The cost of disconnected communities

Report for The Big Lunch

January 2017

Authorship and acknowledgements

This report has been produced by Cebr, an independent economics and business research consultancy established in 1992. The views expressed herein are those of the authors only and are based upon independent research by them.

The report does not necessarily reflect the views of the Eden Project or The Big Lunch.

London, January 2017

Contents

Executive Summary

This is the summary of a report by the Centre for Economics and Business Research (Cebr) that considers the cost to society of disconnected communities. We consider The Big Lunch specifically and community activities and initiatives more broadly, with a view to providing a better understanding of how better connected communities can impact the lives of the people who live there. We consider value from a number of perspectives, including the implicit value of sharing between neighbours, the value of tackling isolation and social exclusion and the value of reducing the demands on public services. We also consider the potential net economic gains through productivity benefits that can flow to employers of happier, healthier workforces.

Purpose and objectives of the research

The Eden Project is an educational charity with the objective of connecting people with each other and with the living world with a view to exploring how we can work together towards a better future. It pursues this objective through its visitor destination in Cornwall and its transformational projects and learning programmes. These are aimed at helping people to build confidence and skills and to connect with other people and with nature to explore what a better future might look like.

One of the Eden Project's most significant and best known initiatives is the Big Lunch Programme. This programme, funded by the Big Lottery Fund, is aimed at improving the happiness and wellbeing of the nation by building more resilient and better connected communities. The Big Lunch itself, the UK's annual get together for neighbours, aims to bring people within neighbourhoods together to build stronger and better connected communities. Big Lunch Extras, brings together people with a passion to improve their local community at Community Camp events hosted at Eden to help build confidence and skills. These people form a nationwide network running local projects and schemes to strengthen and improve their local community.

These initiatives are designed to unlock the value of the social capital that is available to us by connecting with others in our community. There is good evidence to suggest that high levels of social capital can positively and significantly influence people's health, their educational and workplace performance, their socioeconomic circumstances and their tendency towards criminality. Social capital can thus ease the demands on public services, improve the lives of the individuals involved, whilst also delivering productivity gains to employers.

It is these benefits, and reduced costs, that the study leading to this report sought to measure. The estimates provided are indicative but the underlying assumptions are not unrealistic and serve, we believe, the purpose of taking a first step towards a proper understanding of the potential macro-level impacts of community-led initiatives like The Big Lunch.

Approach and methodology

The study involved a desk-based literature review and a survey of participants in and partners of Eden Project's initiatives, principally The Big Lunch. The survey was important in ensuring that original data could be generated on people's perception of the role of community activities and of The Big Lunch initiative itself. There were, however, limitations to the data that could be collected from the survey and we, therefore, sought to fill the remaining gaps through a review of the literature and existing evidence base on the effects of community programmes.

The design of the survey questionnaire was informed by a literature review, which enabled us to build up an understanding of the ways in which community initiatives can enhance social capital and reduce social isolation and exclusion. The survey was developed by Cebr in collaboration with the Eden Project Communities team. The questions revolve around either The Big Lunch, Big Lunch Extras or community activities in general. Community activities, like The Big Lunch and Big Lunch Extras, were characterised as fundamentally about providing opportunities to get to know new people. We asked respondents to provide brief details of community activities (other than The Big Lunch that they are involved in). Popular examples included volunteering in the local church, neighbourhood watch, litter picking and flood watch.

The survey was circulated to about 122,000 people from Eden Project's newsletter databases. The total number of responses received was 1,028 and we developed a methodology, involving relatively conservative assumptions, for linking sub-groups from the sample to sections of the wider UK adult population. This provided a basis for extrapolating from the sample to the population.

The benefits of connected communities or, flipping the concept on its head, the costs of disconnected communities estimated in this report can be considered as indicative valuations of the impact on the welfare of society of such connected or disconnected communities. Whether communities are connected or disconnected is essentially proxied by the extent to which respondents reported being involved in specific initiatives like The Big Lunch or Big Lunch Extras and/or involved in community activities in more general terms.

Improvements in the welfare of society does not, however, always translate into real net economic gains, such as a boost to GDP, so it is necessary to assess each source of benefit or cost on its own merits in terms of what it could add to the economy.

Key findings of the report

A tabular summary of the headline findings of our study is provided in Table E1 below.

Table E1: The cost of disconnected communities in the UK (millions)

Country	Neighbourliness	Health Services	Policing Services	Happiness	Physical exercise and Health	Stress levels and Self-esteem	Total
UK	£14,139	£5,229	£205	£11,948	£312	£104	**£31,937**

Source: Cebr analysis

The interpretation of these results is as follows:

- Disconnected communities could be costing society a potential welfare improvement valued at £32 billion and about £12 billion of this could be realised as a net economic gain (a boost to GDP) through improved productivity.
- The welfare improvement that could be realised includes our estimate of the implicit value of neighbourliness that could be gained through better connected communities. This is based on a £15 billion valuation of the resources shared and help provided between neighbours today and a £29 billion valuation of the resources that could be shared if neighbourliness (catalysed by things such as involvement in community initiatives like The Big Lunch) was more widespread. The difference between the two (the £14 billion) featured in Table E1 is equated with the cost of disconnected communities.

- We estimate that, based on our assumptions, involvement in community activities and initiatives like The Big Lunch and Big Lunch Extras is currently delivering reduction in the demands on the health services that can be valued at £2.7 billion. This has the potential to rise to an estimated £7.9 billion if there is more widespread involvement in community initiatives like the Big Lunch and Big Lunch Extras. The £5 billion difference between the two can be interpreted as an indicative estimate of the burden on the health service that probably arises as a result of the lack of more widespread involvement in the community – and thus as part of the cost of disconnected communities.

- According to evidence revealed through our desk research, the increased sense of community that arises from greater social cohesion can be associated with a 1% reduction in crime. See Wedlock (2006). If community activities and initiatives like The Big Lunch and Big Lunch Extras, and others like Neighbourhood Watch schemes, can be associated with greater social cohesion and increases in this sense of community, this relationship can be translated into the potential resource value of the reduction in the demands on policing services. **Using the Home Office's economic cost of crime, this figure would amount to £205 million**.

- A detailed study by Oswald (2009) estimated that happiness could be associated with a 12% rise in productivity. **We estimate that the productivity benefits associated with the happiness improvements that might be associated with current levels of community involvement at £6 billion**. This is put forward as an indicative value of the productivity benefits to employers as a result of their employees being more community engaged. This could well be a net economic gain, in the form of a boost to GDP, arising from the levels of happiness being derived as a result of current level of engagement with community activities and initiatives.

- Extrapolating to a scenario in which all of those not currently engaged become engaged in their communities, **the estimated productivity boost that could be realised rises to £18 billion**. Again, the difference between these estimates is interpreted as **the cost of disconnected communities, which we estimate at £12 billion**. This is a productivity boost, and thus a net macroeconomic gain that could be realised through better connected communities.

- Another **£0.4 billion of productivity benefit could be realised** through

  – The health and lifestyle improvements that can be associated with involvement in community activities and initiatives like The Big Lunch and Big Lunch Extras.

  – The lower stress and higher self-esteem that can likewise be associated with community involvement.

- The report also provides indicative estimates of how the cost of disconnected communities is spread across the UK. Tabular summaries of the breakdowns across the four nations and nine English regions are provided below.

Table E2: The cost of disconnected communities, national breakdown (millions)

Nation	Neighbourliness	Health Services	Policing Services	Happiness	Physical exercise and Health	Stress levels and Self-esteem	Total
England	£11,824	£4,429	£183	£10,119	£264	£88	**£26,907**
Wales	£1,166	£427	£10	£975	£25	£8	**£2,612**
Scotland	£360	£107	£12	£244	£6	£2	**£731**
Northern Ireland	£790	£267	£0.4	£610	£16	£5	**£1,688**

Source: Cebr analysis

- We find that the cost of disconnected communities can be attributed to the UK nations in the following way: England at £27 billion, Wales at close to £3 billion, Scotland at £0.7 billion (£700 million) and Northern Ireland at almost £2 billion. The distribution across the English regions is shown in Table E3 below.

Table E3: The cost of disconnected communities, regional breakdown (millions)

Region	Neighbourliness	Health Services	Policing Services	Happiness	Physical exercise and Health	Stress levels and Self-esteem	Total
East Midlands	£845	£320	£14	£731	£19	£6	**£1,936**
East of England	£837	£427	£18	£975	£25	£8	**£2,291**
Greater London	£1,605	£587	£38	£1,341	£35	£12	**£3,618**
North East	£430	£160	£8	£366	£10	£3	**£977**
North West	£1,527	£587	£25	£1,341	£35	£12	**£3,527**
South East	£1,540	£534	£26	£1,219	£32	£11	**£3,361**
South West	£2,541	£960	£15	£2,194	£57	£19	**£5,787**
West Midlands	£1,369	£534	£18	£1,219	£32	£11	**£3,182**
Yorkshire and the Humber	£854	£320	£20	£731	£19	£6	**£1,951**

Source: Cebr analysis

1 Introduction

The Centre for Economics and Business Research (Cebr) was commissioned by the Eden Project to produce a report that considers the cost to society of disconnected communities. We consider The Big Lunch specifically and community activities and initiatives more broadly, with a view to providing a better understanding of how better connected communities can impact the lives of the people who live there. We consider value from a number of perspectives, including the implicit value of sharing between neighbours, the value of tackling isolation and social exclusion and the value of reducing the demands on public services.

1.1 Purpose and objectives of the research

The Eden Project is an educational charity with the objective of connecting people with each other and with the living world with a view to exploring how we can work together towards a better future. It pursues this objective through its visitor destination in Cornwall and its transformational projects and learning programmes. These are aimed at helping people to build confidence and skills and to connect with other people and with nature to explore what a better future might look like.

The Eden Project seeks to offer hope and inspiration to individuals who work hard to transform their own communities. The Eden Community Camps support creative, imaginative and collective action and innovative approaches to enable people to make connections with each other and their environment and to look at new ways of sharing, learning, doing and organising. There are many success stories of the Eden Community Camp, Gwen Cook after joining the camp created a cycling project catering for all ages and abilities. In her own words "During the weekend I started to believe that what I do is important, it does matter and I do make a positive difference to my community. I felt really valued and empowered and was filled with enthusiasm to do things even better when I go home."

One of the Eden Project's most significant and best known initiatives is the Big Lunch Programme, part of Eden Project Communities, which consists of a range of community focussed projects including The Big Lunch and Big Lunch Extras. The programme is aimed at improving the happiness and wellbeing of the nation by building more resilient and better connected communities. The underlying philosophy is that society is better equipped to tackle the challenges we face when we face them together. The idea of The Big Lunch, which forms a key part of the wider programme, is for as many people as possible across the UK to have lunch with their neighbours annually on a Sunday in June "in a simple act of community, friendship and fun."[1]

These initiatives are thus designed to unlock the value of the social capital that is available to us by connecting with others in our community. Social capital refers to the interactive networks between people and the relationships forged when members of the community share their time, interests, ideas and resources with each other. Being part of a network can mean easier access to important information, a better ability to influence decision-making and emotional benefits from a sense of belonging, as reflected in Gwen Cook's words above.

There is good evidence to suggest that high levels of social capital can positively and significantly influence people's health and educational performance, their socioeconomic circumstances and their tendency towards criminality. Social capital can thus ease the demands on public services as well as

[1] The initiative began in 2009 and, since then, thousands of Big Lunches have taken place in all types of community, with millions of people taking to their streets, gardens and community spaces for a joint lunch. A Big Lunch can be anything from a small get-together with neighbours in one of their backyards to community events in streets closed to cars for the day.

improving the lives of the individuals involved through the aforementioned health, educational and socioeconomic benefits.

It is these benefits, and reduced costs, that the study leading to this report sought to measure. The estimates provided are indicative but the underlying assumptions are not unrealistic and serve, we believe, the objective of taking a first step towards a full understanding of the impact of community-led initiatives like The Big Lunch. Our understanding of the purpose of the research is that it will lend support to Eden Project in demonstrating to stakeholders and politicians the importance of initiatives that engender connected communities and what they add to society, particularly in the area of tackling social isolation.

1.2 Structure of the report

The remainder of this report is structured as follows:

Section 2: Our approach to the study

This sets out the details of our approach and methodology, including the design of the survey questionnaire and the manner in which the findings were utilised in extrapolating estimated benefits from the sample to the wider UK population.

Section 3: Review of existing evidence

Presents the results of the literature review, split in two subsections - the general connection between social capital and wellbeing and the connection between social cohesion and a set of indicators (such as health, crime and poverty).

Section 4: Descriptive analysis of the survey results

Presents the analysis of the survey results in terms of basic respondent information, connections, and the impact of community engagement on the members of the society.

Section 5: The value of neighbourliness

Presents the implicit value of neighbourliness through respondent information on the nature and value of the resources and help being shared with neighbours.

Section 6: The benefits of well-connected communities

Considering the effects of being involved in the community, this section presents an attempt to measure these benefits in monetary terms. These effects are considered in terms of reducing the demands on public services and the potential productivity gains to employers and the economy.

Section 7: The cost of disconnected communities

Brings the findings of Sections 5 and 6 together to produce estimates of the overall cost of disconnected communities.

2 Our approach to the study

The study involved a desk-based literature review and a survey of participants in and partners of the Eden Project's community initiatives, principally The Big Lunch.

The survey was important in ensuring that original data could be generated on people's perception of the role of community activities and of the Big Lunch Programme itself. However, there were still limitations on what could be gathered because, when surveying, it is necessary to avoid both complexity and excessive length, both of which can cause survey fatigue which can, in turn, lead to spurious responses.

We sought to fill the remaining gaps through a review of the literature and existing evidence base on the effects of community programmes. A full bibliography is provided in Annex I. We have also sought to add substance to the report by drawing on qualitative evidence from case studies of individuals that have been generated by the Eden Project and Big Lunch teams.

2.1 Starting point or hypothesis

The hypothesis is that community initiatives can act to reduce loneliness and isolation and encourage positive change within communities. There is a lot of research on loneliness, however, so our aim for this report is to provide a perspective on the costs imposed on society by disconnected communities or, flipping that on its head, the benefits of connected communities.

By increasing social capital, reducing isolation and enhancing social inclusion, community events lead to improvements in health, educational performance and socioeconomic circumstance. As such, they can not only help redress the balance between the need for and the provision of services, but can also reduce the burden on those services.

2.2 Outline methodology

The study involved a number of steps, as follows:

- First was to develop an understanding of the ways in which community projects act to increase social capital and reduce the costs associated with social isolation and exclusion.
- Second was to try to establish how increasing social capital and reducing isolation and exclusion can impact on individuals through better health, improved educational performance and socioeconomic circumstance and to find any evidence on the value of these improved outcomes in welfare terms.
- Third was to consider how improved health, education and crime outcomes that are the result of better connected communities can reduce the burden on public services. By way of illustration:
  - A case study contained in the LGiU (2013) report[2] highlighted that The Big Lunch had helped an area with its Home Watch Scheme (Neighbourhood Watch). This could result in savings on policing by deterring crime.
  - The same report mentions community projects involving people volunteering to collect litter from local beaches. This could reduce cost to the local council associated with litter collection.

[2] Carr-West. J. and Wilkes, L. (2013), 'The Big Lunch Feeding Community Spirit', Local Government Information Unit.

- Fourth was to consider the potential implications for employers in terms of the productivity benefits that they can derive from the improved health and educational outcomes.
- Fifth was to consider whether the survey data could be said to support the proposition that neighbourliness has a value that can, to some extent, be monetised.

The first and second steps are the subject of Section 3, in which we review the existing evidence. The third and fourth steps are the subject of Section 6, in which our estimates of value have largely been based on data drawn from secondary sources, most notably academic papers and reports providing benchmarks of the cost of running public services like health and policing. We have also made use of data on the value of wages and salaries (from the ONS Annual Survey of Hours and Earnings database) to account for productivity improvements and for improved educational outcomes.

The fifth step is the subject of Section 5, in which we establish an implicit value to society of neighbourliness. Existing research on The Big Lunch has found that 82% of participants from 2009-11 had kept in touch with people they had met at previous Big Lunches.[3] A case study from the LGiU report is about a Big Lunch participant befriending an 83 year old resident who was finding it difficult to manage her house and garden and for whom the participant now provides one hour of cleaning services a week. This has meant the resident being able to stay in her home, rather than having to call for assistance from community care services or to downsize her property, which would likely mean leaving the community that she has been part of for over 50 years.

The hypothesis underlying our valuation of neighbourliness is that initiatives like The Big Lunch serve to enhance neighbourliness and that this neighbourliness has a value in terms of the resources shared or help provided. Through the survey, we asked respondents to indicate the extent to which they are sharing resources or providing help to their neighbours in this manner and to provide indicative estimates of the value of such shared resources and help. This has enabled us to produce an estimate of the implicit total value of neighbourliness across the UK. This value can be thought of in terms of avoided expense that can be redirected to other essential or discretionary spending, depending on individual circumstances.

Using the findings of Sections 5 and 6 (steps 3-5 above), we added up the various monetary impacts of community participation to calculate an overall benefit or value of well-connected communities. We then used a 'what if?' analysis to assess how the results would look if all of the adult population was involved in community initiatives and activities like The Big Lunch and if they all experienced the benefits already being experienced by those already involved. We then took the differences between the 'what if?' analysis and the current benefits of well-connected communities as the 'cost' of disconnected communities (the subject of Section 7). In other words, the cost of disconnected communities is an opportunity cost, the benefits that could be realised if all communities were better connected or, equivalently, the benefits that are being lost as a result of disconnected communities.

