Information Network	Hand search	220	2
National Alliance for Arts Health and Wellbeing	Hand search	110	2
Arts and Health South West	Internal search function	111	8
Public Health Wales / Co-production Wales	Hand search	21	2

The National Lottery Community Fund	Internal search function	53	0
Growing Livelihoods Report	Hand search	10	2
Click and Connect Report	Hand search	5	0
Carnegie Library Lab	Hand search	6	2
Enabling State in Practice	Hand search	6	1
Appreciating Assets	Hand search	9	1
Rural Communities Legacy and Change	Not retrievable	0	0
Using Community Capitals to Develop Assets for Positive Community Change	Hand search	2	0
Goodman et al 1998	Hand search	0	0
Asset Mapping a Handbook	Hand search	0	0
The Abundant Community	Hand search	0	0
A Guide to Government Empowerment of Local Citizens and their Associations	Hand search	5	0
	TOTAL	**2,098**	**61**

Appendix 5: Detailed website search log

Practice-based synthesis: documentation of search process

The Public health England Library website (https://phelibrary.koha-ptfs.co.uk/practice-examples/) was searched on 12/07/2019 and 15/07/2019. The section of the website labelled 'Practice Examples' was scanned in detail using the existing categories of 'Community Centred' and 'Asset Based Approaches'. Based on the title and review of the full text of the document 11 case studies were collected.

The Cambridge Institute of Public Health website (https://www.iph.cam.ac.uk/public-health-policy/case-studies/) was searched on 15/07/2019. The section of the website labelled 'Impact in Practice' was scanned in detail. Based on the title and review of the full text of the document no relevant case studies were collected.

The Think Local Act Personal website (https://www.thinklocalactpersonal.org.uk/Latest/?s=20) was searched on 19/07/2019. The section of the website labelled 'Resource Library' was scanned in detail. Based on the title and review of the full text of the document three case studies were collected.

The Social Care Institute for Excellence website (https://www.scie.org.uk/atoz/?f_az_subject_thesaurus_terms_s=case+studies&st=atoz) was searched on 19/07/2019. The section of the website labelled 'Resources and Services' was scanned in detail. Based on the title and review of the full text of the document no case studies were collected.

The Academic Health Science Network Atlas of Solutions in healthcare website (http://atlas.ahsnnetwork.com/) was searched on 19/07/2019 initially by scanning in detail the seven themes the website presented. As these did not appear to contain case studies relevant for this project the site was also searched using the on-site search engine with single search terms: "wellbeing", "community wellbeing", and "social relations". Based on the title and review of the full text of the document no case studies were collected.

The Royal Society for Public Health website (https://www.rsph.org.uk/our-work/policy/wider-public-health-workforce/measuring-public-health-impact/case-studies.html) was searched on 19/07/2019. The section of the website labelled 'Everyday Interactions Case Studies' was scanned in detail. Based on the title and review of the supplementary text provided on the webpage no case studies were collected.

The Making Every Contact Count website (https://www.makingeverycontactcount.co.uk/implementing/case-studies/) was searched on 19/07/2019 and 24/07/2019. The section of the website labelled 'Case Studies' was scanned in detail. Based on the title and review of the full text of the document no case studies were collected.

The Local Government Association website (https://www.local.gov.uk/case-studies) was searched on 24/07/2019 using the on-site search engine with single search terms: "wellbeing", "community wellbeing", and "social relations". The first 100 hits returned (10 pages) were screened. Based on the title and review of the full text of the document 16 case studies were collected.

The National Institute for Health and Care Excellence website (https://www.nice.org.uk/about/what-we-do/into-practice/shared-learning-case-studies) was searched on 01/08/2019 initially by scanning in detail the 'Local Practice Collection' webpage. As this may have excluded case studies relevant for this project the site was also searched using the on-site search engine with single search terms:

“wellbeing”, “community wellbeing”, and “social relations”. Based on the title and review of the full text of the document two case studies were collected.

The What Works Wellbeing website (https://whatworkswellbeing.org/evidence-into-action/) was searched on 01/08/2019 and 05/08/2019 by using the on-site search engine with single search terms: “wellbeing”, “community wellbeing”, and “social relations”. Based on the title and review of the supplementary text provided on the webpage nine case studies were collected.

The NHS Health Check website (https://www.healthcheck.nhs.uk/commissioners_and_providers/evidence/case_studies/) was searched on 05/08/2019. The section of the website labelled ‘Case Studies’ was scanned in detail. Based on the title and review of the full text of the document no case studies were collected.

The NHS RightCare Casebooks website (https://www.england.nhs.uk/rightcare/products/casebooks/) was searched on 05/08/2019. The section of the website labelled ‘Casebooks’ was scanned in detail. Based on the title and review of the supplementary text provided on the webpage no case studies were collected.

The NHS eWIN Workforce Information Network website (http://www.ewin.nhs.uk/tools_and_resources?tid_1%5B%5D=61) was searched on 05/08/2019 and 15/08/2019. The section of the website labelled ‘Tools and Resources’ was scanned in detail. The first 100 hits returned (10 pages) were screened. Based on the title and review of the supplementary text provided on the webpage two case studies were collected.

The National Alliance for Arts Health and Wellbeing website (http://www.artshealthandwellbeing.org.uk/appg/inquiry-submissions) was searched on 15/08/2019. The section of the website labelled ‘2016/17 APPG Inquiry Submissions’ was scanned in detail. Based on the title and review of the full text of the document two case studies were collected.

The Arts and Health South West website (https://www.ahsw.org.uk/studies.aspx) was searched on 15/08/2019, 29/08/2019 and 10/09/2019 by using the on-site search engine with single search terms: “wellbeing”, “community wellbeing”, and “social relations”. Based on the title and review of the full text of the document eight case studies were collected.

The Public Health Wales / Co-production Wales website (www.goodpractice.wales/SharedFiles/Download.aspx?pageid=96&mid=187&fileid=78) was searched on 29/08/2019. The section of the website labelled ‘Seeing is Believing’ was scanned in detail. Based on the title and review of the full text of the document two case studies were collected.

The National Lottery Community Fund website (https://www.tnlcommunityfund.org.uk/insights/documents) was searched on 15/08/2019, 29/08/2019 and 10/09/2019 by using the on-site search engine with single search terms: “wellbeing”, “community wellbeing”, and “social relations”. Based on the title and review of the supplementary text provided on the webpage no case studies were collected.

The Growing Livelihoods report (https://d1ssu070pg2v9i.cloudfront.net/pex/carnegie_uk_trust/2018/10/02160234/Growing-Livelihoods-Final-Report-s.pdf) was downloaded and searched on 06/09/2019 and 16/09/2019. The main body of the report was scanned in detail. Based on the title and review of the full text descriptions of case studies contained within the report two case studies were collected.

