



Green Gym Evaluation Report



“I feel fitter and better being outside”

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Foreword

The financial constraints on the health and social care system have placed significant strain on the NHS and social care provision. However, it has also offered an opportunity to rethink how we get to grips with some of the demographic, health and lifestyle challenges we are facing, particularly for the most vulnerable in our society.

Engaging and interacting within our communities has been shown to boost our happiness, as we form a sense of belonging, build our confidence and learn new skills. As a result it makes us more resilient. Green Gym has taken these principles and coupled them with exercise and nature. The result is a hugely popular model combating many of the underlying causes of poor physical and psychological health.

The challenge for the TCV research team has been to gather diverse Green Gym experiences and turn them into concrete evidence. TCV asked NEF Consulting to support them in identifying and measuring Green Gym impact. It has been a task as exciting in its potential as it has been tough to deliver.

This report adds to the growing evidence base highlighting that Green Gym has a positive impact on wellbeing, and the ability to bring communities together, breaking down the social isolation that afflicts so many in our society.

Green Gym volunteers gain enormous practical benefits and some have had life-changing experiences beginning new careers, tackling long-standing health issues or building precious friendship networks. The wellbeing benefits are compelling and wider findings provide a base for stronger Green Gym evaluation systems going forward.

We hope you find this report informative and encourage anyone looking to improve or build a case for Green Gym to draw upon its conclusions.

Alison Freeman, Senior Consultant, New Economics Foundation (NEF) April 2016.

Section 1) Executive Summary

Green Gym is effective in both improving and maintaining physical and mental health. Key mechanisms include increasing physical activity levels and reducing social isolation by creating opportunities for people to work together in worthwhile outdoor activities. Reducing social isolation, improving the local environment and developing key employability skills are highly valued by volunteers. Green Gyms increase resilience, creating healthier individuals and communities that are better able to support themselves. Development of an internal insight function and creation of robust outcome metrics will strengthen Green Gym's ability to continue to offer inclusive and tailored projects to meet a wide range of needs.

Evaluation Objective 1: Build on the existing body of evidence - impact of Green Gyms on health and wellbeing and increased employability.

Recommendations:

- Strategic (national Green Gym business unit) - More robust evaluations using a comparison group - but not withholding access to potentially vulnerable Green Gym volunteers.
- Strategic (national Green Gym business unit) - Support licensed Green Gyms to collect and share (with TCV) core monitoring data on health, wellbeing and employability.
- Tactical (local Green Gyms) - Systematically gather informed consent from Green Gym volunteers for research purposes.
- Tactical (local Green Gyms) - Use technology to ensure research is as inclusive as possible.

While this study builds on the existing body of evidence, the very nature of the inclusive and tailored design of Green Gym makes it difficult to create more robust evaluations that typically require random sampling and a counterfactual:

Sampling choices are limited. It is not possible to draw a random sample of Green Gym volunteers across both community and direct delivery Green Gyms. It is not currently possible to contact volunteers (using contact details provided on joining Green Gym) for research purposes.

Next Steps: Changes made to the TCV Green Gym licence agreement for community led projects will give more emphasis to data requirements. We will support licensees to update and share data with us. Reviewing written consent forms will enable re-contact with volunteers at direct delivery projects for research purposes.

Creating a control group counterfactual is problematic. Those referred or signposted to Green Gym by 3rd party organisations typically have higher support requirements and a more acute need to participate in Green Gym. This group tends to be more socially isolated and experiencing, or at risk of experiencing, depression, anxiety or other mental health issues. Denying access (even for a short time) to such a vulnerable group for research purposes (in order to create a control group or similar) is unethical.

Next Steps: A control group approach is inappropriate for Green Gym evaluations at this time. It may be possible to construct a comparison by surveying a group with similar health and wellbeing needs and demographic profile in an area without a Green Gym or similar project. However – such an approach is likely to be complex and resource intensive.

Some Green Gym volunteers require a high level of support to participate in research.

Given the dispersed location of Green Gyms, competing pressures on the time of Green Gym Project Officers and the small size of the Green Gym research team, not all volunteer support needs can be met and a proportion of Green Gym volunteers willing, but unable to take part in research without help, will be excluded.

Next Steps: We will continue to look for solutions harnessing technology to remove as much of the respondent burden as possible. Possible solutions include a short battery of questions sent via text message, creation of an on-line panel and participatory methods such as photovoice and digital storytelling.

Evaluation Objective 2: Systematic monitoring and measurement of Green Gym outcomes.

Recommendations:

- Strategic (national Green Gym business unit) - Create Green Gym research strategy to support systematic monitoring and measurement of Green Gym outcomes.
- Strategic (national Green Gym business unit) - Develop and apply core measures to capture behavioural and health outcomes, data collection processes and information governance across all direct delivery Green Gyms.