It is important to be clear at this stage on the value concepts underlying the estimates of the benefits of connected communities or the costs of disconnected communities presented in this report, and what they represent in real economic terms. This can be explained as follows:

- All of the benefits are added together on the assumption that they all, in one way or another, constitute a gross improvement of the welfare of society. Whether this can be counted as a net gain is a little less certain but it is most likely the case. Furthermore, a gross welfare gain does not always

[3] Carr-West. J. and Wilkes, L. (2013), 'The Big Lunch Feeding Community Spirit', Local Government Information Unit.

translate into real net economic gains, such as a boost to GDP and, so, it is necessary to assess each source of benefit or cost on its own merits in terms of what it adds to the economy.

- To understand welfare impacts, it is necessary to consider the concepts of consumer and producer surplus. Consumer surplus is the difference between what a consumer is willing to pay for a good or service and what they actually pay. In the context of shared services, neighbourliness increases consumer surplus by reducing the cost of the services that are now shared with neighbours, so that there is substantial difference between what the neighbours were willing or expecting to pay and what they actually pay. Thus, the implicit value of neighbourliness represents what neighbours would have been willing and expecting to pay for the shared services and help that is instead provided by neighbours. Producer surplus is an economic measure of the difference between the amount a producer of a good or service receives and the minimum amount the producer is willing to accept for that good or service. The difference, or surplus amount, is the benefit the producer receives for selling the good in the market. According to economic theory, our concept of neighbourliness effectively reduces the amount of producer surplus available to market providers of the goods or services being shared or offered by neighbours. However, in this case, the gain in consumer surplus would likely far outweigh the loss of producer surplus. This is because, due to neighbourliness, the cost of the services shared with neighbours drops, which means that more people can access these services than would otherwise have been the case. People who were previously excluded from the market now have access.[4] Furthermore, the only requirement for there to be a net welfare gain is that those who benefit are willing, in principle, to pay those who lose at least as much in compensation as is required to leave them no worse off. For these reasons, there is quite clearly a net welfare gain as a result of neighbourliness. Establishing what the net figure is would be a complex task, one that was beyond the scope of this report.

- Whether these welfare impacts produce any additional economic activity depends on the extent to which there are any real financial gains. Consider a household that is budget constrained – the saving due to neighbourliness is most likely going to be unknowingly spent elsewhere, either on essentials or on discretionary items, depending on socioeconomic circumstances. In this case, there is likely to be little net impact because the money gets spent in the economy anyway. On the other hand, for a household that is not budget constrained, it may be the case that the money that would have been spent on services now being shared with neighbours is saved for the future. For instance, consider a hypothetical situation in which neighbours share a babysitter for both of their sets of children. If each neighbour hired separate babysitters, they would each pay £60 (total £120), but they only pay £40 each (total £80) if they jointly hire a babysitter.[5] The saving for the neighbours, as a result of their neighbourliness, is £40. But babysitting providers lose out by the same £40. Therefore, the only potential source of net economic impact is the difference between how the neighbours would use this £40 saving, as opposed to how the second babysitter would have used it if the neighbours had not been connected.

- Community initiatives have the potential to alleviate the overall demands on public services by decreasing the need for those services, but also by boosting the supply and choice of services by providing community-based alternatives. For instance, as we have noted from our literature review, greater social cohesion and inclusion is associated with lower levels of crime, so community activities

[4] In economic theory, this is known as reducing the deadweight loss associated with production or provision below the equilibrium, market-clearing level.

[5] In this example, the jointly hired babysitter receives a premium on their hourly rate to reflect the greater number of children needing to be looked after.

in this way can reduce the demands on policing, but neighbourhood watch initiatives can also reduce these demands. All else being equal, it is therefore not unreasonable to consider the benefits measured here as potential net expenditure reductions by the government on public services. This might manifest through lower Annually Managed Expenditure (AME), as a result of lower welfare payments if community involvement increased the chances of those currently unemployed entering or re-entering the workforce. Alternatively, reductions could manifest through lower Departmental Expenditure Limits (DEL), as a result of reduced pressures of healthcare, policing and social services. This is the basis for our analysis and, to that extent, each estimate should be viewed as indicative. This is because, in reality, the savings would more likely need to be viewed within the context of a fixed envelope of DEL expenditure (such as on health or security). Rather than resulting expenditure reductions being passed on to the public, a rebalancing of government spending might be achieved; for instance, this could consist of shifting scarce resources away from what might be unnecessary GP appointments (if people were more active in their communities) to more acute needs where pressures are currently higher, such as social care or assistive equipment for children with disabilities. Valuing the impact on the welfare of society would require a comprehensive valuation of the quality of life improvements that result from the rebalancing of resources in this manner, which lies beyond the scope of this report. But in theory, potential real resource savings and the value of the corresponding quality of life improvements achieved by rebalancing resources in this manner should be equivalent. While this is rarely the case in practice, our estimates of potential real resources savings can be viewed as a proxy for the value of the increase in societal welfare.

- The productivity gains to employers estimated in this report as a result of the improved health and happiness that is derived from involvement in community initiatives like The Big Lunch can be thought of as both a welfare improvement (through, all else equal, increased producer surplus) a net gain to the economy. If workers are happier and more productive, then employers will receive more output for the same wages and salaries that they are currently paying their employees. This will translate into higher GVA contributions to GDP from the industries affected, at least until the producer decides to share their increased surplus with consumers through price reductions (thus boosting consumer surplus rather than GDP), with workers through wage and salary increases or by investing in the expansion and growth of their business.

2.3 The survey and how the results were used

The survey was developed by Cebr in collaboration with the Eden Project team. The survey questions revolve around either The Big Lunch, Big Lunch Extras or community activities in general. Community activities, like The Big Lunch and Big Lunch Extras, were characterised as fundamentally about providing opportunities to get to know new people and developing new ideas and skills.[6] We asked respondents to provide brief details about community activities (other than Big Lunch-related) that they are involved in. Popular examples included volunteering in the local church, neighbourhood watch, litter picking and flood watch.

In designing the survey questionnaire, it was necessary to strike a balance between complexity and realism. Obtaining all the information that it would have been ideal to have would have required a very lengthy and detailed survey. This was neither practical nor fair in terms of the expectations on respondents and the increased likelihood of spurious answers. For example, one of the important benefits of community engagement is happiness. However, it was not practical to ask people how happy

[6] The primary aim of Big Lunch Extras is to upskill, build confidence and share ideas that encourage people to create change in their communities and neighbourhoods.

they were before, for example, attending or helping to organise a Big Lunch, how happy they were afterwards and, therefore, by how much their happiness increased as a result of that attendance or help in organising. While we could have asked people to provide qualitative ratings on a before-and-after basis, we would still have little idea on the starting baseline level of happiness to which we could apply assumed quantitative ratings. Likewise, it was impractical to ask respondents to place a monetary valuation on that increase in happiness, through enhanced productivity, better health etc. We were therefore reliant on the literature to inform us on these kinds of measures.

The survey was circulated to an Eden Project Communities newsletter database of over 120,000 contacts. These contacts were generated from requests for Big Lunch starter packs and applications to get involved with Big Lunch Extras and Eden's Community Camps. This generated 761 survey responses.

To boost response numbers further, the Eden Project also circulated the survey to a further 2,000 contacts that were a small sample of the overall Eden Project newsletter database, alongside a few active partners of the Eden Project Communities team. This generated a further 267 responses to the survey.

As a representative sample of the UK adult population, a sample size of 1,028 provides reasonably high levels of confidence in the estimates and relatively low probabilities of making incorrect inferences about the population based on the sample. However, given the importance of the sample in generating the UK-wide estimates presented in this report (through extrapolation from the sample to the population), it was important to consider the potential for inherent bias in the sample and to attempt to make adjustments for such bias if it was evident.

Through discussions with the Eden Project Communities team, it became apparent that there is a significant risk of bias in the sample because the Eden Project Communities newsletter database of contacts was generated from requests for Big Lunch starter packs or expressions of interest in community activity. The fact that these people expressed an interest in The Big Lunch or Big Lunch Extras suggests that they are already active or at least interested in becoming active in their communities. The Eden Project Communities team also informed us that the further 267 responses were mostly from active partners of the team.

It was therefore necessary to find a way, when extrapolating to the population as a whole, to try to counteract this bias. The results of our analysis are presented in Table 1 and interpreted beneath.

Table 1: Breakdown of sample and extrapolation to the population

Groups by participation in...	# of people in the sample	# of people in wider UK population
No community activity	98	34,630,923
The Big Lunch only	54	1,033,846
Community activities only	438	10,524,277
Community activities and The Big Lunch	438	6,266,154
TOTAL	**1,028**	**52,455,200**

We split the sample of 1,028 respondents into four groups, reflecting different levels of community participation, as follows:

- **The 'No CA' or 'No community activity' group**: consisting of 98 (or 9.5% of) respondents who reported no involvement in community activities at all, either in The Big Lunch or otherwise;

- **The 'TBL' or 'The Big Lunch only' group**: consisting of 54 (or 5.2% of) respondents reporting involvement in The Big Lunch only;
- **The 'CA' or 'Community activities only' group**: consisting of 438 (or 42.6% of) respondents reporting involvement in community activities, but not in The Big Lunch; and
- **The 'CA&TBL' or 'Community activities and The Big Lunch' group**: consisting of another 438 (or 42.6% of) respondents reporting involvement in both The Big Lunch and other community activities.

We note that the total share of the sample reporting involvement in The Big Lunch is the sum of the shares of the 'TBL' and 'CA&TBL' groups, that is, 47.8%. But the vast majority of these are also involved in other community activities including Big Lunch Extras. These community activities are generally of a more frequent nature than the annual Big Lunch, which is significant for the estimates of value presented in this report. This is why the majority of 'Big Lunchers' are included in a different sample group.

The inherent bias in the sample is towards people who are already active in the community, experiencing the benefits for themselves and observing them in others and who would, therefore, be naturally more inclined to respond positively to the questions we asked about their experiences of The Big Lunch and other community activities. In extrapolating from the sample to the population to produce the macro estimates of the value associated with connected and disconnected communities presented in this report, we sought to counteract this inherent bias.

To do so, we established links between the different survey groups and sections of the population, as follows:

- The ONS Community Life survey reports that an estimated 66% of adults in the UK are not involved in any form of civic participation. Assuming that this is a reasonable proxy for the proportion of the population that is not involved in community activities, we associate the 'No CA' sample group with this majority of the adult population, amounting to the 34.6 million adults, in the first row of Table 1 above.
- Using the same source, we equated the remaining 34% of the UK adult population that is engaged in civic participation at least once a year with the 'TBL', 'CA' and 'CA&TBL' sample groups. To establish appropriate splits of the population to associate with these three sample groups, we started with the split in the sample, allowing this to determine the 1 million of adult population corresponding with the TBL group (those involved in The Big Lunch only).
- Through its own research, Eden Project Communities has estimated that 7.3 million people were involved in The Big Lunch in 2016. We therefore constrained the 'CA&TBL' group to 7.3 million minus the number of people in the 'TBL' group, giving the 6.3 million of adult population featured in Table 1 above. This makes the sum of the sections of population linked with the 'TBL' and 'CA&TBL' equal to the total number of Big Lunchers.
- The 'CA' group was equated with the difference between the 34% of the UK adult population (who are engaged in civic participation at least once a year) and the combined number of people in the 'TBL' and 'CA&TBL' groups. This produced the 10.5 million of adult population to associate with the 'CA' group (those involved in community activities, but not in The Big Lunch).

Section 4 provides a deeper insight into the questions posed of respondents in the survey, where we present a descriptive analysis of key findings from the survey evidence gathered.

3 Review of existing evidence

Through the existing literature, we have been able to build up an understanding of the ways in which community initiatives can enhance social capital and reduce social isolation and exclusion. The review of the literature was the first step in establishing how increased social capital can impact on the health, education and crime outcomes and how these improved outcomes can reduce the demands on public services in the better connected communities that result. We have also uncovered other links between community initiatives and the benefits to the individual and society, such as neighbourliness and the impact on employers through enhanced productivity of a happier workforce.

3.1 Community initiatives and improved neighbourliness

Community initiatives, like The Big Lunch, have the power to increase levels of social cohesion for everyone in the neighbourhood, even those neighbours who were not previously involved or engaged. The quality of a neighbourhood in terms of community spirit, neighbourliness and connectedness can affect household decisions on where to live, which could in turn drive up the value of property in better connected neighbourhoods and communities. Evidence from a recent survey conducted by One Poll on behalf of Nextdoor appears to lend support to this idea. The study concluded that 69% of British people crave a sense of community and believe that it would make where they live friendlier and increase property values,[7] while also helping neighbours to feel safer through reduced crime. A third of respondents said they wish there was more community spirit where they live, while a quarter said they just do not know how to get more involved.

Strong community spirit comes in fourth place behind good open spaces, good transport links and good schools on people's ideal wish lists for where they live across the UK – although this factor was nudged into fifth place in England, behind having a good shopping centre close by. Scotland was revealed as the UK nation with those keenest to get to know their neighbours better, while Wales has the most neighbours who are already considered friends by the people next door. Northern Irish people are the most likely to say the community they grew up in felt friendlier and more connected than where they live now.

The same survey reveals that only 12% of the population feels strongly connected to their community but that feeling lonely is not just an issue for the elderly. Specifically, 28% of 18-24 year olds and 29% of 25-34 year olds admitted to feeling isolated, compared to just 14% of people aged 55 and over. Liverpool is reported as the city where the smallest share of people feel lonely at 9%, while Glasgow had the highest at 23%.

It was likewise reported that one-third of the population do not know any of their neighbours, while less than half believe there is still a sense of community spirit in their neighbourhood. While only 10% of the sample reported not knowing their neighbour's name, less than half (41%) would feel comfortable knocking on a neighbour's door to borrow a cup of sugar while an even smaller proportion would be happy giving a spare key to their next door neighbour. Another survey in 2010 (commissioned by Legal and General) found that 70% of the respondents would not recognize their neighbours if they passed them in the street.

The majority of the Nextdoor sample (60%) stated that their own community is not as closely connected when compared to the relationships their parents and grandparents had with their neighbours.

[7] If all communities and neighbourhoods were better connected and social cohesion was 'maximised' then, in theory, any differentials in property values that were driven by the differences in the quality of neighbourhoods would disappear.

Interestingly, one-fifth of people thought that knowing one's neighbours better could help to heal any discord resulting from the Brexit vote.

The majority of respondents (69%) expressed the view that feeling safer and more secure would be a key benefit of a closer neighbourhood. Echoing this, most people said the neighbourhoods of their childhood felt safer than those in 2016. The vast majority (83%) think it is important for communities to pull together to fight crime. A perceived lack of police presence forced by spending cuts is seen as a reason for feeling less safe for nearly a third of people, while slightly less (30%) say that getting involved if they spot criminal activity is just too risky. For a fifth of people, the more transient nature of society with people coming and going all the time, impacts on their sense of security where they live.

In terms of the value placed by people on such benefits, just under half of people said that they would be prepared to pay more for a home in a strong neighbourhood, with 95% of that proportion saying they would be willing to pay up to 10% extra. This would add £20,000 to the current average UK house price. Knowing that people would be willing to pay up to 10% more for their house gives an idea of how individuals value neighbourliness. If individuals are willing to pay this amount more, then this should be a reflection of the value they place on what they are getting for it, that is, a strong sense of community and pervasive good neighbourliness.

The evidence also points to an appetite for a better sense of community and a willingness to get involved, which goes to show that there is still significant potential for those who organise and run community initiatives to achieve lasting benefits in terms of community cohesion. Although the estimates presented in this report focus on the adult population, this willingness to get involved is present at any age. Twelve-year-old Markus Aitken from Cardiff was inspired to organise a Big Lunch after visiting the Eden Project. Getting everyone together has had a lasting effect on the sense of community in the area, as his mother puts it: "Lots of families have very young children so they started up a toddlers' group after meeting at Marcus' Big Lunch".

3.2 Social capital and the functioning of society

The importance of social capital for the well-functioning of a society has been studied by several authors. In the midst of the numerous matters that have been addressed within the 'social capital' literature, noteworthy cases include:

- The conclusion by political scientists that better public service delivery, financial accountability, and adherence to democratic norms is found in countries and regions with greater associational life, trust and inter-group cohesion (Putnam et al. 1993, Knack 2002, Coffe and Geys 2005);
- The several psychologist studies on the connection between participation in community activities and health and educational attainment (Berkman and Syme 1979, Coleman 1988, Helliwell 2003); and
- The literature on the robust link that has been established between social institutions and economic welfare in the form of both household income and aggregate economic growth (Knack and Keefer 1997, Zak and Knack 2001, Narayan and Pritchett 1999, Grootaert 2001, Tabellini 2005, Knowles and Weatherston 2006).

Robert Foa (2011)[8], took a step further in The Economic Rationale for Social Cohesion, by estimating the economic benefits of superior social cohesion levels and the connection between per capita economic

[8] See here.

growth and social cohesion. The author builds a quantitative cross-country index of social cohesion. The main conclusion is that a two-point increase in the index is associated with a 28 percentage point difference in cumulative economic growth over a period of two decades.

There is ample evidence to suggest therefore that social cohesion can improve the functioning of society.

3.3 Positive impacts of social cohesion and better connected communities

Despite the growing literature, at a country level most of the research that has sought to identify the links between social cohesion, wellbeing and the cost savings for individuals and society has been of a qualitative nature. Nevertheless, we outline the findings of some of the studies that have sought to understand these impacts and the valuations that have been put forward in these studies. We use some of these findings as ingredients in our valuations of the benefits of initiatives like The Big Lunch and the costs of disconnected communities.

Health and exercise

Kawachi et al (1997a) studied the relationship between a set of social capital indicators for the US and state-level mortality rates. Their chosen indicator was per capita group participation in organisations such as church or sports groups. The authors concluded that a 1 unit increment in average per capita group membership was associated with, on average, 66.8 fewer deaths per 100,000 population.

The same research focused on the link between measures of civic trust and mortality rates and found that variations in the level of trust explained 58 per cent of the variance in total mortality across states. The authors concluded that if the trust levels increased by 10 per cent increase the mortality level decreased 9 per cent.