The Click and Connect report (https://www.carnegieuktrust.org.uk/publications/click-and-connect-case-studies-of-innovative-hyperlocal-news-providers/) was downloaded and searched on 06/09/2019. The main body of the report was scanned in detail. Based on the title and review of the full text descriptions of case studies contained within the report no case studies were collected.

The Carnegie Library Lab report (https://d1ssu070pg2v9i.cloudfront.net/pex/carnegie_uk_trust/2018/01/20121234/LOW-RES-3384-CLL-Cohort-2-Snapshot.pdf) was downloaded and searched on 06/09/2019. The main body of the report was scanned in detail. Based on the title and review of the full text descriptions of case studies contained within the report two case studies were collected.

The Enabling State in Practice report (https://www.carnegieuktrust.org.uk/publications/enabling-state-practice-evidence-innovators/) was downloaded and searched on 06/09/2019. The main body of the report was scanned in detail. Based on the title and review of the full text descriptions of case studies contained within the report one case study was collected.

The Appreciating Assets report (https://www.carnegieuktrust.org.uk/publications/appreciating-assets/) was downloaded and searched on 12/09/2019. The main body of the report was scanned in detail. Based on the title and review of the full text descriptions of case studies contained within the report one case study was collected.

The Rural Communities: Legacy and Change book was unable to be retrieved.

The Using Community Capitals to Develop Assets for Positive Community Change report (http://srdc.msstate.edu/fop/levelthree/trainarc/socialcapital/communitycapitalstodevelopassets-emeryfeyflora2006.pdf) was downloaded and searched on 13/09/2019. The main body of the report was scanned in detail. Based on the title and review of the full text descriptions of case studies contained within the report no case studies were collected.

The Identifying and Defining the Dimensions of Community Capacity to Provide a Basis for Measurement report (https://journals.sagepub.com/doi/pdf/10.1177/109019819802500303) was unable to be retrieved via the existing link. Having searched online for the document on 13/09/2019 the main body of the report was scanned in detail. Based on the title and review of the full text descriptions of case studies contained within the report no case studies were collected.

The Asset Mapping (A Handbook) report (http://rural.gc.ca/conference/documents/mapping_e.phtml) was unable to be retrieved via the existing link. Having searched online for the document on 13/09/2019 the main body of the report was scanned in detail. Based on the title and review of the full text descriptions of case studies contained within the report no case studies were collected.

The Abundant Community report (http://media.hudson.org.s3.amazonaws.com/files/publications/Abundant%20Community%20transcript.pdf) was downloaded and searched on 13/09/2019. The main body of the report was scanned in detail. Based on the title and review of the full text descriptions of case studies contained within the report no case studies were collected.

The Guide to Government Empowerment of Local Citizens and Their Associations report (https://resources.depaul.edu/abcd-institute/about/Documents/A%20Guide%20to%20Government%20Empowerment%20%20of%20Local%20Citizens%20and%20Their%20Associations.pdf) was downloaded and searched on 13/09/2019.

The main body of the report was scanned in detail. Based on the title and review of the full text descriptions of case studies contained within the report no case studies were collected.

- Appendix 6: Locality data collection template

Case Study Template

The template is for submission to the case-study synthesis work being carried out by Leeds Beckett University, Locality, and the What Works Centre for Community Wellbeing.

Sub-questions are for guidance only and are not mandatory.

Word limits are for guidance only; please write more or less as appropriate.

1. What is the title of the project? (50 words)

2. Overview (150 words)

Can you summarise the case study in no more than 3 sentences? This may be used in a stand-alone form to describe the project and readers will be able to link to the rest of the case study.

3. Setting (150 words)

Please give a brief description of the local area where the project occurred. Please give a brief description of the organisation running the project.

4. Purpose of project (150 words)

What is the challenge/problem the project has tried to address? What are the stated aims, goals, or objectives of the project?

5. Description of the project (200 words)

Please briefly describe what the project is and/or what it does. When did the project begin and when did/will it end? What funding has the project received? Does the project rely on any other resources, such as staff from other organisations or premises owned/managed by other organisations?

6. Why was this approach taken? (100 words)

Why was the project set up this way? Did you draw on any evidence or theory-of-change when setting up the project? What other reasons did you have for implementing the project this way?

7. Who took part? (100 words)

Please indicate the number of people who took part in the project and any demographic information on participants (i.e. gender, ethnicity, age, disability)

8. How was data collected for this case study? (100 words)

Has the project been evaluated? If so, how? What data was collected and by whom (i.e. by you/your organisation, consultants, academics)?

9. Project impact and outcomes (300 words)

Has anything changed as a result of the project? What impact has the project had on participants, the wider community, and your organisation? Have you produced anything as a result of the project (i.e. reports, guidance, etc)? Were there any unexpected outcomes? Were there any negative outcomes?

10. Enablers and barriers (300 words)

What factors have supported the project and any positive outcomes? What factors prevented the project from being more successful? Examples might be amount and length of funding, staff skills, availability of volunteers, enthusiasm of participants, weather, or scheduling.

11. Key learning (100 words)

What is the most important advice you can give to others starting a similar project?

12. Next steps and sustainability (100 words)

How sustainable is the project? Could the project continue? What are the plans for the project in the future and what is needed for this to happen?

13. Further information (100 words)

Please include any titles/links to further supporting material about the project (i.e. website, evaluation report). Please include contact details of anyone who would be willing to share learning from the project with others starting similar projects.

Appendix 7: Data extraction template

Source	Title	Setting	Purpose • Problem/need • Aims /goals	Description • When • What • Who	How funded	Approach taken	Who took part: participant information	Data collection	Impact / outcomes • Reach/uptake • Individual level • Community level • Organisational level	Unintended consequences	Other project reports / publications	Enablers: supportive factors	Barriers: constraining factors	Key learning	What works	Next steps	Sustainability	Further information	Other information

- Appendix 8: Examples of analysis charts

Green & Blue Space analysis – Chart 2A

CODING 1 (fields)	Coding Framework 2	Memos
	CHART 2A. PURPOSE & APPROACH	
Setting	Natural environment Other	
Purpose: challenge/problem, aims or goals	**PROBLEM/NEED** **A1. Barriers to access the natural environment** • Disadvantaged communities and groups **A2: Area deprivation** **A3. Wellbeing inequalities** **A4: Health conditions** **AIMS/GOALS** **A5. Individual wellbeing** **A6. Empowerment**	*More than a response to need. Social justice/social value theme opening up opportunities/outcomes for groups who experience inequalities.*