Activity to deliver a systematic and comprehensive approach to monitoring is underway. A critical outcome of this study is the identification of a set of core measures to capture behavioural and health outcomes, data collection processes and information governance policies that will be used systematically and comprehensively across all Green Gyms.

Next Steps: Focusing on a small set of national indicators¹ with salience to Public Health England and NHS England stated goals, standardised monitoring information will be collected on physical activity levels and mental wellbeing at regular points in the volunteer's journey. We will look at collecting biometric data using wearable tech – as well as opportunities for collaboration with NHS Health Check teams.

Next Steps: A Green Gym research strategy will support the introduction of systematic monitoring and measurement of Green Gym outcomes.

¹ tested with Green Gym volunteers in this study and previous pilot study see appendix I

Evaluation Objective 3: Identify opportunities for learning, change and improvement to the Green Gym programme.

Recommendations:

- Segment Green Gym volunteer profiles.
- Include volunteer feedback in (new) key metrics dashboard.
- Regular feedback will be gained from and provided to referral partners.

More understanding is required of the different needs and motivations driving Green Gym participation across and between particular target groups.



Section 2) Introduction

This report is a central component of TCV's decision to significantly increase the scale of Green Gyms, with a clear view to supporting the UK's health and wellbeing agenda. It reviews the current body of evidence within TCV (and elsewhere) regarding Green Gym and considers monitoring procedures and mechanisms to both enhance and streamline reporting. It sets out the key areas for development across Green Gym that will enhance its credibility into health and clinical networks. Importantly, it captures the qualitative evidence from participants, sharing the sometimes life changing impact the Green Gym programme can have.

Green Gyms, natural exercise for community health, supports positive changes in the health of participants and the green spaces they create and maintain. Green Gyms work to transform people's health and wellbeing through weekly participation in outdoor activities, for example conservation, park management or food growing. By mobilising communities to come together, volunteers become physically active whilst improving their local area at the same time.

Previous Green Gym Research

A number of studies, using a range of methods, have indicated the positive impact Green Gyms have on individuals and their communities². However, many of these studies have been small scale, focusing on one Green Gym or a particular type of Green Gym (i.e. specialist support for volunteers with mental health needs), making it difficult to infer positive impact across all Green Gyms or all volunteer types. Other methodological problems have included high attrition rates in surveys which reflect on the robustness of the findings. Other difficulties include the use of bespoke, non-standardised, non-validated questionnaires making the reliability of any data produced by such questionnaires problematic. Moreover, the use of unique questionnaires negates opportunity for comparisons with population norms or comparison with groups not participating in Green Gym. Green Gyms are not unique in this respect. A recent systematic review carried out by the University of Exeter³ found that there is currently little robust quantitative evidence of the effect of outdoor activities on health and wellbeing. However, by 'testing' the plausibility of some of the key pathways using supplementary higher order evidence (reviews, RCTs etc.) they conclude that factors such as physical activity, social contact, exposure to the natural world, and sense of achievement are proven to be beneficial to health, projects that include these factors, such as Green Gym, are likely to be beneficial to health. Green Gym currently sits at level 1 in the Nesta levels of evidence⁴. We are committed to strengthening the evidence base for Green Gym, this report will contribute to that process.

² See appendix A

³ Lovell et al. BMC Public Health (2015) 15:864

⁴ See appendix G

Section 3) Green Gym

What is a Green Gym?

The Conservation Volunteers (TCV) and Dr William Bird created the Green Gym concept with the original model piloted in 1997 in partnership with Sonning Common Health Centre and in 1999 with East Sussex Brighton and Hove Health Authority.

Green Gyms are a weekly activity, running for 3-4 hours at a local community facility such as a park, usually in the day time on a weekday. Each Green Gym has up to 50-60 volunteers, with turnout on any one week typically ranging from six to 20.

Sessions include a warm-up, cool-down, and a wide range of gardening and land management activities. Intensity increases over time according to ability. Volunteers may begin with a light task such as potting seedlings and later move onto wheel barrowing gravel or soil. By increasing their activity, volunteers improve their fitness over time. They also develop a social network that provides peer support, and have higher levels of contact with the outdoors. This powerful combination helps volunteers to develop resilience against mental and physical health problems, and through learning how to manage green space, new skills, knowledge and confidence. The key objectives of Green Gyms are to improve volunteers:

- **Health and Wellbeing** – by increasing or maintaining fitness, reducing isolation and supporting better mental wellbeing.
- **Employability** – by increasing knowledge, skills and confidence.

Green Gyms run in a highly inclusive way and successfully engage with a very wide range of volunteers, including those where other organisations may struggle, including significant proportions of volunteers from very deprived backgrounds, and those with physical and mental health problems. As sessions run during the week, participants are typically not in full time work. People may simply turn up or be referred by local health, social care and voluntary sector partners. TCV initially manage and lead these sessions (for the first 18 months –to two years). Over this period of time, staff train and mentor participants to develop the skills and confidence to run the Green Gym themselves. From here, as they develop their skills base, groups may migrate to become self-sustaining and community-led, as an independently constituted community group.