Akin to this, a recent meta-analysis concluded that a 26%, 29% and 32% increased likelihood of mortality over an eight year period due to loneliness, social isolation and living alone, respectively. These findings were irrespective of age (Holt-Lunstad et al, 2015).

The GoWell study finds that residents in 3 high rise estates in Glasgow often attribute health problems to adverse relationships with their neighbours and that, whilst they welcome change in physical living conditions, they believe that improving relationships in their community would be more impactful (Egan & Lawson, 2012).

On the side of mental health, Thomas and Morris (2003) assessed the economic cost of depression in England in 2000. Taking into account the cost of treatment, the loss of output and mortality costs, the authors measured the total cost of depression in England amongst adults aged 15 years or older at £9 billion. In 2000 there were around 2.6 million cases of depression, meaning an average cost per case of nearly £3,500. But the authors further conclude that the numbers are likely underestimates of the total cost of depression, since some elements of cost could not be included due to a lack of reliable data. Unfortunately, the author did not assess the impact of community cohesion on the incidence of depression.

Another report by the King's Fund, "Paying the price: The cost of mental health care in England 2026", also produces figures for the cost of depression and anxiety disorders taking into account not only the service costs but the loss of employment costs. For depression, the average service costs for those in contact with services was £2,085 in 2007, while the average cost of lost employment was £9,311. The total cost of services for depression in England in 2007 was estimated to be £1.7 billion, with lost productivity bringing the total cost to £7.5 billion. By 2026 these figures are projected to be £3 billion and £12.2 billion respectively.

For anxiety, the average service cost in 2007 for people in treatment or where their condition is recognised is £1,104. Including lost employment costs brings the total to £2,402 per person. The cost of services for the whole of England in 2007 was estimated at £1.2 billion but, including lost employment, the total cost is estimated to be £8.9 billion. By 2026 it is projected that service costs for anxiety disorders will be £2 billion with total costs at £14.2 billion.

Richard Bailey (2007) analyses the evidence related to the effects of the involvement of children and young people in curricular physical education and sport. The author focuses his attention on the impact that such activities can have on social inclusion and the development of social capital. The areas where the benefits of physical education were examined are: physical health, cognitive and academic development, mental health, crime reduction and reduction of truancy and disaffection.

The key conclusion of Bailey's research is that participation in sporting activities fosters social cohesion by "bringing individuals from a variety of social and economic backgrounds together in a shared interest in activities that are inherently valuable (spatial); offering a sense of belonging, to a team, a club, a programme (relational); providing opportunities for the development of valued capabilities and competencies (functional); and increasing 'community capital', by extending social networks, increased community cohesion and civic pride (power)".

Svoboda (1994), emphasizes the same ideas, arguing that there is a vital contribution of sport to processes of personality development and psychological wellbeing, concluding that there is "strong evidence […] on the positive effects of physical activities on self-concept, self-esteem, anxiety, depression, tension and stress, self-confidence, energy, mood, efficiency and well-being".

Crime

Studies about social cohesion and crime go back as far as 1942. Shaw and McKay (1942) found that geographic variations in crime could be attributed to variations in cohesion. Similarly, Sampson and Groves (1989) concluded that areas that are socially disorganised and lack cohesion have disproportionately high rates of crime and delinquency.

More recent evidence is provided by Hirschfield and Bowers (1997), who found that disadvantaged areas with higher levels of social cohesion have lower levels of crime than expected in disadvantaged areas. The authors go on to conclude that the more an economically disadvantaged area can act as a community, the greater its capacity to combat crime.

Later on, Sampson and Raudenbush (1999) concluded that lower rates of crime and social disorder could be associated with a form of social control, involving people in cohesive communities being prepared to intervene in the presence of deviant and criminal activity. This conclusion held even after controlling for structural differences in the characteristics of neighbourhoods. But none of this research sought to establish quantitative relationships between social cohesion and crime.

Work by Wedlock in "Crime and Cohesive Communities", published by the Home Office in 2006, is more useful in this regard. The paper explores the link between levels of crime and community cohesion, using Sampson and Raudenbush's idea of it acting as a social control and providing a set of norms of behaviour that residents (and visitors) are expected to abide by. Using data from the Local Areas Boost of the 2003 Citizenship Survey, Wedlock expanded the definition of cohesion and identified five key factors that determine community cohesion – sense of community, similar life opportunities, respect for diversity, political trust and sense of belonging. He then sought to examine the influence of these factors on different types of crime.

The table below shows Wedlock's findings. The study concluded that there is a strong link between the sense of community and different types of crime. This sense of community factor was intended, according to the author, to capture aspects of social control such as neighbourliness. The marginal impacts in Table 2 were combined with the Home Office's economic cost of crime estimates to produce cost savings associated with reduced crime arising from stronger community cohesion using the following equation:

$$Potential\ cost\ saving = (Impact\ of\ cohesion\ on\ crime\ type\ level\ of\ crime) * (Cost\ of\ crime)$$

Table 2: Predicted percentage decrease in crime measures as sense of community increased by one unit

Predicted percentage decrease in crime measures as sense of community increased by one unit	
Type of crime	**Decrease in crime as sense of community increases by 1 unit**
All crime	3%
Burglary from dwelling	3%
Burglary form non-dwelling	No significant relationship
Theft of motor vehicle	4%
Theft from motor vehicle	2%
Violent crime	2.7%

Source: Home Office

The results from this exercise are presented in Table 3. The aggregate estimated cost saving from an increase in community cohesion was estimated at £530 million in 2008.

Table 3: Estimated potential cost savings in England and Wales from increase in community cohesion

Estimated potential cost savings in England and Wales from increase in community cohesion					
Crime type	**Average cost 2007/08 (£)**	**Decrease in crime as sense of community increases by one unit**	**Adjusted Crime level 2007/08**	**Reduction in crime level from one unit increase in sense of community**	**Potential Cost Savings (£)**
Violent crime	11,520	2.7%	1,360,000	36,601	422,000,000
Burglary in a dwelling	3,617	3%	610,000	18,425	67,000,000
Theft of vehicle	4,580	4%	130,000	5,384	25,000,000
Theft from vehicle	950	2%	890,000	17,837	17,000,000
Total					530,000,000

Source: Home Office

Wedlock also presents a sensitivity analysis for the costs estimated above. The key drivers of cost savings are the average costs of crime, the marginal effect of cohesion on crime and the adjusted crime levels. Since the principal uncertainty concerns the magnitude of the relationship between cohesion and crime, the marginal impact was adjusted downwards to see what effect this would have on the estimated cost savings. The table below shows how the estimates respond.

Table 4: Estimated potential cost savings in England and Wales after adjusting the assumptions on marginal impact of community cohesion on crime levels

Estimated potential cost savings in England and Wales after adjusting the assumptions on marginal impact of community cohesion on crime levels							
		Low estimate		Mid estimate		High estimate	
Crime type	**Decrease in crime**	**Decrease in crime levels**	**Potential Cost saving (£)**	**Decrease in crime levels**	**Potential Cost saving (£)**	**Decrease in crime levels**	**Potential Cost saving (£)**
Violent crime	1%	13,556	**156,000,000**	25,079	**289,000,000**	36,601	**422,000,000**
Burglary in a dwelling	1%	6,142	**22,000,000**	12,283	**44,000,000**	18,425	**67,000,000**
Theft of vehicle	1%	1,346	**6,000,000**	3,365	**15,000,0000**	5,384	**25,000,000**
Theft from vehicle	1%	8,918	**8,000,000**	13,378	**13,000,000**	17,837	**17,000,000**
Total			**193,000,000**		**361,000,000**		**530,000,000**

Source: Home Office

Other authors have studied the health consequences of a fear of crime. Dolan and Peasgood estimated this by combining survey data on the frequency and severity of individuals' fear of crime with estimates of the loss of quality adjusted life years (QALY) and of the monetary value of QALYs. On this basis, they valued the cost in the range of £0.8 - £2.1 billion for England and Wales.

Education, employment and poverty

Putnam (2002) put forward the interesting proposition that test scores and dropout rates were better predicted by measures of community-based social capital than by measures of teacher quality, class size or spending per pupil. This is probably worthy of further research, if only to highlight the importance of community connectedness in the education of young people. This was beyond the scope of this report unfortunately.

Assuming that living in cohesive communities has a positive impact on educational outcomes, then the impact is more likely to be transmitted later on in life in the form of improvements in the lifetime productivity of the individuals who benefit. The productivity benefits of having additional educational attainment are usually measured using wage and employment returns as a proxy for the extent to which qualifications will raise a person's productivity. The challenge is quantifying the impact of community cohesion on the quality of education and how this higher quality education in turn impacts on productivity in later life.

Granovetter (1973 and 1995) found that, in the US, social networks can provide people with advice, job leads, strategic information and letters of recommendation. In a survey of residents of a Massachusetts town, the author discovered that over 50 per cent of people found their jobs through social contacts. The connection between having a strong social network and being able to find a job is pretty much universally accepted. Community involvement is one such manner of building these social networks,

offering the opportunity to extend their network and meet potential employers or investors who are willing to invest their time and funds in projects that can be life-changing for the individual and the entire community. One such example, if is provided by Mike Managh from Folkestone, a specialist furniture maker, who joined the Big Lunch Extras and got inspired to change the focus of his company from a commercial venture to a social enterprise aiming to employ out-of-work people and ex-offenders and train them in carpentry skills.

Ericksen and Yancey (1980) examined a sample of individuals in Philadelphia and likewise found that the majority of respondents used some form of personal connection to land their job (67% of respondents using strong or weak ties, whereas 43% used formal means or direct applications).

This evidence therefore suggests that social networks can make it easier for individuals to find a job. Social networks can also help people to find better jobs by connecting them to high status individuals. For example, various papers find that weak ties, ties with acquaintances or friends of friends, with whom the individual has little contact, are especially important in facilitating occupational mobility by putting people in contact with individuals from a different background to themselves. This is known as a form of bridging social network.

Another segment of the literature focused on the impacts of Time Banks on individuals and society. Time Banks are a type of community currency which is becoming established in the UK as a new model for volunteering. They reward time spent performing voluntary activities in the community and are designed to build social capital and promote civic participation. Time Banks reward each hour of community volunteering with one credit of a time based local currency (regardless of the service provided).

Gill Seyfang (2001, 2003) found that Time Banks are an innovative mechanism for channelling informal social support and engaging socially excluded groups in community activities, to nurture social inclusion. The Time Bank contributes to the development of individualistic social capital, in the form of weak ties (social networks of acquaintances), which we already noted might be important for occupational mobility. It also has a role to play in the development of collective social capital and progressive collective action. The author's conclusions were that, by allowing its members to develop new skills and obtain training, Time Banks can deliver new informal employment opportunities to the socially excluded, boosting their income, offering access to interest-free credit, offering made goods and equipment available to hire, and providing a forum for social interaction and community-building.

A paper by the Joseph Rowntree Foundation (JFR) by Crisp et al (2016) concluded that community-led activities, despite only having an impact on a small group of people, are behind several valuable outcomes in terms of fighting poverty. The authors suggest that this small scale effect could be scaled up by developing a more targeted and sustained investment for community-led activities in low income neighbourhoods. However, the authors do note that the success of these initiatives depends on having the support of specific skills and leadership qualities of key individuals as well as the existence of an active and supportive voluntary and community sector infrastructure.

The authors present success stories of community-led activities such as the case of a social group set up to tackle isolation among lone parent mothers, which led to improvements in well-being and, occasionally, a movement into work or education. Another example quoted is the grassroots forms of community organising that managed to change the practices of payday lenders, ensuring that low-paid workers receive the living wage.

The authors also discuss Local Trading Systems (LETS) and Time Banks as having one of the highest potentials to address material forms of poverty with impacts both on pockets through mutual provisioning of services and prospects through enhanced employability.

This research also includes a section on the impact of neighbourliness on poverty. The key conclusion is that there is some evidence to show that neighbourhood-based forms of enterprise can tackle material forms of poverty by creating jobs for local residents as well as generating income in the local economy. This may have immediate benefits for the pockets of those who secure jobs but the authors argue that the real value of neighbourhood-led approaches lies in addressing non-material forms of poverty by reducing social isolation.

Loneliness and general wellbeing

A recent study by the Co-op and the British Red Cross discloses sweeping levels of loneliness and social isolation in the UK. Around 20% of the population in the UK report that they are always or often lonely and 52% of the population are at the very least sometimes lonely. Only 20% say that they have never felt lonely.

The report "Trapped in a Bubble" (2016) portrays the issues surrounding modern-day loneliness and identifies six common lifetime events that can trigger loneliness and social isolation. The study demystifies the idea that loneliness only affects elderly people and points out that people may experience loneliness at many different stages in their lives. Key triggers that can disrupt lives and create a situation in which loneliness becomes the norm include becoming a new mum at a young age, facing empty nest syndrome or retirement, experiencing long-term health issues or mobility limitations, dealing with bereavement or going through a family breakdown, such as divorce or separation.

Many studies have confirmed that loneliness can be as damaging to health as smoking and obesity. Social isolation can also be linked to cardiovascular health risks, poor diet, heavy drinking and increased blood pressure, signs of ageing, risks of dementia, symptoms of depression and re-hospitalisation after illness. Fulton and Jupp (2015) try to assess the financial impact of loneliness in terms of increased public service usage by elderly people, putting the cost at £12,000 per person over a 15-year period.

A previous report from the JRF (2014) on the impact of their neighbourhood programme for tackling loneliness concluded that the programme was life-changing for those most closely involved. The rationale behind the initiative was that, when people are experiencing loneliness, the best way to enhance their wellbeing is by involving them in their community, which will develop a sense of inclusion that can then be spread around the entire community.

There are numerous success stories resulting from the participation in the Eden Community Camp. Marie Greenhalgh was determined to address loneliness and isolation for older people in her community by providing befriending schemes and social events. Feeling a bit overwhelmed by what she had taken on, she joined the Big Lunch Extras. She felt invigorated by the experience and since then has got a community coffee morning for older isolated people off the ground at the local pub. In September 2014, Marie registered her project as a Community Interest Company, allowing her to receive funding to continue its services and to employ a part-time staff member. This is likely to be of significant benefit to those elderly people who had, until Marie arrived, been feeling isolated and lonely. Their improved health and wellbeing, in turn, has the potential to reduce the demands on health and social care in the community. This is demonstrated by the thoughts of an attendee of a loneliness group established by Big Lunch Extras participant: "I come here because of the companionship, it gets me out of the house. I've recently lost my husband and it's been an absolute godsend, this place, because I've made so many friends here, and they've all been so kind."

The Office for National Statistics, in its "Measuring national well-being: Life in the UK: 2015" publication, finds that personal wellbeing is higher among individuals who know and regularly talk to neighbours and that people's satisfaction with where they live is determined more by how well one gets on with their neighbours than by quality of the housing (ONS, 2015). ONS also identifies positive relationships with neighbours as playing an important role in improving social cohesion, levels of trust and feelings of belonging.

There is also a growing recognition, according to Wallace & Schmueker (2012) that wellbeing is a more relevant measure of progress in society than GDP because, according to the authors, diminishing returns to increasing wealth on the quality of life is increasingly observed in the post-industrial world. Given the positive influences that social and community cohesion can have on the wellbeing of individuals, Wallace & Schmueker's argument only serves to further highlight the importance of community-led initiatives, like The Big Lunch.

Some studies have found positive relationships between Social Wellbeing (SWB) and membership in (non-church) organisations. Helliwell (2003) found that both individual involvement in such organisations and national average membership are positively related to life satisfaction in his analysis of 49 countries from the WVS.[9] Helliwell and Putnam (2004) confirm these positive relationships, noting also that national average membership significantly increases overall happiness but that individual membership does not. This suggests the potential existence of network effects, whereby the benefits increase exponentially as more and more people connect to the system (as in telecommunications). Pichler's (2006) analysis of the ESS[10] found that membership of more organisations increases life satisfaction.

The study "Kinder Communities: The power of everyday relationships" intends to establish a connection between relationships and wellbeing. The underlying idea is that everyday relationships and kindness are important pre-requisites for community activities, such as volunteering and civic engagement. The authors conclude that whilst a discussion of everyday relationships and kindness in neighbourhoods might on the surface appear to have little relevance in the face of the urgency of the challenges of austerity and increasing inequality, these concepts are "at the very heart of our ability to generate wellbeing and the foundations upon which the power for change can be built."

3.4 Conclusion

The existing evidence base, summarised in this section, is no doubt conclusive that social cohesion is beneficial to the individuals of a society. It is also conclusive that people value the 'quality' of their neighbourhoods, as measured by factors like the sense of community spirit, neighbourliness and connectedness. Finally, the literature is also clear that community initiatives, like The Big Lunch, have positive effects on these factors and can, therefore, drive increases in the quality of neighbourhoods and of people's lives.

The literature provides some quantitative estimates of useful relationships, like the impact on worker productivity of increased happiness, but there is little by way of quantification of the relationship between community activities or specific community initiatives, like The Big Lunch, on factors like happiness, health, education or wellbeing. Nor is it clear on the quantification of how such community activities and initiatives can improve health, education and crime outcomes, or by how much this could reduce demands on public services.

[9] World Values Survey

[10] European Social Survey

The literature is mostly qualitative in nature. This is not surprising - we are dealing with human beings and therefore we cannot run experiments in a laboratory that allows us to isolate the causes behind a phenomenon, as in the physics world. In the social sciences, we rely on surveys in which we ask people to report how they measure impacts on themselves and the world around them. There can be problems with this approach – foremost is that people are not always truthful, even if they intend to be; our brain is capable of tricking us.[11] Nevertheless, as long as there is reasonable comfort with the limitations of this approach, it still provides one of the most reliable approaches to assessing the value of social and community initiatives like The Big Lunch.