	A7. Better community infrastructure/connections **A8. Access to the environment** **A9: Organisational goals/sustainability** **A10. LT societal goals** • Demand in health care • Better health • Reduced reoffending	
Description: when, what and who.	**A11. Range of activities** • Conservation/environmental improvement • Walks • Arts/crafts **A12. Learning about environment** • Skills • Schools • Taster experiences **A13. Building capacity (to deliver)** • Research capacity • Partnerships/coalitions • Training/skills development – professionals and volunteers **A14. Co-production**	*Range of activities with strong leanring and capacity building themes.* *Learning is not just about knowledge also about opening up the environment/experiences and skills sharing.*

	• LPN – transfer community asset into community ownership	
Approach taken: why this way, evidence, ToC,	APPROACH A15. **Understanding the benefits of interacting with the natural environment** • Health and wellbeing benefits • Understanding has to be built A16. **Understanding and addressing inequalities** • Wellbeing inequalities • Barriers to access nature A17. **Recognising assets in area** A18. **Participation is important**. • Work builds though gathering insights and experiences. • Co-design A17 & A18 are linked. A19. **Partnership approach needed**	*Descriptions of the approach were a mix of articulating assumptions about purposeful activities AND learning from experience which led to adaptations* *Growing understanding through leanring and participation is a cross cutting theme.* *Inequalities is also a cross cutting theme. The building of activity is done to reduce inequalities.* *Green space/natural environment is beneficial.*

How funded or other resources.	**A20. Grant funded**	
Data collection: how was project evaluated, how was data collected and by whom	**A21. Evaluation** **A22. Learning by doing**	
	CHART 2B. OUTCOMES	
Who took part: participant information	**Reach/uptake** **REACH/UPTAKE** **B23. Scale** **B24. Reaching target group**	
Outcomes: changes in participants, wider community **organisation.**	**CHART B OUTCOMES** **INDIVIDUAL** **B25. -B29 WELLEBING OUTCOMES** **B25. Increased social interactions** **B26. Increased confidence** **B27. Enjoyment** **B28. Sense of meaning/purpose** **B29. Mental health benefits** **B30. Physical health**	

	B31. Learning, knowledge and skills **B32. Employability** **B33. Transformative experience**	
	COMMUNITY **B34. Empowerment – INDIVDUAL/COMMUNITY** **B35. Increased opportunities to join in** **B36.staff and volunteers upskilled** **B37. Community groups formed**	
	ORGANISATIONAL **B38. Increased profile** **B39. Better project delivery** **B40. Increased networks** **B41. Commissions/funding** **B42. Other**	
Unintended consequences?	**B38.** **B43. Ripple effect**	
	CHART 3: LEARNING & WHAT WORKS	
Enablers: supportive factors	**ENABLERS**	

	C44. Asset based approach • Building on existing assets – social/ environmental/ cultural C45. **Strengthening social networks** • Volunteers **C46. Removing barriers to participation** • Material • cultural **C47. Partnerships – intersectoral** **C48. Learning and adapting**	
Barriers: constraining factors	**BARRIERS** **C49. Barriers to engagement** **C50. Other barriers**	
What works	**WHAT WORKS** **C44. Asset based approach** **C45. Strengthening social netwo** **C46. Removing barriers to participation** **C47. Partnerships – intersectoral**	*Drawing on assets a cross cutting theme linked to awareness of local context and needs* *Relationships key = at all levels. Increasing connections enhances experiences, understanding and builds capacity*

	C48. Learning and adapting **PLUS** **C. 51. Tailored approach – addressing need/culture** **C52. Community engagement/co-production** **C. 53. Increasing community capacity**	*Openness to learning is a cross cutting theme. Linked to adaptation and co-production in some cases.*
Key learning: advice for similar projects	**C44. Asset based approach** **C45. Strengthening social networks** **C46. Removing barriers to participation** **C47. Partnerships – intersectoral** **C48. Learning and adapting** **C51 Tailored approach – addressing need/culture** **C52. Community engagement/co-production** **C53. Increasing community capacity** **C54 Infrastructure** **C55. Commitment/skills of staff**	

Future plans/SUSTAINABILITY		

Green & Blue Space analysis – Chart 3

Coding Framework 2		
CHART 3A. PURPOSE & APPROACH		
Major thematic categories	***THEMES***	***SUB THEMES***
CHALLENGE & RESPONSE	***PROBLEM/NEED – INEQUALITIES***	A1. Barriers to access the natural environment A2: Area deprivation A3. Wellbeing inequalities A4: Health conditions
	AIMS/GOALS	A5. Individual wellbeing A6. Empowerment A7. Better community infrastructure/connections A8. Access to the environment A9: Organisational goals/sustainability A10. LT societal goals
	RANGE OF ACTIVITIES	A11. Range of activities • Conservation/environmental improvement • Walks • Arts/crafts

		A20. Grant funded
	CAPACITY TO DELIVER	A13. Building capacity (to deliver) • Research capacity • Partnerships/coalitions • Training/skills development – professionals and volunteers
BUILDING SOCIAL VALUE	**LEARNING** • *through participation and* • *developing understanding through experience (DOING) and gathering insights*	A12. Learning about environment • Skills • Schools • Taster experiences A15. Understanding the benefits of interacting with the natural environment • Health and wellbeing benefits • Understanding has to be built RESEARCH A21. Evaluation A22. Learning by doing
	TOWARDS GREATER EQUITY	A16. Understanding and addressing inequalities

		• Wellbeing inequalities • Barriers to access nature A19. Partnership approach needed
	CO-PRODUCTION	A17. Recognising assets in area A14. Co-production • LPN – transfer community asset into community ownership A18. Participation is important. • Work builds though gathering insights and experiences. • Co-design *A17 & A18 are linked.*
CHART 3B. OUTCOMES		
Major thematic categories	***THEMES***	***SUB THEMES***
OUTCOMES – FOR WHOM?	**REACH/UPTAKE**	B23. Scale B24. Reaching target group
	INDIVIDUAL	***B25. -B29 WELLBEING OUTCOMES*** B25. Increased social interactions B26. Increased confidence B27. Enjoyment B28. Sense of meaning/purpose

		B29. Mental health benefits B30. Physical health B31. Learning, knowledge and skills B32. Employability B33. Transformative experience
	COMMUNITY	B34. Empowerment – INDIVIDUAL/COMMUNITY B35. Increased opportunities to join in B36.staff and volunteers upskilled B37. Community groups formed B43. Ripple effect
	ORGANISATIONAL	B38. Increased profile B39. Better project delivery B40. Increased networks B41. Commissions/funding B42. Other
CHART 3: LEARNING & WHAT WORKS		
Major thematic categories	***THEMES***	***SUB THEMES***
WHAT WORKS – WHAT SUPPORTS	**BUILDING CONNECTIONS** • **IMPROVED KNOWLEDGE/LEARNING** • **INCREASED CAPACITY**	C44. Asset based approach - *Building on existing assets – social/ environmental/ cultural* C45. Strengthening social networks

	• **STRONGER NETWORKS**	• Volunteers C47. Partnerships – intersectoral C48. Learning and adapting
	RECOGNISING ASSETS & ADDRESSING BARRIERS IN CONTEXT	C46. Removing barriers to participation C49. Barriers to engagement C50. Other barriers C51. Tailored approach – addressing need/culture
	CAPACITY TO DELIVER	C54 Infrastructure C55. Commitment/skills of staff C53. Increasing community capacity
	LEARNING & ADAPTATION	C48. Learning and adapting C51. Tailored approach – addressing need/culture C52. Community engagement/co-production C53. Increasing community capacity

Appendix 9: Case studies summary tables

Community Hubs

Main characteristics of community hubs case studies included in analysis.