Section 4) Current Health Context

There has been a sharp increase in conditions associated with sedentary lifestyles. Prevalence of type 2 diabetes in the UK has doubled in the last 20 years and is expected to reach 5m by 2020⁵. Sedentary behaviour is linked to overweight and obesity, some types of cancer and metabolic dysfunction. The total cost of inactivity in England has been estimated at £8.2 billion a year⁶. Poor physical health can lead to increased risk of developing mental health problems. Moreover, poor mental health can negatively impact on physical health. One in four British adults experience a mental health problem annually⁷ and the Kings Fund suggests interlinked psychological and physical health problems are costing the NHS alone more than £11 billion a year⁸.

According to the Five Year Forward view, sustainability of the NHS and the economic prosperity of Britain all depend on a radical upgrade in prevention and public health⁹. However, since 2010, a decline in Government funding, leading to cuts in local authority spending of up to 40%¹⁰, has reduced the ability of public services to work with and support communities to improve health and wellbeing. The current climate of austerity has created an additional drive to utilise and develop community projects which contribute to improving the social fabric of a community and create positive health and wellbeing outcomes for individuals.

While local authority budgets are declining, Green Gyms can provide a low cost 'gateway' activity to health and wellbeing improvement. Green Gyms reduce the demand for health and care services by getting those susceptible to preventable illnesses (more) active and, those affected by isolation and loneliness, into a socially inclusive environment. Green Gyms directly support the reduction of health inequalities by targeting recognised at risk groups. Specialist Green Gyms support people with learning disabilities, people with mental health problems, and the wider suicide prevention plan. A single Green Gym can impact a number of Public Health Outcomes Framework (PHOF) indicators (see list below) and offers an exit strategy for the NHS Health Check, significantly enhancing return on investment (ROI):

- 1.16 utilisation of outdoor space for exercise/health
- 1.18 social isolation
- 2.12 Excess weight in adults
- 2.13i & 2.13ii active and inactive adults
- 2.14 smoking prevalence
- 2.17 recorded diabetes
- 2.23 set – self reported wellbeing
- 4.04 set – CVD mortality rate

Green Gyms provide a social return on investment (SROI) of £4.02 for every £1 spent¹¹. Recent examination by the New Economics Foundation (NEF) found Green Gyms delivered

⁵ Harvey et al 2002, *J Epidemiol Community Health* 2002;56:18-23 doi:10.1136/jech.56.1.18

⁶ http://www.noo.org.uk/NOO_about_obesity/lifestyle

⁷ Adult Psychiatric Morbidity in England – 2007 - <http://www.hscic.gov.uk/pubs/psychiatricmorbidity07>

⁸ Bringing together Physical and Mental Health. <http://www.kingsfund.org.uk/publications/>

⁹ <https://www.england.nhs.uk/wp-content/uploads/2014/10/5yfv-web.pdf>

¹⁰ The Impact of Funding Reductions on Local Authorities. NAO 2014

¹¹ NEF / TCV (2015) *TCV's impact: Organisational Social Return On Investment. Summary findings* (for more information on this report contact n.munoz@tcv.org.uk)

significant financial benefits for volunteers themselves, the health service and wider community, in particular:

- Increasing the physical health of volunteers by an average of 33% - worth £2.6 million.
- Reducing social isolation – worth in excess of £700,000.
- Increasing wellbeing through ‘giving back’ to the local community and having fun – worth £400,000.

Green Gyms offer statutory agencies the opportunity to support the health and wellbeing of individuals, improve the local environment and develop social value by creating sustainable community organisations.

Plans to increase the number of Green Gyms

TCV plans to grow from around 100 to 600+ sustainable Green Gyms over the next five years. This will enable up to 15,500 people to engage in social action to improve their health and the places where they live. TCV’s ultimate goal is to create Green Gyms available to all, with everyone (in an urban area) having a Green Gym within a 10 minute walk of where they live. The scaling up of Green Gyms across the country is being supported by Nesta and the Cabinet Office, through the Centre for Social Action Innovation Fund. The Centre for Social Action Innovation Fund¹² supports the growth of innovations that mobilise people’s energy and talents to help each other, working alongside public services.



¹² <http://www.nesta.org.uk/project/centre-social-action-innovation-fund>

Section 5) Research Objectives

The evaluation

The aims of the evaluation are:

1. To build on the existing body of evidence, proving the impact of Green Gyms on health and wellbeing and increased employability.
2. To make recommendations for the further development of systematic monitoring and measurement of Green Gym outcomes.
3. To identify opportunities for learning, change and improvement to the Green Gym programme.