Nevertheless, the greatest challenge is assessing the magnitude or extent of the benefits of community cohesion and the sense of belonging in a 'tight knit' community. There is no obvious way of quantifying levels of social cohesion or of measuring the impact on happiness or healthiness that is caused by the increase in social cohesion that arises from participation in community initiatives like The Big Lunch. In other words, whilst there is some understanding of how happiness impacts on productivity, there is little understanding of how enhanced social cohesion catalysed by greater community involvement impacts on levels of happiness. Our survey provided little assistance in this regard beyond the usual qualitative evidence (except in the area of neighbourliness – the subject of the next section).

However, by combining the evidence gathered through the survey work with the limited assumptions it was possible to make based on the existing evidence, this report provides indicative assumptions-based estimates of the value of the benefits or costs that might be at stake as a result of, respectively, connected communities or disconnected communities. While the estimates cannot be interpreted as conclusive, our objective was to take a first step in increasing the understanding of the amounts that might be at stake. This is the subject of the remaining sections of this report.

[11] There are many studies on how people change their valuation of a good they own and want to sell vs. when they do not own it and want to buy it.

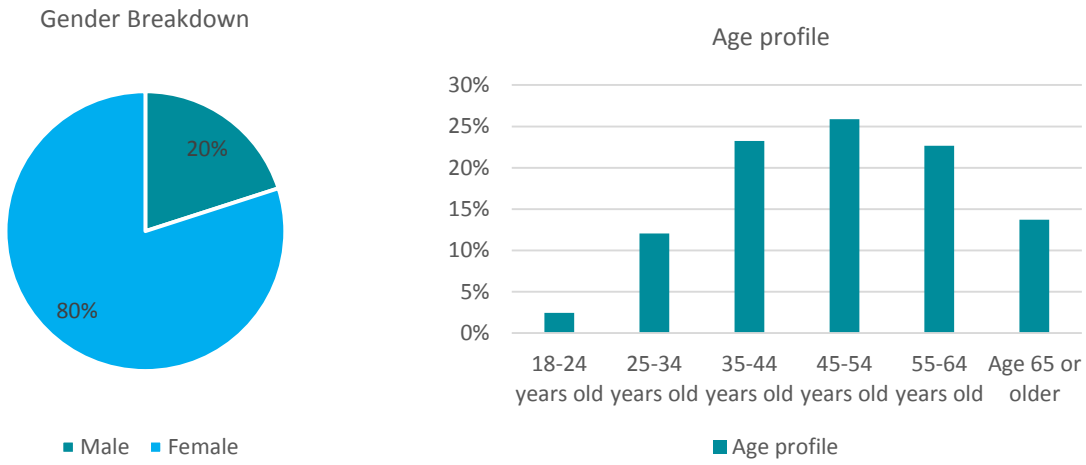
4 Descriptive analysis of the survey results

This section presents a descriptive analysis of the survey data. Section 3.1 summarises basic information about the respondents. In the later subsections, we present results for three of the four sample groups (introduced in Subsection 2.3 above) who are active in the community – the TBL, CA and CA&TBL groups. For the 'No CA' group, those not involved in any community activities at all, there was no survey data to present in the later parts of this section because they had no basis to answer questions on the effects of participation in such activities or in initiatives like The Big Lunch.

4.1 Basic respondent information

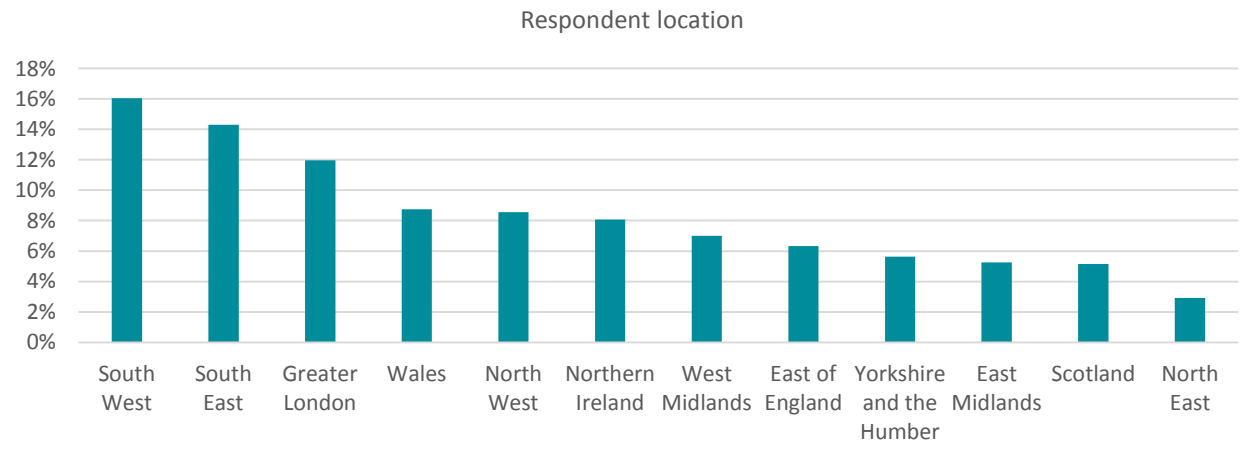
A significant majority of the survey respondents are women: 822 (80%) of the total 1,028 respondents, which accords with the typical gender breakdown of the wider Big Lunch population, as observed through Eden's own survey work on The Big Lunch. The highest shares of responses was provided by those aged between 35 and 44 (23%), and between 45 and 54 years old (26%). In contrast, only 25 respondents were aged between 18 and 24 (just under 2% of respondents).

Figure 1: Basic information on survey respondents: gender, age



There was a decent spread of respondents across the UK regions, with the largest shares from those living in the South West (16%), the South East (14%) and Greater London (12%). The region with the smallest share of respondents was the North East (3%). Both Wales and Northern Ireland were well-represented relative to the size of their respective populations.

Figure 2: Basic information on survey respondents: location



Source: Survey analysis

Most respondents (42%) had heard about The Big Lunch but were not yet involved. The second largest group of respondents (20%) have organised a Big Lunch, but 34% in total identify themselves as having organised a Big Lunch once those who also identify themselves as also being involved in Big Lunch Extras are included. 16% identified themselves as only taking part in a Big Lunch and/or Big Lunch Extras. The smallest group of respondents (2%) take part in both The Big Lunch and Big Lunch Extras (without organising).

4.2 Building connections

According to separate research by The Big Lunch (involving a survey carried by Opinium in 2015), 33% of UK adults said that they found it harder to make new friends at their current age than they did 10 years ago. The research also found that face-to-face conversations are the main form of social interaction UK adults have with their friends, family or neighbours, with 77% rating this as their primary form of social interaction.

Community activities and initiatives like The Big Lunch are an opportunity to get to know new people through such face-to-face interaction. The research from Nextdoor (mentioned in Section 2) suggests that an important underlying reason why people do not know their neighbours is a lack of confidence in starting a conversation or the fear of being perceived as nosy. Being involved in a community activity can mitigate such fears because it creates a common interest amongst people which can be used as a conversation starter, allowing relationships to flourish without the initial discomfort.

The table below shows how 87% of the CA&TBL sample group (representing those involved in The Big Lunch and in other community activities) report keeping in touch with those whom they have met. This compares with 77% of the CA group (those involved in other community activities only) and 65% of the TBL group (those involved in The Big Lunch only).

We note that Eden Project's own research produced the finding that 90% of Big Lunchers report meeting new people and 89% report keeping in touch. The combined statistic for the TBL and CA&TBL groups (representing all the people in our sample who were involved in The Big Lunch) is 85%, a mere 4% difference, a difference that is easily attributable to the results being derived from two completely different surveys. Also relevant is the fact that the questions in our survey asked people to respond in respect of not just The Big Lunch but all the other community activities that they are involved with as well.

Although the TBL group statistic of 65% keeping touch seems as odds with the Eden Project finding, it could reflect the fact that our survey was circulated at a point in time that was a bit more distant from the last Big Lunch event. Our understanding is that the Eden Project surveys are released within a fortnight of the event. However, neither was the trend entirely unexpected. The Big Lunch is an annual event after all, while the other community activities cited by survey respondents are much more frequent in nature, occurring more often than once a year. The probability of keeping in touch with someone we meet once a year can arguably be expected to be lower than if we see those connections once a month, for example.

Table 5: Survey results – Building connections

Indicators	TBL	CA	CA&TBL
% of people who kept in touch	65%	77%	87%
# of connections	6	19	20
# of days in a year people keep in touch (in person)	29	35	34
# of days in a year people keep in touch (mobile or social media)	12	37	46
% of people who keep in touch by starting a shared project	9%	48%	51%
% of people who keep in touch by developing a new skill	2%	17%	21%
% of people who keep in touch by exercising	7%	12%	13%
% of people who keep in touch by doing something cultural	4%	13%	14%

Source: Survey analysis

There are several examples of people who met at a Big Lunch, who have started their own events that facilitate participants in keeping up the connections they make at The Big Lunch. Lou Kiddier from Edinburgh organised a Big Lunch in his community which catalysed an email chain to discuss any issues or further events. He now knows his neighbours and regularly pops in to ask for advice on local services. Due to a 'simple lunch', families with children are socialising together and friendships have formed.

Another example of the inspiration provided through initiatives like The Big Lunch is provided by Anthea Coldman. Anthea got inspiration from the Eden Community Camp and decided to learn how to use social media to get to know her community. She created a survey on Facebook that motivated everyone in her village to start using social media. As a result of her efforts to connect her community, the village went on to successfully hold their first music festival, selling more than 500 tickets and raising £10,000 for the cancer ward at the local hospital. The festival has turned into an annual event and Anthea continues her efforts. She managed to get the old village telephone box converted to house a new defibrillator unit and is working towards providing safe walking paths to the village social hub.

The differences across the groups when we compare the number of connections are definitely more sizeable, but the reasoning is the same. The people involved in The Big Lunch only are, for our purposes, involved in one community activity[12], while the people in the other two groups are involved in, on

[12] This can be considered infrequent in the case of the Big Lunch only, but will be more frequent for those involved in Big Lunch Extras as well.

average, three community activities. They thus have more opportunities to create new connections. However, interestingly, we calculated the number of connections per community activity and found that, on average, the number of connections made is ultimately the same per community activity for any of the three groups (6 connections).

The aforementioned Opinium survey found that 44% of respondents have some form of social interaction with a friend, neighbour or family member every day in a typical week and 40% interact with these most days of the week. It was also found that only 11% interact with friends, neighbours or family members once a week. Moreover, the respondents stated they wish they could spend, on average, 60 minutes each day having some form of social interaction with friends, neighbours or family members. As we can see in Table 5 above, involvement in community activities, including infrequent activities like The Big Lunch, can be effective in inspiring connections and in providing a platform for levels of social interaction to increase to the levels desired by the Opinium survey respondents.

When we compare the number of days on which people keep in touch with others in person, the differences are likewise more subtle on closer examination. This suggests that people involved solely in The Big Lunch, despite less of them reportedly keeping in touch (in our survey), for those who do, the number and quality of the connections made appear comparable on a per activity basis with the people involved in community activities, despite the comparable infrequency of The Big Lunch.

There are numerous studies, some of which we pointed to in Section 2, on how networking can improve career chances by putting people in contact with those who are in a position to introduce them to new job opportunities or sources of investment for a project. Having a diverse network can also have an impact on your 'quality' as a member of the labour force, since people who face different cultures or situations outside of their comfort zone in their daily lives are generally better able to transfer those skills to their work life. However, the manner in which people keep in touch influences the extent to which these benefits are harnessed.

The survey results appear to support this link between connections and career chances. 48% of the people who are involved in community activities keep in touch by starting a shared project and 17% kept in touch by developing a new skill. The equivalent figures for the group identified as engaging in community activities and The Big Lunch (CA&TBL) are very similar at 51% and 21% respectively. The equivalent numbers for The Big Lunch sample group (TBL) are 9% and 2% respectively. This suggests that the connections made through The Big Lunch are less centred on common activities like a shared project, skills development or exercise, and more centred on neighbourliness – sharing a cup of tea or a meal and conversation and company. This is examined further in Section 5 below.

The example of Nicholas Okwulu is illustrative of the importance of the networks of connections formed at community events. Nicholas is the founder of People Empowering People, a Community Interest Company that supports locals to develop their skills and find work. According to Nicholas, running a Big Lunch not only brought him together with other people, but it created the opportunity for people to discuss their ideas and issues with him so that he was better equipped to support them in moving forward with their lives.

4.3 The impact of community activities on the members of society

According to the same Eden Project Research (using the same survey carried by Opinium in 2015), 60% of those who say they feel lonely think that having more interaction with friends, neighbours and family would make them feel less lonely or prevent them from feeling lonely. Participating in community activities can impact not only on the people involved but also on the community and society as a whole

because, once people start being more connected and feeling that they belong to the community, their behaviour towards others, the community and society as a whole can change as a consequence.

Maria Billington is an example of how a community event lead to vast impacts on the community. Maria was involved in a community garden as part of the council run Gatis Adventure Playground. However, the site was destined for closure due to a lack of funding and she was struggling to find a way forward. After visiting the Eden Community Camp she was full of great ideas and determined that she could take on the building at Gatis as a community asset. She promptly set up a committee to develop a proposal to the council and local residents. The committee was given a six-month trial to have the building and grounds transferred to them as an asset. The site is now offering regular family play days, a Real Junk food café, a forest school area, gardening clubs, youth activities, sewing and cycling clubs and wild flower and nature clubs.

The impact on participants

There are notable differences between the sample groups in terms of the impact of their community involvement on the participants. While the CA and CA&TBL groups are remarkably similar on most measures, the values for people who do not take part in community activity at any other time of year apart from The Big Lunch are notably lower, as presented in Table 6 below. This again is not entirely unexpected. The Big Lunch is an annual event as compared with the more frequent nature of the types of community activities cited by respondents. People in the TBL group may understandably have felt that they did not know their connections well enough or see them often enough to be able to pass judgement as to some of the effects that we asked about.

Table 6: Impact of community activities on others

% of people who...	TBL	CA	CA&TBL
...believe they are providing help by staying in touch	35%	59%	64%
...observed an increase in the sense of community	19%	53%	61%
...witnessed a greater level of social engagement	9%	43%	51%
...detected higher levels of happiness	30%	45%	41%
...saw a rise in other people's health levels	7%	22%	21%
...observed people getting more physically active	11%	28%	31%
...perceived other people feeling safer	6%	21%	21%
...witnessed a surge in self-confidence/self-esteem	13%	36%	34%
...consider there are was a proliferation of positive social behaviour	15%	27%	29%

Source: Survey analysis

What is clear is that community activities, including The Big Lunch, are perceived to be making a difference in terms of revealing opportunities to help others, increasing the sense of community (community cohesion), increasing levels of social engagement, happiness, confidence and self-esteem, improving health and lifestyle and increasingly positive social behaviour in general. This is evident specifically for The Big Lunch not only from the data for the TBL group but also from the differences

between the CA&TBL and CA groups. While the data lead us to conclude that the differences between the TBL group and the CA/CA&TBL groups are most likely driven by the frequency of the activity, the corollary to this is that, for the effects to be more widespread, there needs to be more frequent participation, since only through repeated participation can individuals 'renew' these effects.

But neither can we ignore the so-called 'Eden Effect' mentioned by several Community Camp participants. According to the Eden Project research, 85% of people holding a Big Lunch feel better about where they live, while 65% of those involved in The Big Lunch say they wish to do more within their community and 66% feel more confident about getting involved in community events. There is a vast list of case studies reporting situations in which people who get involved in a Big Lunch feel motivated to participate in the Eden Community Camps as part of Big Lunch Extras – which are associated with more frequent activities. There is also evidence that 65% of Big Lunch organisers have taken part in other community activities as a result of their involvement. The important point being that there is evidence to suggest that The Big Lunch can work as a catalyst for involvement in more regular community participation. Hence, we cannot exclude the possibility that, if The Big Lunch did not exist, there might be several people in the 'CA&TBL' sample group who would not be involved in any community activity at all.

When people participate in a community event, such as The Big Lunch, they have the opportunity to learn new skills, such gardening or arts and crafts. This learning process is often triggered because of the need to help out in a specific community project, but these skills are transferable to numerous spheres of someone's life. An illustrative story is that of Stephanie Wright. Stephanie got involved with the Bicester Big Lunch via a music project that she was already running. Before becoming involved in The Big Lunch she felt isolated. Now she knows many more people in her community and feels much more confident. She even learned how to drive so she could help out at The Big Lunch event.

The latter analysis considered what respondents observed amongst other participants. Table 7 presents data for the three sample groups on what respondents observed as the effects on themselves of community participation.

The differences between the TBL group and the CA and CA/TBL groups are less stark than those observed in Table 6, but are nonetheless prevalent. We would likewise associate this with more of a willingness on the part of respondents to confidently assert an impact on themselves, but also with the fundamental difference in frequency between The Big Lunch and community activities which is still driving the differences between the TBL and CA/CA&TBL groups. But the aforementioned corollary still holds, in that more frequent participation is likely to enhance the effects that people perceive in themselves.