Title	Origin	Setting	Who working with / population	Summary of project	Summary of goals	Main activities	Funding	Data collection
Age Well - Hwyliog Môn- A Youth Club for the Over 50s.	Public Health Wales / Co-production Wales.	Community.	Over 50s in deprived communities.	A social enterprise was set up to continue delivery of a former service and provide user-led activities in deprived communities. Individual, community and organisational outcomes were reported.	To provide local facilities and user-led activities to improve health and wellbeing and reduce social isolation and loneliness.	Social enterprise created to run two centres. Social and educational activities. One to one support. Provision of information. Volunteering opportunities.	Social enterprise.	Local evaluation.

Auntie Pam's.	Public Health England Library.	Community setting.	Pregnant women and new mums.	A successful pilot led to provision of a service aimed at providing peer support to tackle the social and economic problems facing pregnant women and new mums. Individual and organisational outcomes were reported.	To provide support for pregnancy and parenting and increase access to services.	One to one support and signposting. 'Whole life' approach. Equipment store. Training and skills development. Volunteer opportunities.	Local authority service.	Pilot completed. Service user feedback. Qualitative data collection.
Blackburn with Darwen Integrated Wellbeing Service.	NICE Shared Learning Case Studies.	Not reported.	Whole population.	Holistic approach to health and wellbeing using partnership working adopted to address wider determinants of health through a wellbeing hub. Individual,	To create a single point of access to support people wishing to make lifestyle changes and to address the wider	Practical advice, support and signposting. Targeted approach with priority groups.	Public sector service.	Monitoring data.

				community and organisational outcomes reported.	determinants of health.	Partnership working across public and third sectors.		
Community Connectors Project.	Locality.	Community setting.	All age groups.	Social isolation and inappropriate use of services were addressed through the use of existing community assets or development of new groups and activities. Individual, community and organisational outcomes were reported.	To reduce inappropriate referrals to adult social care and address low level mental health needs arising from isolation and loneliness.	Groups and activities. One to one support. Development of community groups. Provision of knowledge, skills and resources. Community forum.	Grant funded.	Monitoring data. External evaluation.

Cook2Learn.	Carnegie Library Lab report.	Community setting - libraries	Not reported.	Cookery workshops were established in libraries to widen access and increase knowledge. Individual, community and organisational outcomes were reported.	To develop nutritional knowledge and cooking skills and promote libraries as community spaces.	Cooking skills workshops. Resources to support learning. Publicity and communications activity.	Not reported.	Monitoring data.
Durham County Council: Macrae House - Transformative Change Through Asset Transfer.	Enabling State in Practice report.	Community setting.	Local groups.	Asset transfer of community building enabled a range of groups to deliver projects to address community needs. Individual, community and organisational outcomes were reported.	To enable community to take control of valued services and community assets.	Business plan developed. Health and wellbeing project for 'hard to reach' men. Activities for women to increase confidence and skills.	Not reported.	Not reported.

						Social and fitness activities.		
Happy Crafters Miners Court Residents Association.	Arts and Health South West.	Community setting – residential housing scheme.	Vulnerable adults with range of physical and mental health conditions.	Arts and crafts activities were provided to improve social and mental wellbeing. Individual, community and organisational outcomes were reported.	To provide meaningful activity to improve mental health, connection with the community and raise self esteem.	Range of arts and crafts activities on individual or group basis. Inclusive approach with activities adapted where necessary. Volunteer opportunities.	Grant funded.	Participant feedback and survey of beneficiaries.
Harkton Hub	Locality	Community setting – urban	Adults	Social prescribing scheme delivered through three community anchors with a	Support people who are socially isolated to engage in social activities or	Social prescribing scheme – work with individuals to identify needs and plan activities and	Grant funded	External evaluation.

				community-wide approach	access health services. Aim to reduce loneliness and social isolation, reduce health inequalities, reduce demand on health services, improve community resilience.	sources of support. Develop new community groups and activities through start-up funding.		Quantitative Monitoring data. Qualitative case studies.
Skelmersdale International (Welcoming and Valuing New Arrivals).	Public Health England Library.	Community setting.	Asylum seekers.	Asset-based approach used to connect new arrivals to the community to help with settlement and build social cohesion. Individual, community and organisational outcomes reported.	To improve social cohesion by building connections between new arrivals and the community.	Activities, resources and signposting. Volunteer opportunities.	Not reported.	Monitoring data.

Southbourne Creative Hub.	Arts and Health South West.	Community and faith setting.	People receiving adult social care with mental health needs or learning disabilities.	Arts and creative activities were provided in response to local needs and provide intergenerational events. Individual, community and organisational outcomes were reported.	Provide accessible creative activities and intergenerational events to improve physical and mental health. Increase understanding of the value of arts for health and wellbeing.	Identified needs of the community. Creative and social activities in a supportive environment. Mental health project. Intergenerational activities. Links built with local businesses.	Community Interest Company with grant funding.	External evaluation.
Staying Well Hebden Bridge.	Locality.	Urban and rural setting.	Whole population.	Support for all vulnerable adults to improve health and wellbeing and connect local community	To reduce loneliness and social isolation and increase community capacity and	Social prescribing service. Building connections between	Grant funded.	Monitoring data. External evaluation.