Research objective 1 - Demonstrating the health and wellbeing impact of Green Gym

TCV's vision is to create healthier, happier communities for everyone. Green Gym does this by bringing people together to revitalise local green spaces. Our volunteers become more active, improving their physical health, make more frequent and meaningful contact with others, reducing isolation and improving mental wellbeing and contributing to community cohesion. There is interest, amongst public health bodies, the NHS and health charities in using Green Gyms more widely as a health promotion intervention. Put simply, commissioners, service users and investors all need evidence to know whether the products or services they buy or invest in make a positive difference. Demonstrating and understanding our impact is essential to underpin and expand the Green Gym programme.



Research objective 2 – systematic monitoring and measurement of Green Gym outcomes

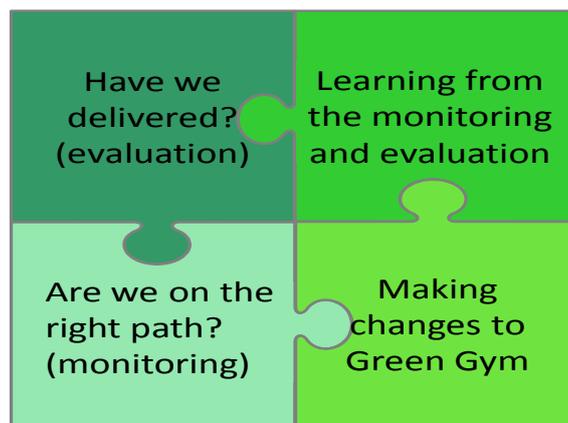
On joining, all Green Gym volunteers complete a ‘welfare form’¹³ capturing basic contact details including, demographic information on age, ethnicity, sexuality and health status. Further information on previous volunteering experience and consent for marketing activity such as taking photographs and sending newsletters is recorded.

Beyond basic information, regional and local variations exist. For example, in some areas, volunteers complete the physical activity readiness questionnaire (PAR-Q) and the Short Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS). A number of Green Gyms have collected data via the SF-12 Health Survey while other Green Gyms have opted for more qualitative approaches. A more tailored approach is taken where Green Gym funders have specific requirements. This results in bespoke tools used in a single or small number of Green Gyms. Overall, a range of tools and approaches are used. In line with building the evidence base for Green Gyms, there is a need for a consistent and systematic approach to monitoring and measurement of outcomes.

Research objective 3 - identify opportunities for learning, change and improvement to the Green Gym programme

As part of expansion plans, Green Gym is keen to explore ways to extend reach further into supporting beneficiaries with non-communicable diseases, for example cardiovascular disease or those living with chronic conditions such as musculoskeletal disorders. In addition, there are opportunities for Green Gyms to deliver therapeutic benefits in bringing together beneficiaries with a range of health conditions but with similar personal background experiences, for example ex service personnel. Moving forward to design and deliver new projects requires the ability to learn from monitoring and evaluation as part of the project cycle (see diagram below). This research project has identified a number of processes that would benefit from enhancement to further develop the Green Gym programme.

Monitoring and Evaluation Project Cycle



¹³ See appendix H

Section 6) Method

Design

A mixed method approach was used. A short questionnaire survey collected once a month, for three months (December 2015, Jan & Feb 2016) and a series of qualitative interviews with both volunteers and referral partners.

Questionnaires and Topic Guides

Both the survey and interviews gather information on the main Green Gym impact outcomes, better health and wellbeing and increased employability.