Table 7: Impact of community activities on you

% of people who...	TBL	CA	CA&TBL
...observed an increase in their sense of community	35%	66%	74%
...felt a greater level of social engagement	19%	51%	55%
...detected higher levels of happiness	41%	58%	54%
...saw a rise in their health levels	15%	24%	16%
...became more physically active	9%	25%	21%
...start feeling safer	20%	18%	17%
...witnessed a surge in their self-confidence/self-esteem	17%	39%	38%

Source: Survey analysis

The impact on the community and society

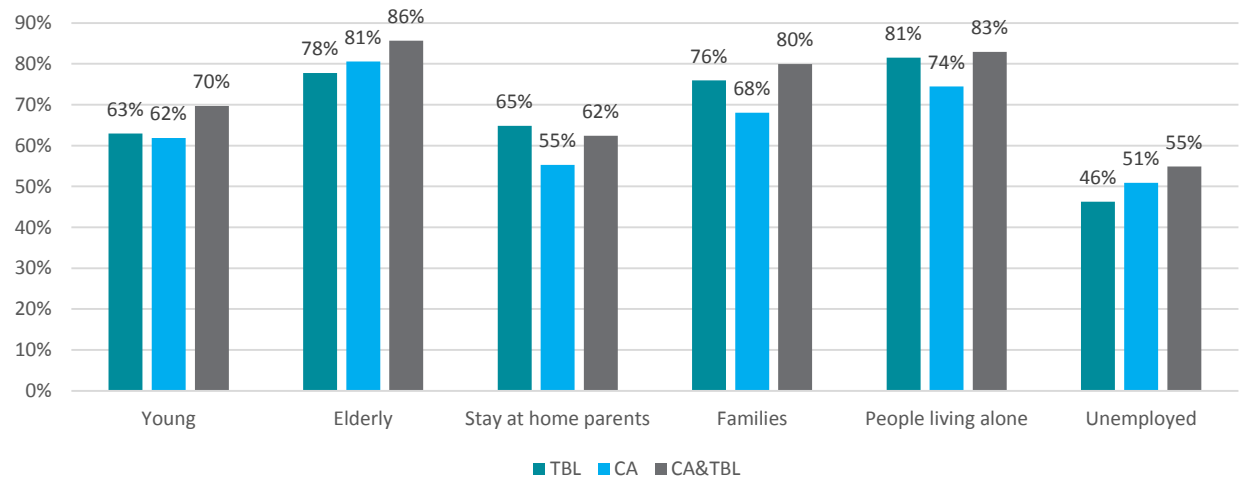
In the CA group, 63% of respondents stated that they have experienced situations in which community projects have increased interaction between people and/or reduced or prevented loneliness or social isolation. The equivalent figures for TBL group and the CA&TBL group are 30% and 67%, respectively.

Despite this sizeable difference between the TBL and the other groups in terms of being able to pinpoint specific situations, which again is most likely driven by the relative infrequency of The Big Lunch, when asked if they agreed that community projects have a positive impact on society as a whole the results were quite homogeneous across the three groups: 98% agreeing or strongly agreeing in the TBL group and the CA&TBL group and 96% in the CA group.

These numbers are in accordance with The Big Lunch Research Brief of 2016, in which 94% of Big Lunch participants believe it has a positive impact on the community and 88% say it makes them feel better about their neighbourhood. The same study reports 54% of organisers responding that the Big Lunch brought ethnic communities together and 47% believing that it made them feel less isolated, which reinforces the ideas described in the section above. Furthermore, for 9% of those organisers, the reason they decided to host a Big Lunch was in order to reduce their own feelings of isolation.

The groups were likewise homogeneous in terms of the people they perceive to benefit from community projects. Elderly and people living alone are the groups that are believed to benefit the most from community project, with between 78% and 86% of respondents (depending on the sample group to which they belonged) expressing this view, as illustrated by the second set of columns.

Figure 3: Who benefits from The Big Lunch, Big Lunch Extras or other activities in the community?



Source: Survey analysis

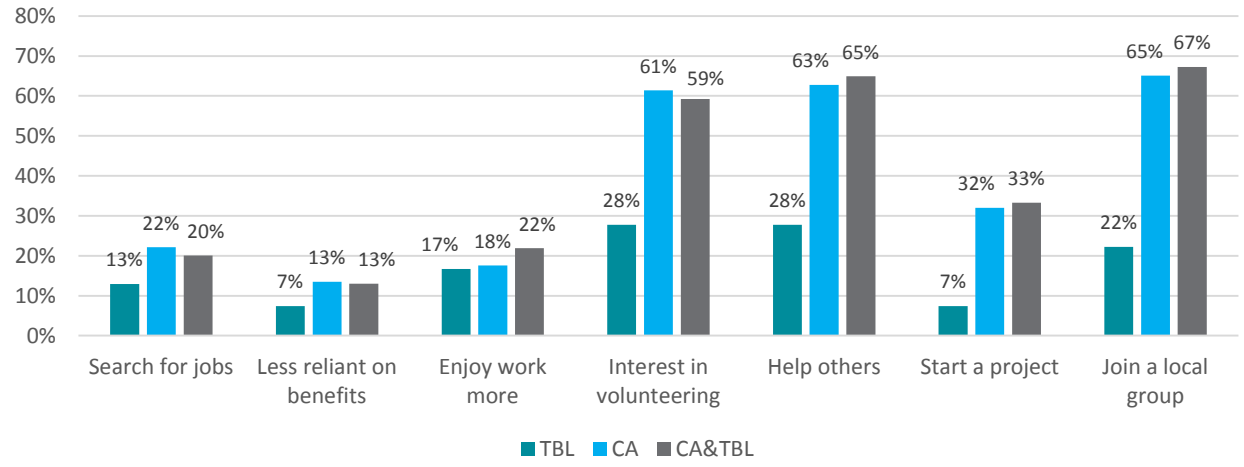
Across the sample groups, there was an almost undisputed view that the cost of running key community services is higher if the community is not connected and if people are lonely or socially isolated (less than 4% disagreed or strongly disagreed with this idea). Amongst these costs are policing, healthcare, social care, welfare and the environment and more than 70% of the respondents agreed or strongly agreed that this was the case in many of these areas.

The sample suggests that community initiatives can spur individuals into action, such as being more proactive in searching for a job or enjoying work more and being more productive as a result. Figure 4 below shows the proportion of respondents in each survey group that observed such and other effects as a result of participation in community activities. Amongst the CA and CA&TBL groups, high proportions observe the urge to volunteer, to help others and to join a local group as effects of community participation. These are all associated with health and wellbeing benefits and are the kinds of benefits that can reduce the demands on public services in the community.

The Eden Project Research Report (2013-2014) on the impact of Big Lunch Extras found similar results. It concluded that 94% of participants have taken action that drives Big Lunch events and other community activities in their neighbourhoods, 85% have started something new or developed their existing community work as result of Big Lunch extras, while 91% said that Big Lunch Extras has helped strengthen their sense of community where they live.

The case of Helen Gotts is an example of how small actions by individuals can have an impact on their community and even on people's health. Helen gives her time to a community garden project at the back of the local library. The community garden works with residents, schools and community groups, bringing people together to celebrate their area and increase awareness of healthy eating and food production. The Eden Community Camp gave her advice about different ways to engage communities and it motivated Helen to work with people who have mental health difficulties. Another example is the one of Christina Ashworth. After visiting the Eden Community Camp, Christina started to transform her local park by inviting people to come and plant spring bulbs with her. This simple gesture transformed the local park without using any public funds, making the park a more attractive place to spend time, which also lead to a series of regular public activities taking place in the park.

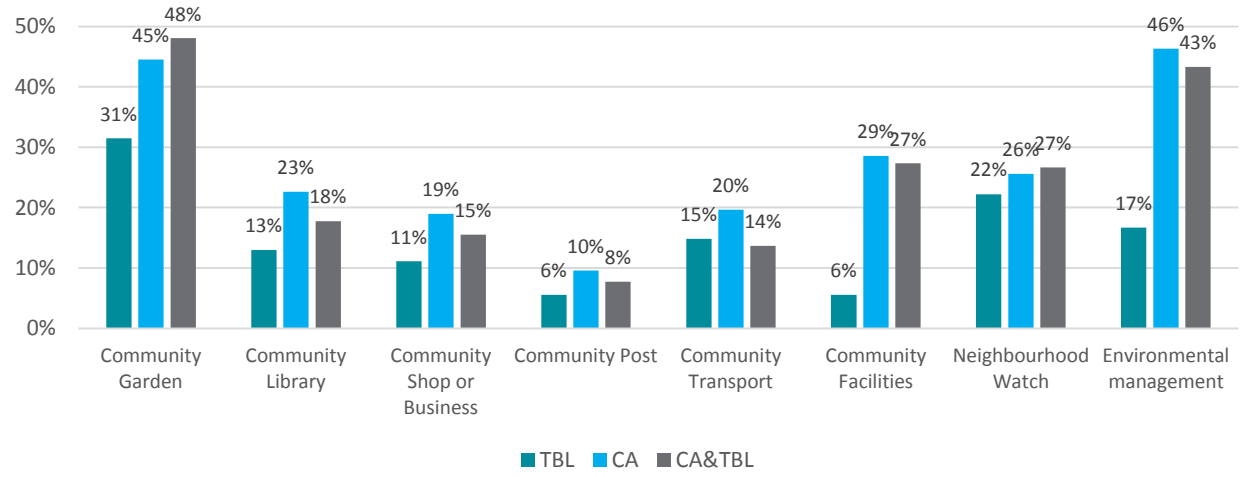
Figure 4: From your experiences of community projects, have you seen participants subsequently do more of the following?



Source: Survey analysis

Community activities can also alleviate pressure on public services by providing locally run alternatives to those services. One of the most commonly cited examples was neighbourhood watch schemes. The proportions of respondents citing this and other examples are illustrated in Figure 5 below.

Figure 5: Are you aware of any situations where community initiatives or projects (such as the following) have helped start or keep local services running?



Source: Survey analysis

Community gardening and environmental management were one of the top categories chosen by respondents across all survey groups. The latter includes activities such as litter picking and flood watch.

Although on most of the measures featured in Figure 4 and Figure 5 above, the TBL group scores lowest, their scores are not that different in several cases and are higher than the CA&TBL group on one measure – Community Transport. What is clear, therefore, is that the benefits of getting involved in community activities to both the individual and society overall are observable regardless of whether the individual is engaged once a year through an annual event such as The Big Lunch or is involved in more regular community activity. Whilst the results are stronger in the CA and CA&TBL groups, who engage

more regularly, the fact that an event involving a single day can have an impact at the levels illustrated is significant.

The survey evidence suggests that the benefits of getting involved increase when people take part in more regular activity. There is also evidence to suggest that joining a Big Lunch is likely to increase the probability of them getting involved in more community activities - separate Eden research suggests that 65% of those involved in a Big Lunch go on to do more activities within their communities afterwards. In other words, involvement in single one-off community events can act as a stepping stone to more community involvement, which has the potential to unlock even greater benefits to individuals and society, as demonstrated by the survey evidence and by the analysis later in this report.

There are many case studies (including some of those covered earlier in this report) in which people who visited the Eden Community Camp were inspired to start smaller scale 'Eden Camps' in their local community. These are places where people in the local community can meet to exchange ideas and feel inspired to create new projects such as, for example, a community garden. The community garden can be at the centre of several activities in the community where people meet and develop new skills, and the care of the gardens has the potential to reduce the demands on local government gardening and landscaping services, or at least increase the quality of the public space for a given level of such expense.

Anne Quinn was a member of her residents association and had just set up an allotment project before she joined Big Lunch Extras. She was hoping the Community Camp would give her more opportunities to network, exchange information and to gain knowledge that would benefit her in her efforts to increase the quality of her neighbourhood. The Community Camp boost gave her the confidence to apply for enough money to create a community orchard and to develop the idea of selling plants and excessive vegetables from her allotment, in order to generate an income for the group that was formed around her activities. She also developed a green space around the allotment for native grassland and trees.

5 The value of neighbourliness

This section makes use of the data from the survey to produce an estimate of the implicit value of neighbourliness through resources shared or help provided. Through the survey, we asked respondents to indicate the extent to which they are sharing resources or providing help to their neighbours in this manner and to provide indicative estimates of the value of such shared resources and help. This has enabled us to produce an estimate of the value to households of neighbourliness across the UK. This value can be thought of in terms of avoided expense that can be redirected to other discretionary spending.

5.1 Approach to the analysis in this section

The macro estimates of the implicit value of neighbourliness presented in this section involved extrapolating from our sample to the wider UK adult population. The analysis is based on the same split of the sample into four groups that was introduced in Table 1 in Subsection 2.3 and the same links to population sections introduced there. However, a number of further adjustments were required in order to put an implicit current value on neighbourliness. Specifically,

- We factored the 34.6 million section of the population that we have associated with not being community involved by the finding from the Nextdoor research that only two-thirds of the population know their neighbours. This provided an estimate of the number of UK adults who are not involved in community activities but who know their neighbours.
- We factored the population sections for each of the four sample groups (including the adjusted estimate for the group not involved in any community activities) by the proportion of people in each sample group that report sharing resources with their neighbours. Applying these shares was the final step because even those who know their neighbours and, regardless of whether they are involved in the community or not, does not necessarily have a bearing on whether they are on strong enough terms to be sharing resources.

The sizes of the sample groups and the corresponding population cohorts to which they are matched is presented in Table 8 below.

Table 8: Linking the sample the wider UK adult population, adjusted for the purposes of the analysis of neighbourliness

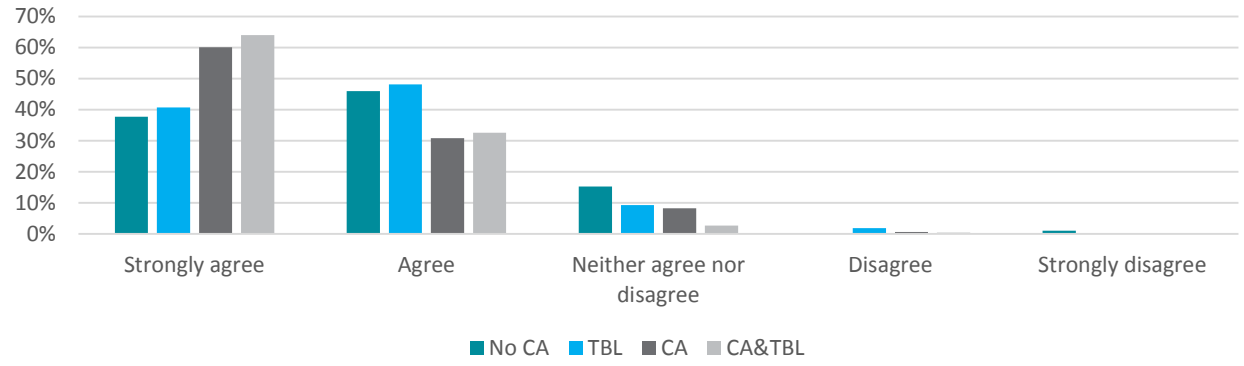
Groups by participation in...	# of people in the sample	# of people in wider UK population
No community activity	98	14,370,655
The Big Lunch only	54	804,103
Community activities only	438	8,720,322
Community activities and The Big Lunch	438	4,873,675
TOTAL	**1,028**	**28,768,755**

Source: Cebr analysis

5.2 The value of knowing one's neighbours

Figure 6 illustrates how the majority of people in all sample groups either strongly agree or agree that community projects enhance neighbourliness and increase social capital, including the No CA group.

Figure 6: Consider the following statement: "Community projects like The Big Lunch and Big Lunch Extras enhance neighbourliness and increase social capital in the community. Do you:

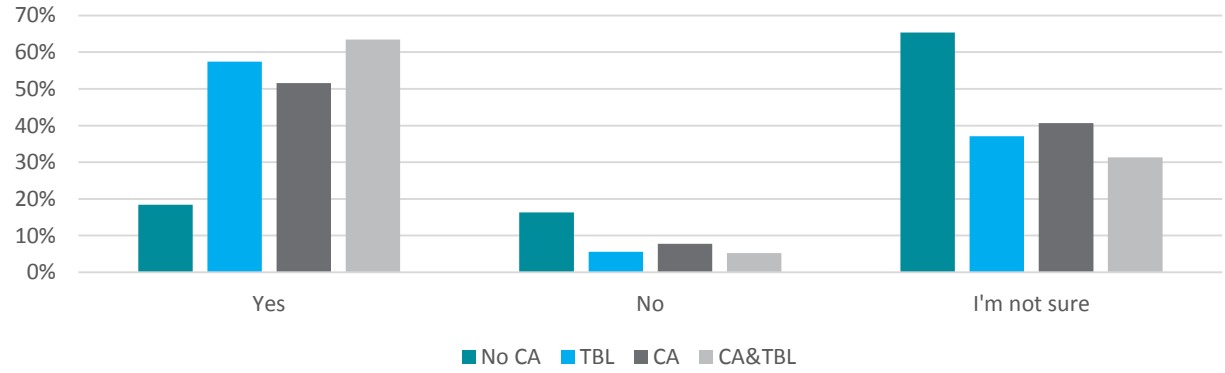


Source: Survey analysis

Regarding the impact of community activities on reducing isolation the results are pretty uniform across the active groups (TBL, CA and CA&TBL), but are rather different for the No CA group. As shown in Figure 7, larger proportions have doubts about this proposition in respect of the benefits of community activities and initiatives than observed up to now. This applies across groups but particularly so amongst the No CA group, with 65% saying they are not sure about this impact, compared with between 31% and 41% for the other groups. This can most likely be traced to the lack of first hand evidence of the benefits of community activities because they are not themselves involved.

However, the more important conclusion is that between 52% and 63% of those who do have first-hand evidence agreeing that neighbourliness, sharing, reduced isolation and loneliness has increased since The Big Lunch and Big Lunch Extras or any of the other community-led activities got started.