				organisations together to increase capacity. Community and organisational outcomes were reported.	cross-sector working.	organisations providing services.		
Studio Upstairs.	Arts & Health South West.	Therapeutic community setting.	People with mental health problems.	Art therapy methods used to engage people with mental health problems. Individual and organisational outcomes reported.	To prevent social isolation and improve wellbeing. Also aims to challenge stigma and enable people to live independently.	Art based activities. Education. Therapeutic support.	Grant funded and income generation.	Monitoring data – quantitative and qualitative. External evaluation.
The Hop50+ Community Space and Cafe.	Public Health England Library.	Community setting – outreach work.	Vulnerable and socially isolated over 50s with a range of physical and mental health issues.	Flexible and user led service provided for isolated and vulnerable older people. Individual and community	To provide support, activities and groups for people at risk of loneliness and reduce social isolation, improve health	Exercise groups. Arts and crafts groups. Minibus trips.	Grant funded.	Qualitative and quantitative data collected through feedback, focus groups and surveys.

				outcomes were reported.	and maintain independence.	Befriending. Information and signposting.		
The Hub @ Castlepoint.	Public Health England Library.	Community setting - deprived community.	Deprived community.	Asset-based approach used to respond to community need to bring people together. Individual, community and organisational outcomes reported.	To provide a point of connection for accessing help at a point of need.	Practical one to one support for people in need. Volunteer run classes and groups.	Grant funded.	Evaluation and monitoring data.
Time Union at Coventry City Council's Award Winning Pod.	Public Health England Library.	Community setting – city wide.	Whole community and those with lived experience of mental health services.	Time bank established to build community capacity and support mental health recovery. Individual, community and	To reduce stigma around mental health problems, improve resilience and recovery, improve social brokerage and	Social brokerage – exchange of skills, knowledge and experience across the city.	Local authority service with income generation.	Feedback from service users.

				organisational outcomes were reported.	community connections.	Development of a micro-economy and social value. Community building.		
WAST Manchester (Women Asylum Seekers Together).	Public Health England Library.	Community setting – city centre.	Asylum seekers.	User-led service to educate and empower asylum seeking women through peer support and skill sharing. Individual, community and organisational outcomes were reported.	To provide emotional and social support through the sharing of knowledge, experience and skills. To raise awareness and give marginalised women a voice.	Women-only safe space. Peer-led support groups and skill sharing. Drop-ins and food bank. Educational, lobbying and campaigning activities.	Grant funded charity.	External evaluation. Qualitative and quantitative data collection.

Wealden District Council.	Local Government Association.	Community setting.	Not reported.	A reduction in loneliness was prioritised to reduce the risks to physical and mental health through activities to bring people together. Individual, community and organisational outcomes reported,	To improve mental and physical health and reduce loneliness.	Activities and events. Establishing a network of forums. Training and skills development. Social prescribing pilot.	Local authority service.	Not reported.

Summary of main outcomes of community hubs case studies included in analysis.

Title	Individual outcomes	Community outcomes	Organisational outcomes	Unintended outcomes	Numbers reached

Age Well - Hwyliog Môn- A Youth Club for the Over 50s.	Improved health and wellbeing. Access to information. Sense of empowerment.	Strengthened social networks and increased participation. Purposeful activities. Learning and leisure opportunities.	Received 2013 Care Council Social Accolade Award.	Not reported.	Not reported.
Auntie Pam's.	Skill development.	Not reported.	Local Government Chronicle community involvement award.	Development of skills programme.	Contact with around 1,000 pregnant women and new mums over 6 years.
Blackburn with Darwen Integrated Wellbeing Service.	Improvements in physical and mental health and wellbeing.	Building on existing skills and resources.	Consistent processes for delivery and referral. Single point of access. Efficient use of resources.	Service included in CCG Health and Wellbeing strategy.	5,242 contacts with the hub. Around 2,000 one to one interventions.

Community Connectors Project.	Improved mental wellbeing. Increased confidence. Increased knowledge and skills. Volunteering.	Support and funding of community groups. Use of community assets. Provision of activities and volunteering opportunities.	Partnership working. Network building. Staff development.	Community Connectors embedded in Adult Social Care team.	580 referrals.
Cook2Learn.	Increased knowledge and skills. Increased confidence.	Creation of new volunteer roles.	Partnership working. Development of resources.	Increased profile of project lead.	40 participants at 8 workshops.
Durham County Council: Macrae House - Transformative Change Through Asset Transfer.	Reduction in isolation. Improvements in skills, confidence and employability.	Reaching previously 'hard to reach' men. Community enabled to find solutions for local needs.	Partnership working.	Development of asset transfer programme.	150 people per week.

Happy Crafters Miners Court Residents Association.	Increased levels of social interaction. Improved health and wellbeing.	Pastoral care of others. Improved mood across the housing scheme.	Development of administration and evaluation skills. Collaboration with other artists.	Greater than expected uptake by men.	140 vulnerable adults.
Harkton Hub	Reduction of social isolation. Improved health-related quality of life. Referral onto other appropriate services. Increased volunteering.	Micro-commissioning effective for establishing new social and support activities. Inclusion of participants from deprived communities.	Improved relationships and partnerships between public and 'third' sectors. Improved relationships between hub(s) and community provision.	Not reported	1,686 referral made
Skelmersdale International (Welcoming and Valuing New Arrivals).	Needs of new arrivals met. Reduction in isolation.	Formation of new groups.	Formation of rural committee.	Formation of new formal and informal groups.	12 individual asylum seekers.

	Improved English language skills	Opportunities for volunteering.			‘A couple’ of asylum seeking families.
Southbourne Creative Hub.	Improved independence and confidence. Skill development. Volunteering.	Inclusive events. Wider understanding of the value of arts and group activities.	Income generation.	Project replication. Appreciation of social enterprise model. Research into arts and wellbeing.	150 people attending activities and events.
Staying Well Hebden Bridge.	Not reported.	Connections between existing organisations improved.	Micro-commissioning of projects across district. Alignment of organisation with national priorities.	Not reported.	
Studio Upstairs.	Improved health and wellbeing.	Not reported.	Additional funding awarded.	Not reported.	45 members took part in exhibitions.

	Increased confidence and independence.				
The Hop50+ Community Space and Cafe.	Building social connections. Sense of ownership. Support through times of transition.	Formation of new groups. Signposting to other community resources.	Not reported.	Social connections in wider community improved.	>1000 customers in last 6 months. 50 volunteers.
The Hub @ Castlepoint.	Reduced isolation. Increased self esteem and confidence. Improved health and wellbeing. Skills development.	Opportunities to volunteer.	Organisational evolution and growth.	Not reported.	700 people engaged with activities. 50 volunteers.

	Volunteering.				
Time Union at Coventry City Council's Award Winning Pod.	Use of existing skills. Development of new interests.	Micro-economy - exchanging skills and time.	Increased awareness of The Pod. Improved customer service. Generating income.	Not reported.	125 members (around 20% with lived experience of mental health services).
WAST Manchester (Women Asylum Seekers Together).	Reductions in stress and anxiety. Skill development. Domestic abuse and FGM survivors supported.	Opportunities to socialise. Food bank.	Building networks.	Other organisations adopting peer-support model.	200 members. 70 women per week attending drop-in.
Wealden District Council.	Development of new skills.	Development of local forum and networks.	Investment in 375 projects and 43 service level agreements to	Not reported.	350 residents participated in Street learning courses.