Figure 1 – Green Gym Logic Model

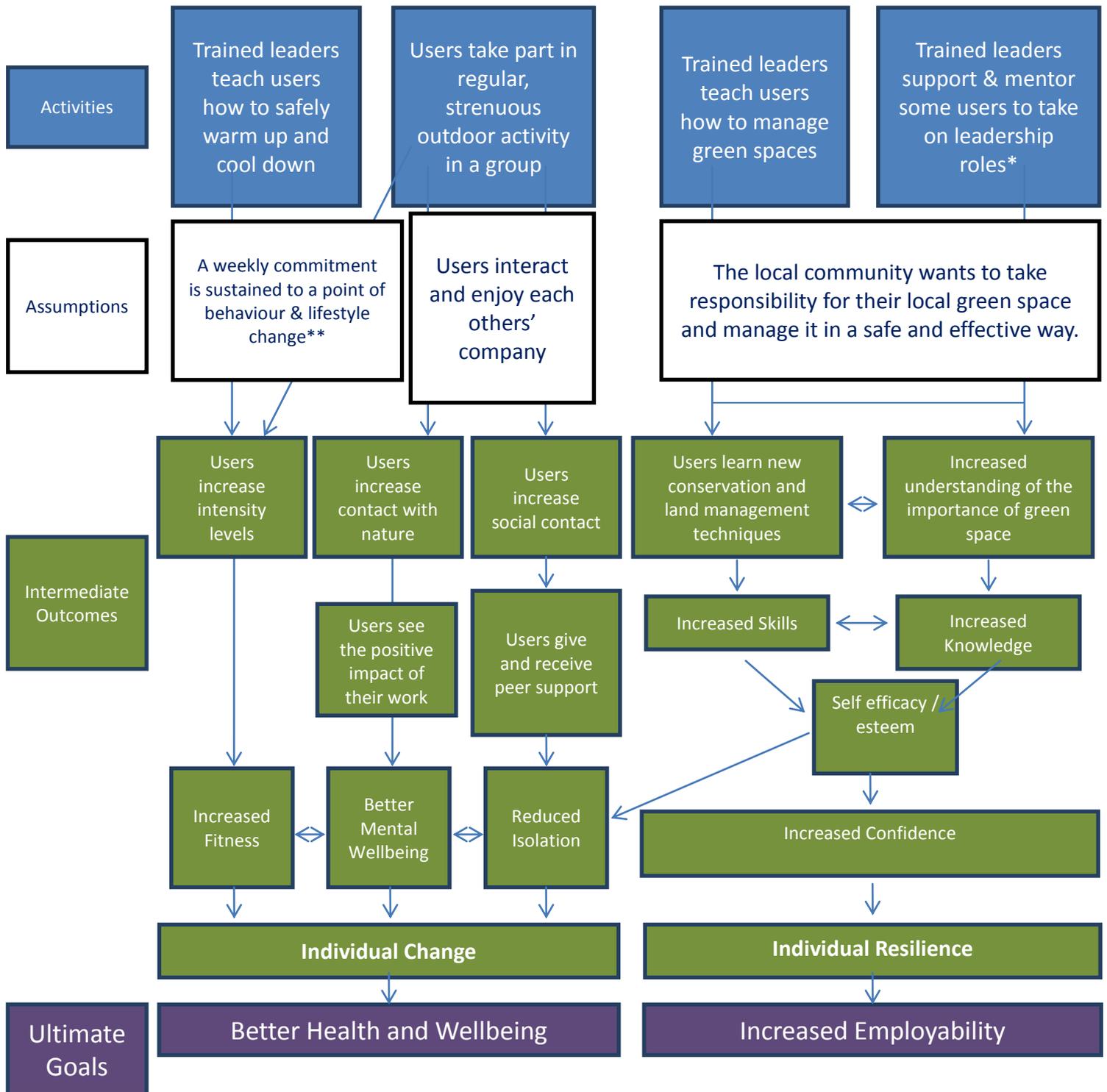


Figure 2 – Outcomes and Tools

The outcomes we measured		The tools we used to measure these outcomes
Better Health and Wellbeing	Motivation to join Green Gym	<ul style="list-style-type: none"> • Bespoke questions • Interviews with volunteers
	Increased fitness	<ul style="list-style-type: none"> • The International Physical Activity Questionnaire • Interviews with volunteers and referral partners
	Better mental wellbeing	<ul style="list-style-type: none"> • Shortened Warwick Edinburgh Mental Wellbeing Scale-WEMWBS • Office for National Statistics Wellbeing Questions • Interviews with volunteers • Interviews with referral partners
	Reduced Isolation	<ul style="list-style-type: none"> • Office for National Statistics Wellbeing Question • Interviews with volunteers
Increased Employability	Increased skills and knowledge	<ul style="list-style-type: none"> • Interviews with volunteers • Interviews with referral partners
	Increased confidence	<ul style="list-style-type: none"> • Interviews with volunteers

Demographic information was collected in the first month of the survey (baseline), and a small number of attribution questions were asked each month to assess the extent to which volunteers attributed their behaviour and feelings to Green Gym participation and being outdoors.

A fifth of volunteers either had no internet access to complete the survey on-line, or did not feel confident to do so. A proportion required significant support to take part in the research; this included, but was not exclusive to volunteers with mild to moderate learning difficulties. Some volunteers struggled to read and comprehend the written word fluently. This often appeared linked with a lack of confidence to attempt the task. A number of volunteers are limited in their ability to fully self-reflect in response to the qualitative interview process. This has implications for the quality of the data collected from some volunteers.

Figure 3 – Qualitative Interviews

Type of participant	Referral Partner	New Volunteer	Existing Volunteer
Number of volunteers	5	6	12
Number of interviews	Single interview	Paired interview ¹⁴	Single interview
Mode of interview	Telephone	Personal and telephone	Personal and telephone

Eighteen semi-structured qualitative interviews were conducted with volunteers from five Green Gyms, representing both urban and rural areas. Six of the 18 volunteers were new members (attending Green Gym for less than four weeks), with the remaining 12 active in Green Gyms for between six months – three years.

Single interviews were conducted with 12 volunteers in December 2015. Paired interviews (before and after) were conducted with new volunteers at the beginning of the study in December 2015 and at the end in February/March 2016.