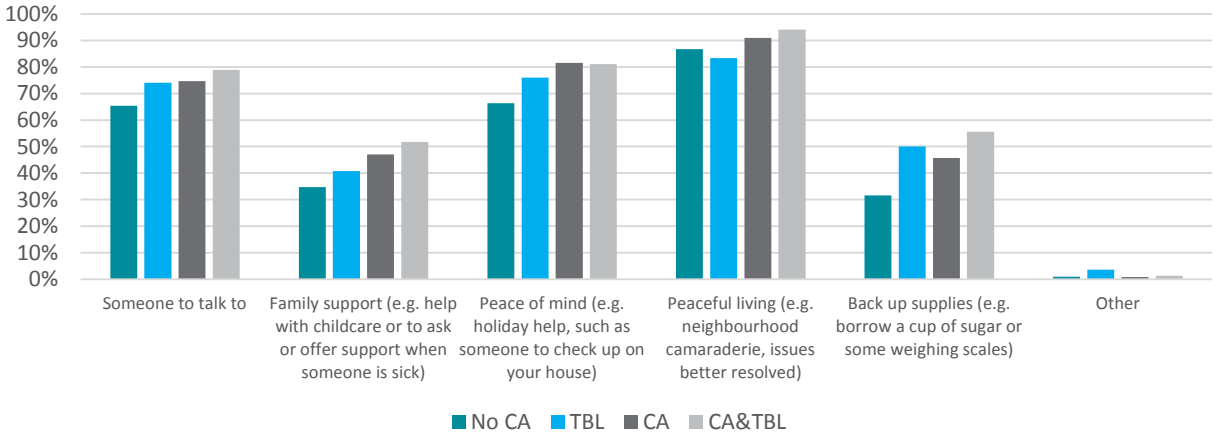
Figure 7: Would you say that this type of neighbourliness, sharing, reduced isolation and loneliness etc. has increased since The Big Lunch and Big Lunch Extras got started, or any of the other community-led activities you have described earlier in the survey?



Source: Survey analysis

We also asked respondents about the benefits of meeting and knowing their neighbours. Large proportions of the all sample groups were in agreement about the benefits suggested in the survey, with the proportions rising in most cases with the level of community engagement (that is moving through the groups from No CA up to CA&TBL). Peaceful living, peace of mind and someone to talk to all rated very highly. Family support and back-up supplies were less strong but still indicated as a benefit of knowing one's neighbours by significant proportions amongst all sample groups.

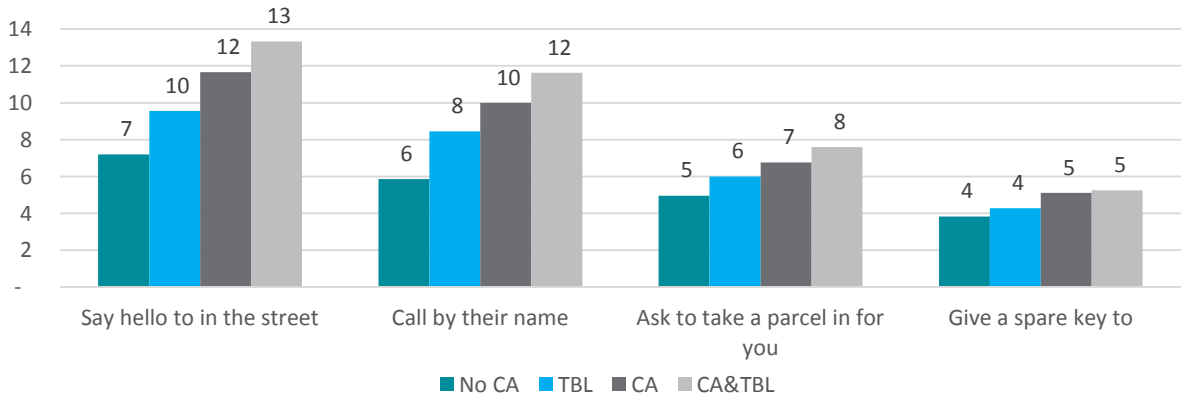
Figure 8: What do you consider to be the benefits of meeting and knowing your neighbours?[13]



Source: Survey analysis

Figure 9 below shows that people in the CA&TBL group know, on average, more neighbours than any of the other groups to say hello to in the street, call by their name or ask to take a parcel in for you. The ratings on giving a spare key are lower and more uniform across the groups. Similarly with taking in parcels, when compared with the other two factors. This is understandable in that relationships are not homogeneous and some will be stronger than others in overcoming the boundaries of trust. But what is apparent is that community activities, including The Big Lunch, appear to catalyse or at least be positively related to levels of neighbourliness.

Figure 9: How many of your neighbours do you know well enough to do any of the following?



Source: Survey analysis

5.3 Sharing of resources amongst the survey sample

Existing Eden Project research (reflected in the previously mentioned 2015 Opinium survey) suggests that the top things UK adults have done with their neighbours are to borrow/lend something (38%), to have a cup of tea together (34%) and to ask for/to give advice (33%). Additionally, 65% of UK adults know

[13] In this questions the respondents could select more than one category. Hence, the percentages do not sum to 100%.

their nearest neighbour well and they are on friendly terms. Below we study the possibility of these friendships between neighbours being turned into savings for the individuals involved.

Table 9 establishes the proportions of the sample groups that indicated that they share services with their neighbours. The range of services shared include childcare and babysitting, sharing transport and food, help with DIY and household tasks and sharing tools and equipment.

Table 9: Percentage of people who share the following services with their neighbours

Percentage of people who share services with their neighbours	No CA	TBL	CA	CA&TBL
Childcare/babysitting	30%	33%	30%	35%
Borrowing tools or household equipment	54%	59%	63%	68%
DIY help/home help	47%	54%	50%	57%
Sharing transport/getting lifts	44%	48%	56%	62%
Sharing food and vegetable surplus	52%	48%	57%	63%
Shopping help	37%	37%	38%	45%
Pet sitting/feeding	46%	57%	51%	57%
Gardening help	47%	46%	45%	52%
Other (e.g. car repairs, counselling)	33%	31%	29%	30%

Source: Survey analysis

There are not many discernible differences between the sample groups evident in this table, except that the CA&TBL group (the most community-engaged group in our sample) score the highest across all service categories but that, for activities where the level of trust in the relationship is important (e.g. childcare/babysitting), the difference are barely discernible.

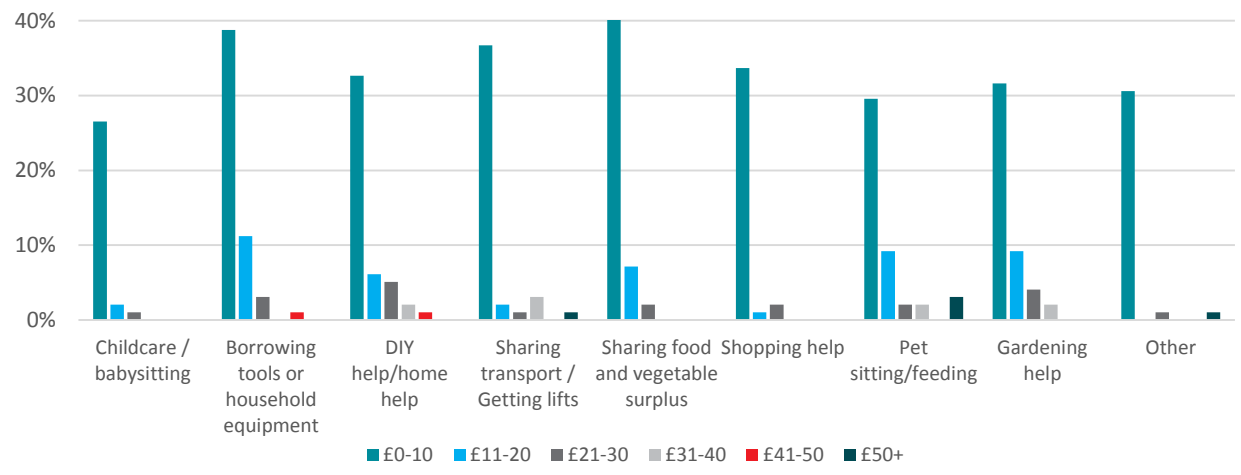
The scores for the TBL group are on a par with and sometimes greater than the scores for the CA group (representing those only involved in community activities that are more frequent in nature). The scores for the No CA group are, in most cases, lowest but are (under some of the service categories) equal to or greater than for the TBL group.

To the extent that involvement in initiatives like the Big Lunch and in other (more frequent) community activities is a driver of neighbourliness, it might be reasonable to suggest, on the basis of the above table, that The Big Lunch, on its own, is catalysing a sharing culture amongst neighbours that is on a par with levels observed amongst those who are regularly involved in other community activities and usually greater than levels observed for the No CA group. Likewise, the difference between the CA&TBL groups and the CA group might be attributed to a Big Lunch 'boost'. However, this cannot be interpreted as conclusive.

Figure 10 and Figure 11 are illustrative of the monthly savings made by sharing services such as baby sitting or borrowing items, for the sample group 'No CA' and the sample group 'CA&TBL', respectively. For the different shared service categories presented, respondents identified the amount of money they saved per month thanks to their neighbours. The bars show the percentage of people in the relevant sample group that identified a particular level of saving in a particular service category. For example, 40% of the people in the No CA group (Figure 10) identify a saving of £0-£10 as a result of sharing food and

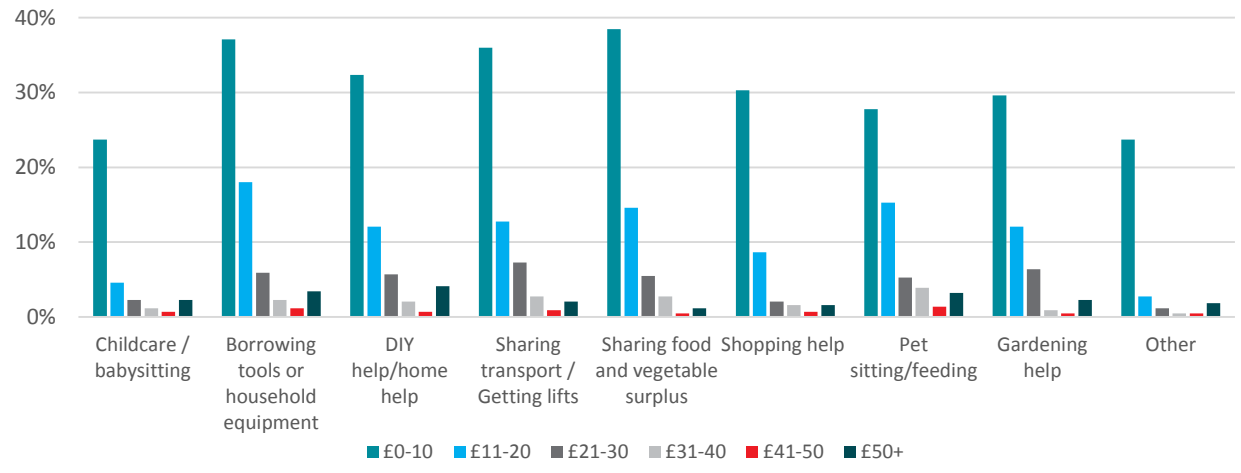
vegetable surplus. The results are very similar for the other sample groups that are not illustrated – the TBL and CA groups. For all sample groups, the lowest monetary value is the amount that most people feel they have saved by sharing by sharing with their neighbours, as illustrated by the high bars corresponding to the £0-£10 saving range in both figures below. However, in the case of the CA&TBL group, the proportion who share services in the higher savings ranges is greater.

Figure 10: Monthly value of shared services amongst neighbours in the No CA group (only respondents who do share services)



Source: Survey analysis

Figure 11: Monthly value of shared services amongst neighbours in the CA&BL group (without the respondents who do not share services)



Source: Survey analysis

5.4 A macro estimate of the value of neighbourliness

Using these survey findings, we calculated the savings per person for each of four sample groups. We then extrapolated from the sample groups to the wider population using the method outlined in subsection 5.1 above. The results are shown in the table below:

Table 10: The value of sharing resources with neighbours

Sample groups by participation in...	Savings per person per annum	Total savings	# of people in wider UK population
No community activity	£418	£5,999,601,881	14,370,655
The Big Lunch only	£509	£409,377,629	804,103
Community activities (only)	£522	£4,550,216,433	8,720,322
Community activities & The Big Lunch	£726	£3,537,155,712	4,873,675
TOTAL		**£14,496,351,655**	

Source: Cebr analysis

The total savings in the UK arising from sharing resources with neighbours is estimated to be just under £14.5 billion. This implicit value of neighbourliness, on a per person basis, is highest for the CA&TBL group at £726 per annum. The value is lowest for the No CA group at £418 per person per annum.

For those who participate in The Big Lunch only, the estimated savings are on a par with those estimated for the group who only participate in community activities only. The difference in the per person savings between the CA and CA&TBL groups might also be interpreted as the impact of The Big Lunch specifically.

This lends some support to the proposition that those who are active in the community are more inclined towards neighbourliness, and that The Big Lunch is building strong connections at the neighbourhood level, despite only being an annual event. In other words, those who are only involved in The Big Lunch, who might only have saved £418 or less because we know they are not involved in other community activities, are making a saving (£509) on a par with those who are more active in the community anyway (the CA group at £522). In fact, an additional £91 is saved on top of the £418 saved by those not involved in any activity in their community. The logical suggestion is that The Big Lunch is the reason for the difference.

Table 11 considers what the savings could be in a hypothetical scenario in which all UK adults not currently involved in community activities switch to being involved and those not currently sharing with their neighbours begin to do so as a result. This is based on population sections that were matched with the sample groups in Table 1 (subsection 2.3), but the No CA population section is added to the CA group to account for them now being involved in community activities. The factors applied to these population sections for the purposes of Table 8 above are also dropped.

Table 11: What if analysis: The value of sharing resources with neighbours in the hypothetical scenario of widespread community involvement and resulting neighbourliness

What if analysis : Sample groups by participation in...	Savings per person per annum	Total savings	# of people in wider UK population
The Big Lunch only	£509	£526,342,666	1,033,846
Community activities (only)	£522	£23,561,735,934	45,155,200
Community activities & The Big Lunch	£726	£4,547,771,630	6,266,154
TOTAL		**£28,635,850,230**	

Source: Cebr analysis

The differences between the savings presented in Table 10 and Table 11 are equated with the overall cost to society of disconnected communities, which is analysed is Section 7 below.

The two tables below show the implicit value of sharing resources with neighbours in the different nations and regions of the UK. In order to calculate these values we used the national and regional breakdowns of each of the four sample groups. For example, in the group 'CA' 11% of the respondents are from Wales. Therefore, 11% of the UK-wide neighbourliness saving in the 'CA' group is attributed to Wales.

The reason for using this sample breakdown - instead of something more generic like a population breakdown - was to try to capture the fact that some nations and regions are inherently more connected than others (a finding that was transmitted through the survey results and the desk research, including Eden Project's own research such as The Human Warming Map[14]). To use the UK population national and regional breakdown would be ignoring the fact that some places already have higher levels of connectedness.

These two tables also consider what the savings could be in a hypothetical scenario in which all UK adults not currently involved in community activities switch to being involved and the implications for the value of neighbourliness experienced in each nation and region.

Table 12: The value of sharing resources with neighbours and what if analysis (UK nations and regions)

Nation	Total savings	What if analysis
England	£11,633,265,603	£23,457,212,652
Wales	£1,264,647,017	£2,430,444,116
Scotland	£593,501,349	£953,132,583
Northern Ireland	£1,004,937,687	£1,795,060,879

Region	Total savings	What if analysis
East Midlands	£818,873,791	£1,663,971,269
East of England	£998,889,978	£1,835,862,177
Greater London	£1,667,616,786	£3,272,954,300
North East	£423,569,171	£853,432,125
North West	£1,355,304,049	£2,882,057,725
South East	£1,848,048,459	£3,387,792,320
South West	£2,485,406,063	£5,026,465,377
West Midlands	£1,187,261,861	£2,556,229,873
Yorkshire and the Humber	£848,295,445	£1,702,618,215

Source: Cebr analysis

[14] Eden Project Research

6 The benefits of well-connected communities

This section presents the findings of our attempts to measure the benefits of well-connected communities. We have adopted the same group split of the survey sample and the broad approach to extrapolating from the sample groups to the wider population as used and outlined in the Subsection 2.3 above, except that the No CA group (those not involved in any community activities) does not feature because they are not involved in their community and are therefore not considered to be deriving the benefits of community involvement. However, the No CA group is allocated to the CA group for the purposes of the 'what if?' analysis presented in this section – the benefits that could be realised if everybody became more active in their community.

The analysis in this section hinges on the data gathered in response to survey questions about the effects of community involvement and builds on the survey results presented in Section 4. For each group, we have developed assumptions about the potential magnitudes of the different effects arising from involvement in the community. We combined these assumptions with the wider population data and with a monetary proxy (one for each type of effect) to produce indicative estimates of the potential UK-wide benefits of well-connected communities.

6.1 Potential reduction in demands on public services

Community activities can alleviate the demands on public services by decreasing the need for those services. For example, increasing connectedness helping to reduce crime and the demands on policing but also by providing community-based alternatives to those services, such as neighbourhood watch initiatives. This section focuses on potential reductions in the demands on health services and on policing as a result of engagement in the community.

It is not unreasonable to consider the benefits measured here as potential net spending reductions by the government on public services. This is the basis for our analysis and, to that extent, each estimate should be viewed as an indicative maximum. This is because, in reality, the savings would more likely need to be viewed within the context of a fixed envelope of public spending (such as on health or security) and a consequent redirection of resources to potentially more productive uses as a result of the effects of the population increasing its levels of community involvement. Using this more bottom-up approach was beyond the scope of this study.

Value of potential reductions in demands on health services

Using anecdotal evidence revealed through our desk research on other community activities, and the fact that, as described in the literature review, there is a link between community activities and better health, we assumed that participation in community activities has the potential to reduce the average number of GP visits per person per year by 3 and the average number of nurse visits 0.48 per person per year.

The cost to the NHS of a GP visit is reported at £45 and the cost of a nurse visit at £34. Using these figures as our monetary proxies, the cost savings from the reduced demands on GPs and nurses are, on average, £151 per person per year as a result of community involvement. Extrapolating to the wider population in the manner described previously produced the results presented in Table 13.