	Reduction in social isolation.	Provision of activities. Volunteering opportunities. Dementia friendly film screenings.	provide services to community.		200 people participated in social prescribing project.

o Green and blue spaces

Main characteristics of green and blue spaces case studies included in analysis.

Title	Origin	Setting	Who working with / population	Summary of project	Summary of goals	Main activities	Funding	Data collection
Bitesize Case Study: Nature4Health.	eWIN - NHS Workforce Information Network.	Natural environment.	Not reported.	Assets available in the natural environment were used to design a range of products to address local health needs. Individual, community and organisational outcomes were reported.	To improve community health through a range of coordinated and collaborative projects using assets in the natural environment.	Health walks. Horticultural therapy. Mindful contact with nature. Forest School activities. Practical conservation. Centre of research excellence.	Grant funded with additional support from Public Health.	External impact evaluation using action research. 2 PhD students examining elements of project.

Llyn Parc Mawr Community Woodland Group.	Public Health Wales / Co-Production Wales.	Deprived community setting.	Not reported.	A community woodland group was established to improve community wellbeing. Individual, community and organisational outcomes were reported.	To improve community wellbeing through a community woodland group and empowering people to improve their quality of life.	Identified needs of community. Developed knowledge and awareness of natural resources. Formed a constituted group. Took responsibility for the maintenance of an area of woodland.	Grant funded.	Not reported.

Come Outside! Welsh Natural Resources Improve Wellbeing.	What Works Wellbeing.	Community setting.	Not reported.	Activities were provided in the natural environment to encourage people from deprived areas to participate. Individual and community outcomes were reported.	To support people from deprived areas to use the natural environment and improve their overall wellbeing.	Identified areas with greatest need. Awareness raising to establish cross sector partnerships and links with community groups. Provided outdoor activities to remove barriers to participation.	Grant funded.	Two pilot programmes in South Wales.
GOOP - Greener on the Outside of Prison.	What Works Wellbeing.	Prison setting.	Not reported.	Horticulture and other activities were used to improve the wellbeing of prisoners.	To enhance the wellbeing being of offenders and reduce reoffending.	Provided horticultural and other land-based activities.	Grant funded.	Unclear – though evaluated as part of a wider portfolio.

				Individual and organisational outcomes were reported.				
Urban Forests.	What Works Wellbeing.	Woodland setting.	Men with early stage dementia.	A programme co-designed with men with early stage dementia provided opportunities to connect with nature and improve wellbeing. Individual outcomes were reported.	To support the wellbeing of people with early stage dementia through forestry activity.	Undertook an action research project. Developed forest based activities.	Grant funded.	Participatory action research.
mindSCAPE.	Arts and Health South West.	Woodland setting.	Older people with dementia, carers, artists, volunteers and voluntary	Forestry activities and training were provided to improve the physical and	To improve physical and mental wellbeing of people living with	Provided training for professionals and carers.	Grant funded.	External evaluation at year one.

			and statutory sector providers.	mental wellbeing of older people living with dementia and their carers. Individual, community and organisational outcomes were reported.	dementia and their carers through access to the natural environment.	Provided a series of workshops. Developed capacity and skills across different groups.		Regular participant feedback collected.
Sheffield Environmental Movement.	What Works Wellbeing.	Urban setting.	Middle aged African and African Caribbean men, women and young people.	Activities, information and support were provided to the BAMER community to improve access to the natural environment. Individual, community and	To improve equality in access to the natural environment and wellbeing for the BAMER community.	Provided information, activities and support. Provided taster activities in local areas of interest to increase engagement.	Organisation has charitable status.	Action research collecting quantitative and qualitative data.

				organisational outcomes were reported.		Used existing infrastructure. Worked with schools, colleges and youth centres.		

Summary of main outcomes of green and blue spaces case studies included in analysis.

Title	Individual outcomes	Community outcomes	Organisational outcomes	Unintended outcomes	Numbers reached
Bitesize Case Study: Nature4Health.	Developed skills and gaining experience.	Increased opportunities for volunteering. Increased opportunities for social interaction.	Developed infrastructure. Improved project delivery. Improved natural products.	Natural products developed through project generated national interest.	Not reported.
Llyn Parc Mawr Community Woodland Group.	Developed knowledge and skills.	Established new woodland group. Improved communication between community and statutory bodies.	Extended partnership working and networks. Fund raising.	Not reported.	200 people attended awareness day. 50 people attended Fungi Foray. 300hrs of volunteering given.
Come Outside! Welsh Natural Resources Improve Wellbeing.	Provided training opportunities for re-	Some groups progressed towards	Not reported.	Not reported.	70 groups enabled 1,600 people to access activities.

	entering work and education. Increased interest in natural environment. Increased physical activity, confidence and motivation.	becoming self-sustaining.			
GOOP - Greener on the Outside of Prison.	Improved mental wellbeing. Improved behaviour in prison. Increased uptake of healthier lifestyle choices. Increased employability.	Not reported.	Improved prison environment. Improved prisoner behaviour. Provided sustainable cost effective service.	Not reported.	Not reported

Urban Forests.	Improved mental wellbeing. Increased sense of empowerment and meaning. Increased opportunities for social interaction. More opportunities to connect with nature.	Not reported.	Not reported.	Not reported.	Not reported
mindSCAPE.	Improved mental wellbeing. Improved physical wellbeing.	Increased opportunities for volunteering and skill development. Development of a supportive group.	Contribution to the district wide aim of becoming 'dementia friendly'. Raised profile of the organisation.	Participants reported carrying on mindSCAPE activities at home. Wider audience became aware of the impact of creative	28 participants living with dementia. 29 carers, artists and volunteers attended training.

	Increased sense of empowerment. Reduced isolation for people living with dementia and carers. Artists and volunteers developed new skills.	Team of 'Dementia Champions' created.		activities in the natural environment.	4 volunteers attended first aid training.
Sheffield Environmental Movement.	New experiences for those taking part in taster activities. Increased opportunities for social interaction. Improved sense of wellbeing.	Identification of additional opportunities to take part in activities. Walking group established. Widened access to natural environment.	Improved partnership working. Development of organisation influenced by data and feedback.	Film and play produced about the walking group.	Not reported.

Appendix 10: Quality appraisal template

Name of case study:

Type of intervention:

1. Integrity					
	Yes	No	Can't tell	N/A	Comment
a. Is it clear why this case study was written?					
b. Is the research method clearly described?					
c. Is the writing accurate, balanced and objective?					
d. Is the evidence base used? (Published papers & work of relevance.)					
e. Is there attribution of authorship and contributions?					