Thirteen volunteers were interviewed in confidential spaces at Green Gym project sites and five were interviewed by telephone.

A further five interviews were conducted (over the telephone) with referral partners - organisations that formally or informally send their clients to Green Gyms (see appendix D for more information on the volunteers we interviewed and appendices E and F for the interview guides we used).

Analysis

Excel was used to collate and analyse the questionnaire data from Survey Monkey. Qualitative data was analysed using QDA Miner using a thematic and framework approach to identify themes and patterns in the data, with an emphasis on the transparency of data analysis¹⁵

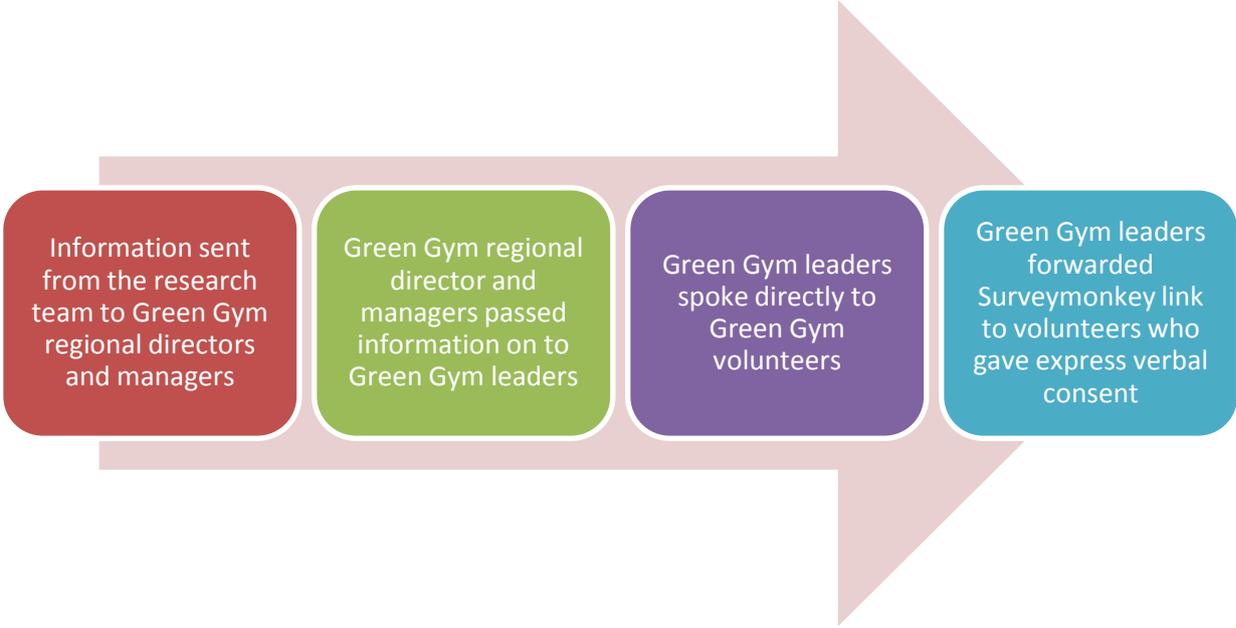
Quantitative Sampling and Data Collection

A pragmatic approach was taken to sampling both Green Gyms and volunteers for (see Figure 4 on next page):

¹⁴ 5 of the 7 were interviewed twice – once in December 2015 and again in March 2016

¹⁵ See appendix B for an example of the codes used to analyse volunteer interviews.

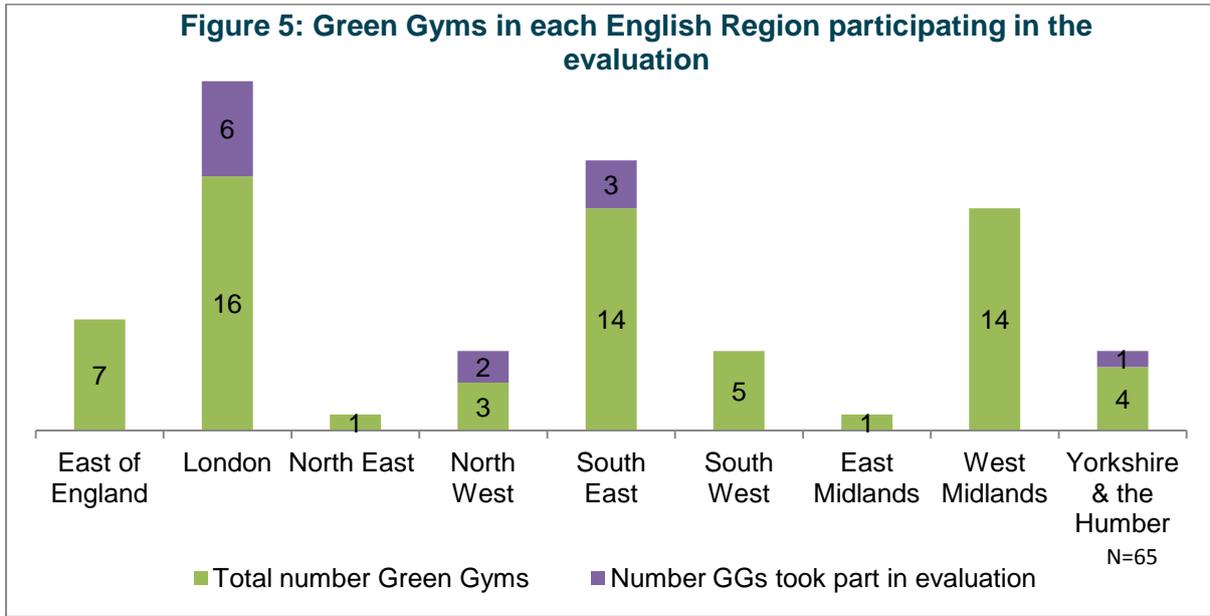
Figure 4 – Process used to recruit volunteers to the study