The result is an estimated saving of £2.7 billion, if viewed as a potential net spending reduction on the health service.

Table 13: Effects of social cohesion on health services – reduction in demand (UK)

Sample groups by participation in...	Savings per person per annum	Total savings	# of people in wider UK population
The Big Lunch only	£151	£156,110,799	1,033,846
Community activities only		£1,589,165,821	10,524,277
Community activities and The Big Lunch		£946,189,201	6,266,154
TOTAL		**£2,691,465,821**	

Source: Cebr analysis

Table 14: What if analysis: Effects of social cohesion on health services – reduction in demand (UK) considers what the savings could be in a hypothetical scenario in which all those UK adults not currently involved in community switch to being involved. This 'what if?' approach attempts to measure the potential savings that could result from more widespread involvement amongst the population in community activities. The total savings could be as significant as £7.9 billion, which represents an increase of more than £5 billion.

Table 14: What if analysis: Effects of social cohesion on health services – reduction in demand (UK)

What if analysis : Sample groups by participation in...	Savings per person per annum	Total savings	# of people in wider UK population
The Big Lunch only	£151	£156,110,799	1,033,846
Community activities only		£6,818,435,200	45,155,200
Community activities and The Big Lunch		£946,189,201	6,266,154
TOTAL		**£7,920,735,200**	

Source: Cebr analysis

The difference between the estimates presented in Table 13 and Table 14 are again equated with the cost of disconnected communities, what is being lost by not having more widespread better connected communities.

The two tables below provide indicative breakdowns of these potential savings estimates across the UK nations and English regions. The method used for national and regional extrapolation mirrors that used and outlined in subsection 5.4 above.

Table 15: Effects of social cohesion on health services – reduction in demand and what if analysis (UK nations and English regions)

Nation	Total savings	What if analysis
England	£2,071,734,663	£6,500,605,668
Wales	£254,060,196	£680,939,329
Scotland	£148,952,868	£255,672,652
Northern Ireland	£216,718,094	£483,517,552

Region	Total savings	What if analysis
East Midlands	£145,432,691	£465,592,041
East of England	£157,464,448	£584,343,581
Greater London	£307,670,751	£894,629,559
North East	£74,394,133	£234,473,808
North West	£213,086,502	£800,045,310
South East	£385,065,559	£918,664,476
South West	£450,860,831	£1,411,338,880
West Midlands	£184,443,034	£718,041,950
Yorkshire and the Humber	£153,316,713	£473,476,063

Source: Cebr analysis

Value of potential reductions in demands on policing

Wedlock's (2006) research estimated the potential cost savings from a decrease in crime due to an increase in the sense of community in England and Wales. In 2015, crime in England and Wales was estimated to represent 94% of total crime in the UK (data from ONS and NISRA). Using this share we were able to extrapolate these results for the entire UK.

To illustrate the potential value of community involvement, we equate the effect of participation in community activities with Wedlock's one unit increase in sense of community. We thus assume that community involvement leads to a 1% reduction in crime, adopting Wedlock's lower range estimate. Based on Wedlock's estimates and using updated data, this would amount to a £205 million cost saving on police services.

Table 16: Effects of social cohesion on crime – reduction in demand (UK)

How crime changes with an increase in the sense of community		
Percentage decrease in crime	**Total decrease in crime**	**Potential cost savings**
1%	31,874	£205,319,149

Source: Wedlock (2006), Cebr analysis

These estimates hinge on the assumptions made. The idea that participation in community activities of the kinds cited by survey respondents leads to a one unit increase in sense of community does not seem outlandish when viewed alongside the survey evidence presented earlier in this report.

Alex Hall is an illustrative example of how community events can increase the sense of community and hence decrease crime levels. Alex, a manager of a local youth club, came away from the Big Lunch Extras bursting with ideas and inspired to do things she, her club and the local community would not have otherwise done. She now runs a range of craft activities, inspired by the Eden Community Camp, in the club's youth sessions. Getting inspiration from Eden's winter lantern parade, she decided to try to create the same even in East London, since her community often feels unsafe on the streets at night. In the month leading up to the parade, local school pupils and parents took part in lantern-making workshops,

creating the structures for the lanterns out of willow and other natural materials. This is how the so-called Lincoln Light Parade was born.

The tables below illustrate how the potential savings in policing would likely break down across the nations and regions.

Table 17: Effects of social cohesion on crime – reduction in demand (UK Nations and regions)

How crime changes with an increase in the sense of community		
Nation	**Total decrease in crime**	**Potential cost savings (£)**
England	28,464	183,350,000
Wales	1,498	9,650,000
Scotland	1,912	12,319,149
Northern Ireland	64	410,638

How crime changes with an increase in the sense of community		
Region	**Total decrease in crime**	**Potential cost savings (£)**
East Midlands	2,167	13,961,702
East of England	2,741	17,657,447
Greater London	5,897	37,984,043
North East	1,275	8,212,766
North West	3,952	25,459,574
South East	4,112	26,486,170
South West	2,327	14,988,298
West Midlands	2,741	17,657,447
Yorkshire and the Humber	3,060	19,710,638

Source: Cebr analysis

6.2 Productivity gains to employers and the economy

This section considers the implications for employers and the economy in terms of the productivity benefits that they can derive from the improved health and educational outcomes that arise from community participation. We consider three channels through which productivity benefits might be transmitted. As noted in Subsection 2.2 above, the estimates presented in this section do not just constitute an improvement in societal welfare, but also a potential net boost to the economy.

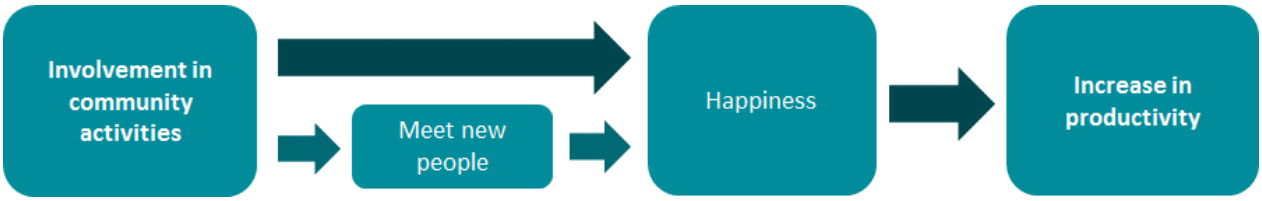
Happiness and Connections

The existing evidence outlined in Section 2 and the results of our survey support the idea of a link between involvement in community activities and people's happiness. Oswald (2009) estimated that happiness was associated with a 12% rise in productivity. We assume that involvement in community activities of the types described by our survey respondents (and including The Big Lunch) can be associated with a sufficiently large impact on happiness to trigger this 12% rise in productivity.[15] Combining this with average salary data as a proxy for the marginal productivity of workers, we were able to provide indicative monetary estimates of the potential productivity impact.

Community activities are also linked to happiness and associated productivity gains via a more indirect route. This is concerned with building connections. While some of them will not evolve any further, others will be transformed into friendships. Requena (1994) studied the relationship between friendship and happiness and concluded that there is strong evidence to support a positive relationship between the two (of 0.03). Such indirect impacts would already be accounted for in the first happiness calculation outlined above.

The chart below summarises how the two routes described above affect productivity.

Figure 12: Happiness and connections impact on productivity



Source: Cebr analysis

The productivity gains for an adult person in the UK via the direct happiness route correspond to an estimated £345 per year.[16] This was the estimate after the incorporation of assumptions about deadweight and attribution, necessary in trying to isolate the effect of community activities. Deadweight is concerned with what would have happened without the activity, while attribution seeks to assess whether there was anything else contributing to the change. There are no solid data on these, so we drew assumptions from the survey data, including:

- A deadweight rate of 59% which was calculated as the difference in the shares of survey respondents who perceived higher levels of happiness between the No CA and CA&TBL groups.
- An attribution rate of 75%, which was calculated using a previous Eden Project survey research on The Big Lunch, which suggests that, after participating in The Big Lunch, people were 25% more confident[17]. Essentially this involves attributing 25% of the increase in happiness, and thus of the increase in productivity, to increased confidence. This is purely for illustrative purposes.

[15] We make this assumption tentatively because we have no evidence to provide a basis for adjusting it should it need to be for the particular subject matter of this report. It is also important to note that a range of other factors must be considered as determinants of people's happiness. For some, therefore, community involvement may be perceived as having no role. For others, community involvement might just be the thing to unlock or substitute for these other factors that determine happiness.

[16] Of this, £2 per person per year is estimated to be attributable to the indirect happiness route.

[17] The Big Lunch Annual Research Report 2014

Table 18 shows the total productivity gains for the UK adult population, due to an increase in happiness. As in Section 4, we attributed these gains to the three sample groups that are engaged in the community. Our indicative estimates suggest a potential productivity gain attributable to community participation of about £6 billion.

Table 18: Effects of social cohesion on productivity – Happiness (UK)

Sample groups by participation in...	Savings per person per annum	Total savings	# of people in wider UK population
The Big Lunch only	£345	£356,676,992	1,033,846
Community activities only		£3,630,875,551	10,524,277
Community activities and The Big Lunch		£2,161,823,008	6,266,154
TOTAL		**£6,149,375,551**	

Source: Cebr analysis

In the table below, we produce a 'what if' analysis, which tries to assess what the benefits for the UK economy could be if the entire adult population participated in the community. Under this scenario, productivity gains in the UK could reach £18 billion.

Table 19: What if analysis: Effects of social cohesion on productivity – Happiness & Connections (UK)

What if analysis : Sample groups by participation in...	Savings per person per annum	Total savings	# of people in wider UK population
The Big Lunch only	£345	£356,676,992	1,033,846
Community activities only		£15,578,544,000	45,155,200
Community activities and The Big Lunch		£2,161,823,008	6,266,154
TOTAL		**£18,097,044,000**	

Source: Cebr analysis

The two tables below show how the estimated productivity benefits are likely to be broken down across the UK nations and regions. The same methods were used to produce these breakdowns as before.

Table 20: Effects of social cohesion on productivity and what if analysis – Happiness (UK nations and regions)

Nation	Total savings (direct route)	What if analysis
England	£4,733,433,501	£14,852,377,188
Wales	£580,468,659	£1,555,788,533
Scotland	£340,322,779	£584,152,747
Northern Ireland	£495,150,612	£1,104,725,533

Region	Total savings (direct route)	What if analysis
East Midlands	£332,279,989	£1,063,769,894
East of England	£359,769,765	£1,335,089,638
Greater London	£702,956,352	£2,044,021,177
North East	£169,973,351	£535,718,303
North West	£486,853,267	£1,827,918,093
South East	£879,785,550	£2,098,935,391
South West	£1,030,112,495	£3,224,582,210
West Midlands	£421,409,581	£1,640,559,423
Yorkshire and the Humber	£350,293,152	£1,081,783,057

Source: Cebr analysis

Physical Exercise and Health

Existing research documented a link between involvement in community activities and people getting more active, and hence healthier. The survey results also support the existence of this connection.

Cox et al (1981), Song et al (1982) and Shepard (1992) estimated a reduction of 22% in the total number of sick days as a result of greater physical activity. Assuming this reduction in sick days corresponds to a gain to productivity, we used average daily pay data from the ONS Annual Survey of Hours and Earnings (ASHE) with the ONS data on the number of sick days in the UK that can be attributed to illnesses that could be reduced through more exercise, catalysed by involvement in community activities and initiatives. We assumed the productivity gain therefore to be equal to 22% of UK sick days that are due to minor illnesses, headaches and migraines and musculoskeletal problems times average daily pay.

This amounts to £160 million, as presented in Table 20 below. As with the previous analysis, these estimates are obtained after making assumptions about attribution and deadweight. For deadweight, we assumed 70% on anecdotal evidence coming through our desk research and the attribution rate equals 25%. The latter was calculated using the ONS survey on wellbeing (by dividing the share of people in the group 'CA&TBL' which said were more active by the share of people in the UK population who participate in at least 30 minutes of sport at moderate intensity at least once a week).[18]

[18] The logic behind this assumption is based on comparing the typical person in the UK that says he/she is physically active (the ONS wellbeing survey only had a comparable share for sports) with the share of people that do community activities and therefore are more active from our survey. Our idea was to try to estimate a part of the UK share of people that are more active for who greater activity is "caused" by participation in community activities like The Big Lunch and others mentioned by our survey respondents.

Table 21: Effects of social cohesion on productivity – More Active & Healthier (UK)

Sample groups by participation in...	Savings per person per annum	Total savings	# of people in wider UK population
The Big Lunch only	£9	£9,304,617	1,033,846
Community activities only		£94,718,493	10,524,277
Community activities and The Big Lunch		£56,395,383	6,266,154
TOTAL		**£160,418,493**	

Source: Cebr analysis

In the table below, we provide the same 'what if' analysis. This suggests that the benefits that result from healthier and more active lifestyles, catalysed by community involvement, could rise to £472 million if all those not currently involved started to become involved. This is an increase of more than £312 million, which can be equated with what is being lost as a result of having low community participation or, in other words, the cost of disconnected communities.

Table 22: What if analysis: Effects of social cohesion on productivity – More Active & Healthier (UK)

What if analysis : Sample groups by participation in...	Savings per person per annum	Total savings	# of people in wider UK population
The Big Lunch only	£9	£9,304,617	1,033,846
Community activities only		£406,396,800	45,155,200
Community activities and The Big Lunch		£56,395,383	6,266,154
TOTAL		**£472,096,800**	

Source: Cebr analysis

The two tables below show the productivity gains due to an increase in the levels pf physical activity and health for the UK nations and regions.

Table 23: Effects of social cohesion on productivity and what if analysis – More Active & Healthier (UK nations and regions)

Nation	Total savings	What if analysis
England	£123,480,874	£387,453,318
Wales	£15,142,661	£40,585,788
Scotland	£8,877,986	£15,238,767
Northern Ireland	£12,916,972	£28,818,927

Region	Total savings	What if analysis
East Midlands	£8,668,174	£27,750,519
East of England	£9,385,298	£34,828,425
Greater London	£18,337,992	£53,322,292
North East	£4,434,087	£13,975,260
North West	£12,700,520	£47,684,820
South East	£22,950,927	£54,754,836
South West	£26,872,500	£84,119,536
West Midlands	£10,993,293	£42,797,202
Yorkshire and the Humber	£9,138,082	£28,220,428

Source: Cebr analysis

Stress levels and self-esteem

There is plenty literature on the negative impacts of loneliness and social exclusion on stress and self-esteem. There is complementary research on how community activities can combat feelings of loneliness and social exclusion, which enabled us to establish a link between participation in community activities and people feeling more self-confident and having lower stress levels. The survey results also support the existence of this link.

Using the idea explored by Cox et al (1981), Song et al (1982) and Shepard (1992) regarding how physical activity affects the number of sick days, we assume that there is a similar impact of community activities on the number of sick days due to stress, anxiety and depression, for which there are separate ONS data. We then followed the same approach as in the previous subsection, valuing these sick days according to average levels of pay from the ASHE database. Due to a lack of data on how the number of sick days might decrease, we assumed that one-third of sick days associated with stress, anxiety and depression would disappear. This produces an estimate of over £53 million, or £3 per person per annum.

In this case, the deadweight was assumed to be 69% (calculated as the difference in the shares of survey respondents who perceived lower levels of stress between the group 'CA&BL' and 'No CA'). The attribution rate is assumed to be 36%, and was calculated using the ONS survey on wellbeing (by dividing the share of people in the group 'CA&TBL' who reported having lower stress levels by the share of people in the UK population who rated their anxiety levels as very low.[19]

[19] The thinking behind this assumption involved assuming that the ONS estimates on wellbeing are a representation of the median-man in the UK. By dividing the survey share by the ONS share, we were endeavouring to produce an estimate of the part of the median-man result – here in terms of anxiety - is due to participation in community activities.

Table 24: Effects of social cohesion on productivity – Lower stress & Higher self-esteem (UK)

Sample groups by participation in...	Savings per person per annum	Total savings	# of people in wider UK population
The Big Lunch only	£3	£3,101,539	1,033,846
Community activities only		£31,572,831	10,524,277
Community activities and The Big Lunch		£18,798,461	6,266,154
TOTAL		**£53,472,831**	

Source: Cebr analysis

The table below shows the same a scenario analysis as before, in which we assess what the impact could be if everyone in the UK was involved in their community. Under this scenario, the gains in the UK would reach £175 million, which represents an increase of more than £100 million.

Table 25: What if analysis: Effects of social cohesion on productivity – Lower stress & Higher self-esteem (UK)

What if analysis : Sample groups by participation in...	Savings per person per annum	Total savings	# of people in wider UK population
The Big Lunch only	£3	£3,101,539	1,033,846
Community activities only		£135,465,600	45,155,200
Community activities and The Big Lunch		£18,798,461	6,266,154
TOTAL		**£157,365,600**	

Source: Cebr analysis

The two tables below show how these UK-wide productivity gains associated with reductions in stress and increases in self-esteem, again catalysed by more widespread community involvement, break down across the nations of the UK and the English regions.

Table 26: Effects of social cohesion on productivity and what if analysis – Lower stress & Higher self-esteem (UK nations and regions)

Nation	Total savings	What if analysis
England	£41,160,291	£129,151,106
Wales	£5,047,554	£13,528,596
Scotland	£2,959,329	£5,079,589
Northern Ireland	£4,305,657	£9,606,309

Region	Total savings	What if analysis
East Midlands	£2,889,391	£9,250,173
East of England	£3,128,433	£11,609,475
Greater London	£6,112,664	£17,774,097
North East	£1,478,029	£4,658,420
North West	£4,233,507	£15,894,940
South East	£7,650,309	£18,251,612
South West	£8,957,500	£28,039,845
West Midlands	£3,664,431	£14,265,734
Yorkshire and the Humber	£3,046,027	£9,406,809

Source: Cebr analysis

7 The cost of disconnected communities

Sections 5 and 6 presented two sets of estimates under six benefit categories, including neighbourliness, reduced demands on public services (health and policing), and improvements in productivity through each of improved happiness, better health through activity/exercise and lower stress and improved self-esteem. Under each benefit category:

- The first set of estimates represent the value of the societal welfare improvements being generated from levels of community activity prevalent today (as reflected in our survey results).
- The second set of estimates represent the value that could be realised in a hypothetical situation (hence, the 'what if?' analysis) in which all UK adults engage more in their community and begin to derive the benefits being experienced by those who are already engaged.