2. Completeness					
	Yes	No	Can't tell	N/A	Comment
f. Is the setting (i.e. organisation or sector) clearly described?					
g. Is the population / community (i.e. socio-economic factors) clearly described?					

h. Is the geography or locality clearly defined (i.e. urban/rural)?					
i. Is the intervention clearly described?					
j. Are the aims / objectives of the intervention clear?					
k. Are the outcomes of the intervention clear?					
l. Are all results published regardless of outcome?					

3. Transparency					
	Yes	No	Can't tell	N/A	Comment
m. Are the funding sources and sponsors described?					
n. Are any potential conflicts of interest disclosed?					
o. Are the data collected made accessible? (e.g. link to empirical data)					
p. Is there discussion of any limitations of the intervention?					
q. Is there discussion of any limitations of the evaluation / research?					

4. **Responsibility**					
	Yes	No	Can't tell	N/A	Comment
r. Are the dates of when the project took place provided?					
s. Is there a clear statement that peer-review or evaluation of the case study has been undertaken?					

5. **Format**					
	Yes	No	Can't tell	N/A	Comment
t. Is the content in a suitable format for other practitioners? (e.g. jargon free, could guide practice of others)					
u. Is there a clear structure?					

6. **Key learning/recommendations**					
	Yes	No	Can't tell	N/A	Comment
v. Does the case study report key learning and/or make recommendations based on learning?					

Appendix 11: Quality appraisal matrix

Name	Source	Intervention type	Integrity					Completeness							Transparency					Responsibility		Format		Key Learning
			Is it clear why this case study was written?	Is the research method clearly described?	Is the writing accurate, balanced and objective?	Is the evidence base used?	Is there attribution of authorship and contributions?	Is the setting (i.e. organisation or sector) clearly described?	Is the population / community (i.e.socio-economic factors) clearly described?	Is the geography or locality clearly defined (i.e. urban/rural)?	Is the intervention clearly described?	Are the aims / objectives of the intervention clear?	Are the outcomes of the intervention clear?	Are all results published regardless of outcome?	Are the funding sources and sponsors described?	Are any potential conflicts of interest disclosed?	Are the data collected made accessible? (e.g. link to empirical data)	Is there discussion of any limitations of the intervention?	Is there discussion of any limitations of the evaluation / research?	Are the dates of when the project took place provided?	Is there a clear statement that peer-review or evaluation of the case study has been undertaken?	Is the content in a suitable format for other practitioners?	Is there a clear structure?	Does the case study report key learning / make recommendations?
Age Well - Hwyliog Môn- A youth club for the over 50s	Public Health Wales / Co-production Wales - website	Community Hub			✓	✓		✓	✓	✓	✓	✓	✓		✓			✓				✓	✓	✓
Auntie Pam's	Public Health England Library - website	Community Hub			✓		✓	✓	✓		✓		✓		✓							✓	✓	✓
Blackburn with Darwen Integrated Wellbeing Service	NICE Shared learning Case Studies - website	Community Hub			✓	✓		✓			✓	✓	✓		✓	✓				✓		✓	✓	✓
Cook2Learn	Carneigie Library Lab - report	Community Hub			✓		✓	✓			✓	✓	✓					✓		✓			✓	✓
Durham County Council: Macrae House - transformative change through asset transfer	Enabling State in Practice - report	Community Hub			✓			✓			✓	✓	✓							✓				
Happy Crafters Miners Court Residents Association	Arts and Health South West - website	Community Hub					✓	✓		✓		✓	✓		✓			✓		✓			✓	✓
Skelmersdale International (Welcoming and valuing new arrivals)	Public Health England Library - website	Community Hub			✓	✓				✓	✓	✓	✓							✓			✓	✓
Southbourne Creative Hub	Arts and Health South West - website	Community Hub			✓			✓			✓	✓	✓		✓	✓				✓		✓	✓	✓
Studio Upstairs	Arts and Health South West - website	Community Hub			✓			✓		✓	✓	✓	✓		✓			✓		✓		✓	✓	✓
The Hop50+ Community Space and Cafe	Public Health England Library - website	Community Hub			✓			✓		✓	✓	✓	✓		✓			✓	✓	✓		✓	✓	✓
The Hub @ Castlepoint	Public Health England Library - website	Community Hub			✓		✓	✓	✓	✓	✓	✓	✓		✓			✓	✓	✓		✓	✓	✓
Time Union at Coventry City Council's award winning Pod.	Public Health England Library - website	Community Hub			✓		✓	✓		✓	✓	✓	✓		✓					✓		✓	✓	✓
WAST Manchester (Women Asylum Seekers Together)	Public Health England Library - website	Community Hub			✓		✓	✓	✓	✓	✓	✓	✓									✓	✓	✓
Wealden District Council	Local Governement Association - website	Community Hub	✓		✓			✓		✓	✓	✓	✓		✓			✓				✓	✓	✓
Come outside! Welsh natural resources improve wellbeing	What Works Wellbeing - website	Green & Blue Spaces				✓					✓				✓					✓				
GOOP	Public Health England Library - website	Green & Blue Spaces			✓			✓	✓		✓											✓		
Llyn Parc Mawr Community Woodland Group.	Public Health Wales / Co-production Wales - website	Green & Blue Spaces			✓			✓	✓		✓		✓									✓	✓	✓
mindSCAPE	Arts and Health South West - website	Green & Blue Spaces		✓	✓			✓	✓		✓	✓	✓		✓					✓		✓		✓
Nature4Health	eWIN - NHS Workforce Information Network - website	Green & Blue Spaces	✓		✓		✓			✓	✓	✓	✓									✓	✓	✓
Sheffield	What Works Wellbeing - website	Green & Blue Spaces	✓	✓		✓			✓	✓	✓		✓					✓				✓		✓
Urban Forests	What Works Wellbeing - website	Green & Blue Spaces	✓	✓					✓	✓	✓	✓	✓		✓							✓		
	Proportion of case studies assessed as present		19%	14%	81%	19%	38%	76%	43%	57%	95%	76%	90%	0	62%	10%	0	38%	10%	57%	0	76%	71%	81%

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Appendix 14: Case study synthesis and systematic review comparison table.

We carried out a traditional systematic review of research evidence to boost social relations through improvements in community infrastructure. Then, as part of a separate methodological study, we completed a pilot synthesis of practice-based case study evidence about two types of intervention: community hubs and green & blue space. We compared the two sets of results to see where there are synergies, where case-study evidence addresses gaps in the systematic review findings, and if there are any contradiction. Table 1 shows the results for all improvements in community infrastructure interventions, Table 2 shows a comparison for just 'Community hub' interventions, and Table 3 shows a comparison for just 'Green & Blue spaces'.