Section 7) Profile of Participating Green Gyms

Response from Green Gyms

Twelve Green Gyms took part in the study, representing 18% of all Green Gyms in England¹⁶. Seven direct delivery and five community led. Green Gyms based in four of the nine English regions participated in the study. Green Gyms in London and the South-East are disproportionately featured.



¹⁶ Records held on TVC's management information system (MIS) in December 2015 identified 65 Green Gyms (England only). Just under half (31) are direct delivery – run and organised by TCV staff with the rest (34) run by local communities.



Section 8) Profile of Participating Volunteers

Response from volunteers

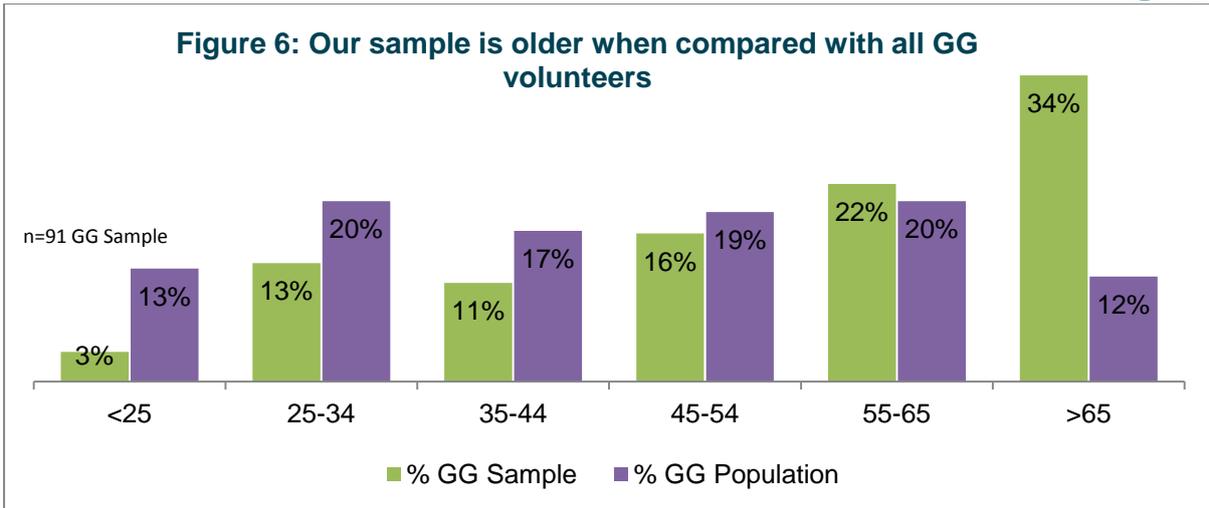
Ninety two volunteers from 12 Green Gyms across England returned baseline survey questionnaires. This represents 15% of all Green Gym volunteers over the two week survey period¹⁷. Of the 92 who completed the baseline in December 2015, 80 completed a further follow-up in January 2016 and 79 completed a second follow-up in February 2016. With 13 volunteers dropping out of their Green Gym over the three month period, the overall response rate (comparing the number completing the baseline with the number completing follow-up surveys) was 86%.

Profile of Participating Volunteers – Gender, Age and Ethnicity

Women, non-white ethnic minorities and those aged under 54 are under-represented in the survey sample¹⁸, with the largest disparity at the youngest age groups.