As noted previously, we have equated the difference between the estimates from the 'what if?' and the first set of estimates reflecting the situation today as the opportunity cost or what is being lost as a result of having less connected communities.

Table 27: Cebr's estimates of the cost of disconnected communities (millions)

Country	Neighbourliness	Health Services	Policing Services	Happiness	Physical exercise and Health	Stress levels and Self-esteem	Total
UK	£14,139	£5,229	£205	£11,948	£312	£104	**£31,937**

Source: Cebr analysis

In Table 27, the £14 billion value under neighbourliness is the difference between the present day estimate of £14.4 billion (Table 10) and the 'what if?' estimate of £28.6 billion (Table 11). Applying the same method to the other benefit categories produced an estimate of the potential welfare loss associated with disconnected communities of £32 billion. The potential net economic loss could be as high as £12.3 billion in terms of worker productivity.[20]

Table 28 presents our estimates of how these costs of disconnected communities are distributed amongst the four nations of the UK.

Table 28: Cebr's estimates of the cost of disconnected communities – nations (millions)

Nation	Neighbourliness	Health Services	Policing Services	Happiness	Physical exercise and Health	Stress levels and Self-esteem	Total
England	£11,824	£4,429	£183	£10,119	£264	£88	**£26,907**
Wales	£1,166	£427	£10	£975	£25	£8	**£2,612**
Scotland	£360	£107	£12	£244	£6	£2	**£731**
Northern Ireland	£790	£267	£0.4	£610	£16	£5	**£1,688**

[20] Recall subsection 2.2, in which we distinguished between improvements in societal welfare that can and cannot be counted as net economic gains.

Source: Cebr analysis

Table 29 presents our estimates of how the costs of disconnected communities in England is distributed amongst the nine English regions.

Table 29: Cebr's estimates of the cost of disconnected communities – English regions (millions)

Region	Neighbourliness	Health Services	Policing Services	Happiness	Physical exercise and Health	Stress levels and Self-esteem	Total
East Midlands	£845	£320	£14	£731	£19	£6	**£1,936**
East of England	£837	£427	£18	£975	£25	£8	**£2,291**
Greater London	£1,605	£587	£38	£1,341	£35	£12	**£3,618**
North East	£430	£160	£8	£366	£10	£3	**£977**
North West	£1,527	£587	£25	£1,341	£35	£12	**£3,527**
South East	£1,540	£534	£26	£1,219	£32	£11	**£3,361**
South West	£2,541	£960	£15	£2,194	£57	£19	**£5,787**
West Midlands	£1,369	£534	£18	£1,219	£32	£11	**£3,182**
Yorkshire and the Humber	£854	£320	£20	£731	£19	£6	**£1,951**

Source: Cebr analysis

Annex I: Bibliography

Amlani, N. M., & Munir, F. (2014). Does physical activity have an impact on sickness absence? A review. Sports Medicine, 44(7), 887-907.

Bailey*, R. (2005). Evaluating the relationship between physical education, sport and social inclusion. Educational review, 57(1), 71-90.

Belfiore, E. (2002). Art as a means of alleviating social exclusion: Does it really work? A critique of instrumental cultural policies and social impact studies in the UK. International journal of cultural policy, 8(1), 91-106.

Berkman, L. F., & Syme, S. L. (1979). Social networks, host resistance, and mortality: a nine-year follow-up study of Alameda County residents. American journal of Epidemiology, 109(2), 186-204.

Boardman, J., Knapp, M., Lelliott, P., Harvey S., Henderson, M., & Tulloch, S. (2008). Mental Health and Work. Royal College of Psychiatrists

Brand, S., & Price, R. (2000). The economic and social costs of crime. London: Home Office.

Clark, A. E., & Oswald, A. J. (2002). A simple statistical method for measuring how life events affect happiness. International Journal of Epidemiology, 31(6), 1139-1144.

Crisp, R., McCarthy L., Parr, S., & Pearson S. (2016).Community-led approaches to reducing poverty in neighbourhoods: A review of evidence and practice. Joseph Rowntree Foundation.

Coffé, H., & Geys, B. (2005). Institutional performance and social capital: An application to the local government level. Journal of Urban Affairs, 27(5), 485-501.

Coleman, J. S. (1988). Social capital in the creation of human capital. American journal of sociology, S95-S120.

Collins, A., & Wrigley J. (2014). Neighbourhood approach to loneliness contribute to people's wellbeing? Joseph Rowntree Foundation.

Cook, R. (2012). Social Exclusion in Scotland. Glasgow: Scotland Institute.

Co – Op & British Red Cross (2016).Trapped in a Bubble. December 2016. An investigation into triggers for loneliness in the UK.

Davies, T., Hull, D., & Swersky, A. (2016). The community Business Market in 2016. Power to change.

Department for Communities and Local government. (2009).The Economic Case for Cohesion.

Di Tella, R., MacCulloch, R. J., & Oswald, A. J. (2003). The macroeconomics of happiness. Review of Economics and Statistics, 85(4), 809-827.

Dolan, P., Peasgood, T., & White, M. (2008). Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective well-being. Journal of economic psychology, 29(1), 94-122.

Dolan, P., & Metcalfe, R. (2011). Measuring subjective wellbeing for public policy: Recommendations on measures.

Dunbar, R. (2016). Breaking Bread Report on a National Survey for The Big Lunch.

Eden Project. (2013). Big Lunch Extras Pilot Research.

Eden Project. (2015) Research Report 2013-2015.

Eden Project. (2014). Annual Research Report 2014.

Eden Project. (2015) Research Report 2013-2015.

Eden Project. (2015).Big Lunch 2015 Research Debrief (October 2015).

Egan, M., & Lawson, L. (2012). Residents' Perspectives of Health and Its Social Contexts: Qualitative Findings from Three of Glasgow's Transformational Regeneration Areas. GoWell, Glasgow.

Ericksen, E., & Yancey, W. (1980). The locus of strong ties. Unpublished manuscript, Department of Sociology, Temple University, Philadelphia.

Evans, J., Macrory, I., & Randall, C. (2015). Measuring National Well-being: Life in the UK, 2015. Office for National Statistics.

Ferguson, Z. (2016). Kinder Communities: The power of everyday relationships. Joseph Rowntree Foundation.

Foa, R. (2011). The economic rationale for social cohesion–The cross-country evidence. Roberto Foa, Harvard University.

Fujiwara, D. (2014). Measuring the social impact of community investment: the methodology paper. London, Housing Associations Charitable Trust (HACT).

Granovetter, M. S. (1973). The strength of weak ties. American journal of sociology, 1360-1380.

Granovetter, M. S. (1995). Getting a job: A study of contacts and careers. University of Chicago Press.

Grootaert, C. (2001). The missing link. Social capital and participation in everyday life, 23(8).

Health and Safety Statistics. (2016). Work related Stress, Anxiety and Depression Statistics in Great Britain 2016.

Helliwell, J. F. (2003). How's life? Combining individual and national variables to explain subjective well-being. Economic modelling, 20(2), 331-360.

Helliwell, J. F., & Putnam, R. D. (2004). The social context of well-being. Philosophical transactions-royal society of London series B biological sciences, 1435-1446.

Hirschfield, A., & Bowers, K. J. (1997). The effect of social cohesion on levels of recorded crime in disadvantaged areas. Urban Studies, 34(8), 1275-1295.

Holt-Lunstad, J., Smith, T. B., Baker, M., Harris, T., & Stephenson, D. (2015). Loneliness and social isolation as risk factors for mortality a meta-analytic review. Perspectives on Psychological Science, 10(2), 227-237.

Index, U. P. (2013). Exploring the Fabric of Peace in the UK from 2003 to 2012. Institute for Economics and Peace Sydney.

Jackson, J., & Stafford, M. (2009). Public health and fear of crime a prospective cohort study. British Journal of Criminology.

Kawachi, I., Kennedy, B. P., Lochner, K., & Prothrow-Stith, D. (1997). Social capital, income inequality, and mortality. American journal of public health, 87(9), 1491-1498.

Knack, S., & Keefer, P. (1997). Does social capital have an economic payoff? A cross-country investigation. The Quarterly journal of economics, 1251-1288.

Knack, S. (2002). Social capital and the quality of government: Evidence from the states. American Journal of Political Science, 772-785.

Knowles, S., & Weatherston, C. R. (2006). Informal institutions and cross-country income differences. University of Otago, Department of Economics.

Mackenbach, J. P., Meerding, W. J., & Kunst, A. E. (2010). Economic costs of health inequalities in the European Union. Journal of Epidemiology and Community Health, jech-2010.

McCrone, P. R., Dhanasiri, S., Patel, A., Knapp, M., & Lawton-Smith, S. (2008). Paying the price: the cost of mental health care in England to 2026. King's Fund.

Narayan, D., & Pritchett, L. (1999). Cents and sociability: Household income and social capital in rural Tanzania. Economic development and cultural change, 47(4), 871-897.

Nextdoor (2016). One Poll Survey.

Nicholls, J., Lawlor, E., Neitzert, E., & Goodspeed, T. (2009). A guide to social return on investment. London: Office of the Third Sector, The Cabinet Office.

Oswald, A. J., Proto, E., & Sgroi, D. (2009). Happiness and productivity.

Parsfield, M. (2015). Community Capital: the value of connected communities.

Pichler, F. (2010). Foundations of anti-immigrant sentiment: The variable nature of perceived group threat across changing European societies, 2002-2006. International Journal of Comparative Sociology, 51(6), 445-469

Putnam, R. D. (1993). The prosperous community. The american prospect, 4(13), 35-42.

Putnam, R. D. (2002). Community-based social capital and educational performance. Making good citizens: Education and civil society.

Rae, A., Hamilton, R., Crisp, R., & Powell, R. (2016). Overcoming deprivation and disconnection in UK cities.

Requena, F. (1995). Friendship and subjective well-being in Spain: A cross-national comparison with the United States. Social Indicators Research, 35(3), 271-288

Sampson, R. J., & Groves, W. B. (1989). Community structure and crime: Testing social-disorganization theory. American journal of sociology, 774-802.

Sampson, R. J., & Raudenbush, S. W. (1999). Systematic social observation of public spaces: A new look at disorder in urban Neighborhoods 1. American journal of sociology, 105(3), 603-651.

Scott, S., Knapp, M., Henderson, J., & Maughan, B. (2001). Financial cost of social exclusion: follow up study of antisocial children into adulthood. Bmj, 323(7306), 191.

Seyfang, G. (2001). Working for the Fenland dollar: an evaluation of local exchange trading schemes as an informal employment strategy to tackle social exclusion. Work, Employment & Society, 15(3), 581-593.

Seyfang, G. (2003). Growing cohesive communities one favour at a time: social exclusion, active citizenship and time banks. International Journal of urban and regional Research, 27(3), 699-706.

Shaw, C. R., & McKay, H. D. (1942). Juvenile delinquency and urban areas. Chicago, Ill.

Svoboda, B. (1994). Sport and physical activity as a socialisation environment: Scientific review part 1. Strasbourg, France: Council of Europe.

Tabellini, G. (2005). The role of the state in economic development. Kyklos, 58(2), 283-303.

The Big Lunch (2015). Opinium Survey.

Thomas, C. M., & Morris, S. (2003). Cost of depression among adults in England in 2000. The British Journal of Psychiatry, 183(6), 514-519.

Wallace, J., & Schmuecker, K. (2012). Shifting the dial: From wellbeing measures to policy practice.

Wedlock, E. (2006). Crime and cohesive communities. London: Home Office.

Zak, P. J., & Knack, S. (2001). Trust and growth. The economic journal, 111(470), 295-321.

Annex II: Further case studies

Cebr was requested by the Eden Project Communities team to draw on existing case studies as a way of further demonstrating the impacts of community involvement presented in this report. Cebr has drawn on this evidence throughout the main report. Here, they are gathered together in one place with some additional case studies provided below. The case studies presented here are from the book "A space to connect: The Big Lunch Programme an Eden Project".

One of the underlying hypotheses of this report is that, when people join a community activity they have the opportunity to learn new skills, such as gardening or arts and crafts. Many times this learning process is triggered because of the need to help out in a specific community project, but these skills are transferable to numerous spheres of life.

Stephanie Wright - Bicester

Stephanie got involved with the Bicester Big Lunch via a music project that she was already running. Before becoming involved in The Big Lunch she felt isolated. Now she knows many more people in her community and feels much more confident. She even learned how to drive to help out at The Big Lunch event.

Anthea Coldman - Norfolk

Anthea got inspiration from joining Big Lunch Extras and attending the Eden Community Camp and decided to learn how to use social media to get to know her community. She created a survey on Facebook that motivated everyone in her village to start using social media. As a result of her efforts to connect her community, the village went on to successfully hold the first music festival, selling more than 500 tickets and raising £10,000 for the cancer ward at the local hospital. The festival turned into an annual event and Anthea continues her efforts. She managed to get the old village telephone box to house a new defibrillator kit and is working towards providing safe walking paths to the village social hub.

Even events that are less frequent, such as The Big Lunch, are able to motivate people to start new groups after getting to know their neighbours and community, a good example are the neighbourhood watch initiatives repeatedly mentioned by the respondents to the survey deployed as part of this study. These groups are responsible for creating relationships which should last long and motivate people to keep participating in the community.

Gwen Cook - Southend

Gwen arrived at the Eden Community Camp feeling that what she was doing in her community was not significant. However, the Community Camp showed her how the 'small' things she was involved in were able to have an enormous positive impact. Feeling valued and empowered, she joined forces with a local bike shop and set up a cycling project catering for all ages and abilities called Just Ride. Sessions are held for people with disabilities and people who are in rehab after accidents and strokes. See more here: https://www.youtube.com/watch?v=C68A1ulvdYk.

Marcus Aitken- Cardiff

Twelve-year old Marcus was inspired to organise a Big Lunch after visiting the Eden Project. After this event – which he organised himself - the people in his neighbourhood developed a sense of community.

Since the lunch, the community decided to start a toddlers group, since there were many families with small children. See more here: http://ignite.wales/videos/my-big-lunch/.

The case studies also demonstrate how through involvement in initiatives like Big Lunch Extras and the Eden hosted Community Camps, people are inspired to start smaller scale versions of the Eden Camp in their local community. These are places where people in the local community can meet to exchange ideas and feel inspired to create new projects such as, for example, a community garden. These community gardens are at the centre of several activities in the community where people meet and develop new skills.

Helen Gotts - Wirral

Helen is lead of community garden project Grow Sow Well. The community garden works with residents, schools and community groups, bringing people together to celebrate their area and increase awareness of healthy eating and food production. The Eden Community Camp gave her advice about different ways to engage communities and it motivated Helen to work with people who have mental health difficulties.

Christina Ashworth - Liverpool

After visiting the Eden Project Community Camp, Christina started to transform her local park by inviting people to come and plant spring bulbs with her. This led to the birth of the Tree House Project, and the establishment a series of regular public activities in the park, including gardening, a green gym, 'philosophy in the park', and 'wild Fridays' for children.

Community involvement can help people to extend their network and meet potential employers or investors who are willing to invest their time and funds in projects that can be life-changing for the community.

Mike Managh - Folkestone

Mike is a specialist furniture maker from Folkestone. He describes his experience of joining Big Lunch Extras as life changing, as it led to him changing the focus of his company from a commercial venture to a social enterprise aiming to employ out-of-work people and ex-offenders to train in carpentry skills.

Nicholas Okwulu - Hackney

Nicholas was already a very active member of his community when he ran his first Big Lunch. As the founder of People Empowering People (known as PemPeople), a Community Interest Company that supports locals to develop, he describes how holding a Big Lunch not only brought people together but also created an opportunity for people to discuss their ideas so he could support them to move forward. Nicholas gained a lot of confidence from joining Big Lunch Extras.

Maria Billington - Wolverhampton

Maria was involved in a community garden as part of the council run Gatis Adventure Playground. However, the site was destined for closure due to a lack of funding and she was struggling to find a way forward. After visiting the Eden Community Camp she was full of great ideas and determined that she could take on the building at Gatis as a community asset. She set up a committee to develop a proposal to the council and local residents. The committee was given a six-month trial to have the building and

grounds transferred to them as an asset. Currently, they are now offering regular family play days, a Real Junk food Café, a forest school area, gardening clubs, youth activities, sewing and cycling clubs and wild flower and nature clubs.

Marie Greenhalgh - Manchester

Marie is determined to address loneliness and isolation for older people in her community by providing befriending schemes and social events. Feeling a bit overwhelmed by what she had taken on, she joined the Big Lunch Extras. When she went home, feeling a renewed vigour, she got a community coffee event for older isolated people off the ground at the local pub. In September 2014, Marie registered her project as a Community Interest Company, allowing her to receive funding to continue its services and to employ a part-time staff member.

Alex Hall – East London

Alex, manager of a local youth club, came away from Big Lunch Extras bursting with ideas and inspired to do things she, her club and the local community wouldn't have otherwise done. She now runs a range of craft activities inspired by the Eden Community Camp in the clubs youth sessions. Getting inspiration from Eden's winter lantern parade, she decided to try to create the same event in East London, since her community often feels unsafe on the streets at night. In the month leading up to the parade, local school pupils and parents took part in lantern-making workshops, creating the structures for the lanterns out of willow and other natural materials. This is how the Lincoln Light Parade was born.