Table i: All improvements in community infrastructure interventions.

Intervention type	**Systematic Review (SR) Findings**	**Case-study synthesis findings**	**Synergies between SR and case-study findings?**	**SR Evidence gaps**	**Do case-study findings address gaps in SR findings?**
All	Moderate evidence that a range of intervention approaches to community infrastructure can be used to boost social relations and wellbeing in a community. Common themes around implementation and delivery identified, incl.	Evidence that a range of community hub and green & blue space interventions can be used to boost social relations and wellbeing in a community. Strong emphasis on processes and mechanisms and some clear themes around local needs, coproduction, learning, safe spaces and collaborative working.	Evidence that a range of intervention approaches to community infrastructure can boost social relations and community wellbeing. Evidence of range of individual, community, and organisational outcomes.	Not possible to determine any association between setting and type of intervention, population, outcomes measured and effect size. *Health inequalities* – lack of research on community infrastructure and social relations or wellbeing in stigmatised groups. Lack of detail about interventions;	**Yes**: Health inequalities a significant theme across case studies; case studies described high levels of social, economic, cultural, and health inequalities in which projects/programmes developed. Case studies provided greater detail about interventions.

	- Accessibility - Friendly, safe environments - Community involvement - Skilled facilitators - Flexibility - Providing a focal point - Inclusivity - Consistency - Long-term outlook - Utilising volunteers - Reflecting local culture.		Evidence of key mechanisms.	implementation and delivery (how, by whom, setting finer details about what) . Not possible to identify differences between interventions designed by agencies and that that developed informally. Not possible to describe effectiveness of regeneration, high street renewal, or new housing development schemes. Descriptive analysis within individual studies lacks interpretive power to produce explanation. Most individual quantitative studies did not have a comparator group, limiting	Case study provided greater detail about the inception and evolution of projects in response to community context/setting. Case studies commonly described the significance of offering an informal, open spaces in addition to a range of more structured activities. Case studies commonly described how projects developed and by whom; co-production consistently reported as an important factor to success. ***No***: No findings re. effectiveness of regeneration, high street renewal, or housing development schemes.

				conclusions re. attribution of causation. Validity assessment limited due to insufficient methodological details in individual studies.	Mostly qualitative evidence; no comparator groups, no validated measures. Very limited methodological details .

- Table ii: Comparison of community hub interventions.

Intervention type	**SR Findings**	**Case-study synthesis findings**	**Synergies between SR and case-study findings?**	**SR Evidence gaps**	**Do case-study findings address gaps in SR findings?**
Community hubs (CH)	Promote social cohesion through the mixing of different social or age or generational groups. Increase social capital and build trust between people in communities.	CHs developed in response to local need; common aim to increase individual wellbeing. Multiple activities developed, organised/ delivered by range of stakeholders.	Individual-level outcomes. Community-level outcomes. When interventions took place.	Only 5/11 studies about a population common to the UK. Costs associated with intervention not reported in 10/11 studies; only 6 report funding source(s).	***Yes***: Entirely UK based evidence. Further evidence about: - Contextual factors (incl. setting, aim of intervention, description of intervention, who was involved, participants, approach taken)

	Wider social networks and interaction between community members. Increase community members' sense of pride in their local area. Changes to community hubs may increase civic participation. Increase individual's knowledge or skills.	Variety of learning techniques used to develop and sustain projects. Individual outcomes: ● Learning and skills development ● Opportunities for social interaction ● Mental and physical health benefits. Community outcomes: ● Opportunities to join in ● Community empowerment ● Upskilling of staff and volunteers ● New community groups forming. Organisational level outcomes:	Who initiated intervention.	Key contextual factors related to intervention not reported in 9/11 studies. Intervention initiation not reported in 4/11 studies.	- Intervention mechanisms (incl. enabling factors, barriers, key learning, and 'what works') - 'reach' of interventions - Organisational outcomes. Greater information about costs and funding. Some information about next steps. ***No***: Only limited evidence about sustainability

		● Networking and partnership ● Organisational profiles ● Commissions/funding. Unforeseen outcomes: ●Pastoral care in the community, ●Skills training programmes, ●'Peer-led' becoming widely appreciated ●Asset-transfer programme developed. Key mechanisms identified (i.e. building connections, creating spaces for interaction, secure funding, utilising volunteers, co-production, staff skills and attributes, responding to community need).			

- Table iii: Comparison of green and blue spaces interventions.

Intervention type	**SR Findings**	**Case-study synthesis findings**	**Synergies between SR and case-study findings?**	**SR Evidence gaps**	**Do case-study findings address gaps in SR findings?**
Green & Blue spaces (G&B)	Opportunity to participate in activities or meetings can improve social interactions. Increase community cohesion by encouraging mixing of different cultural and socioeconomic groups. Increased social networks, social interactions and bonding and bridging social capital. Improved family wellbeing by providing	Multiple and layered interventions developed in response to local need, particularly around wellbeing inequalities. Broad aims to improve wellbeing, empower, and reduce inequalities. Prominent learning processes to gather insights to improve interventions. Individual level outcomes: ● Increased social interactions and confidence, gaining employment and a sense of purpose, and	Individual-level outcomes. Community- level outcomes. When interventions took place. Who initiated intervention.	Financial costs not described in 13/14 studies - Half reported funding source(s). Contextual factors not described in 9/14 studies. 10/14 studies about a setting common to the UK and 10/14 about a population common to the UK. 10 /14 studies reported who initiated the intervention.	***Yes:*** Evidence about: - Contextual factors (incl. problem/need to be addressed, aim of intervention, description of intervention, approach taken, participants, who delivered intervention, setting) - Intervention/project costs - Mechanisms (incl. enabling factors). No: Limited description of 'reach' of interventions. No information about sustainability of interventions

	something for families to do together. Improvements to G&B may result in: ● Increased civic activity ● Positive behavioural change, encouraging physical activity and healthy eating. May lead to improved individual mental wellbeing. Changes to G&B may positively affect community members' skills and knowledge.	other mental health benefits. ● Gaining new knowledge and skills ● A transformative change in some people's lives. Community level outcomes: ● Opportunities for social activities and volunteering, ● Increased community capacity ● Empowerment via participant-led activities. Organisational level outcomes: ● Strengthened organisational capacity ● Strengthened or new partnerships			mechanisms not always comprehensive (i.e. barriers, key learning).

		● Increased influence or organisational profile. Key mechanisms identified (i.e. building connections and partnerships, asset-based approaches, adapting to local need, community participation and co-production).			