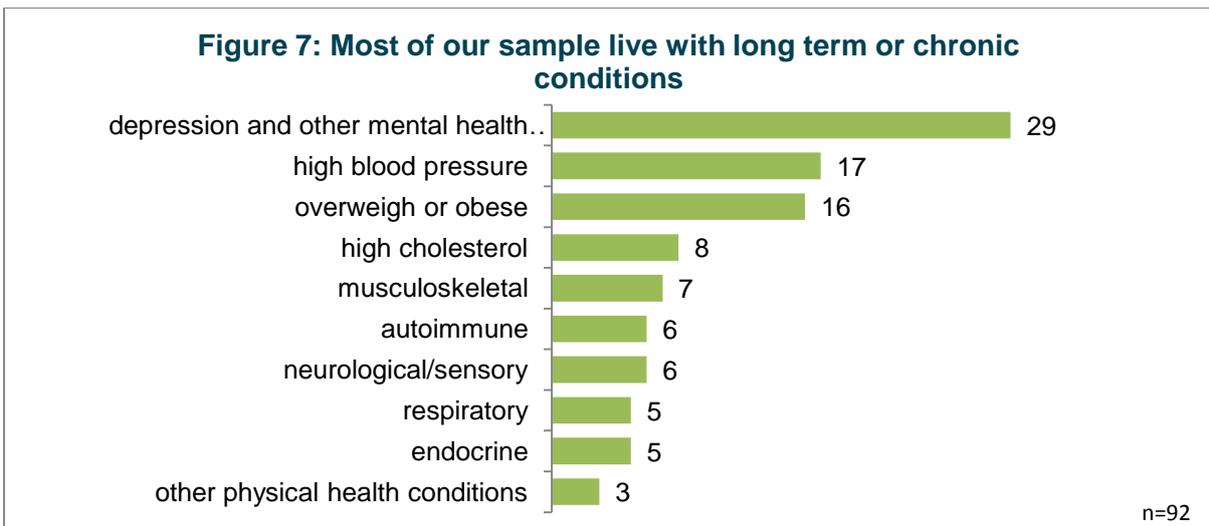
¹⁷ For the two week survey period in December 2015, 334 active volunteers are registered on TCV's management information system across 31 direct delivery Green Gyms, an average of 11 volunteers per Green Gym. Each community Green Gym is responsible for holding its own records and no central database exists from which the number of volunteers in all community Green Gyms can be ascertained. However, anecdotal information gathered from TCV Green Gym Project Officers (experienced in developing community Green Gym groups) suggests community run Green Gym groups are approximately 70% of the size of direct delivery Green Gyms. Using this fraction gives a population of 275 active volunteers (for the two week survey period in including December 2015) for the 34 community Green Gyms in England.

¹⁸ As compared with the population of all Green Gym volunteers in England in December 2015



Health Profile of Participating Volunteers

Many volunteers live with multiple physical and/or mental health conditions. Nearly a third (32%) of volunteers participating in the survey and nearly half of those interviewed (eight out of 18) are living with mental health conditions.



Volunteer Engagement with Green Gym

Nearly half of volunteers joined Green Gym more than two years ago with a further quarter joining between six months and two years ago. The remainder are new volunteers joining Green Gym within the last six months. Most volunteers are regular attendees, with nearly four out of five attending Green Gym once a week or more.

Attrition

Thirteen volunteers (who had completed the baseline survey) dropped out of Green Gym over the three month period and were, therefore, no longer eligible to take part in the evaluation. Volunteer attrition is a concern because loss of volunteers may result in subsequent data that is increasingly biased. Ten of the 13 who stopped attending Green Gym provided further information. A range of reasons for no longer attending Green Gym were given, including difficult family situations such as bereavement or personal health breakdown (five volunteers) or problems with benefits and social welfare payments (one volunteer). Positive outcomes, such as getting paid employment or taking an extended

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holiday out of the UK (four volunteers), were also given as reasons for no longer attending Green Gym. Despite multiple calls /emails, there was no further contact with three volunteers and their reasons for leaving Green gym are unknown.

Section 9) Referral Partners

Referral organisations

We spoke to five referral organisations about how they work with their local Green Gyms, how their clients benefit from Green Gym and what process improvements would add further value to the referral process.

How are referrals made to Green Gym?

A wide range of health, social care, employment, training organisations and voluntary sector bodies refer and signpost to Green Gyms. Types of relationships with partners include formal referrals via 'social prescribing', linking people (usually, but not exclusively, via primary care) with non-medical sources of support within the community, to more informal channels such as featuring Green Gym on partner websites, endorsing Green Gym to clients and sharing Green Gym literature.

The process of referring service users to Green Gym is similar throughout the organisations we spoke to, initially, clients are recommended Green Gym and their details are forwarded by telephone to Green Gym Project Officers / Volunteer Coordinator, who then arrange a visit directly with the client. Alternatively, referring organisations will simply ask clients to just turn up at a Green Gym session.

In general, referring organisations are happy with this system and believe it works well, primarily because it is low maintenance for the person making the referral, as it relies on conversations over the phone or face to face (f2f) rather than the completion of forms. However, the nature of the Green Gym Project Officer's work can mean that they are not always immediately available and this can create a delay in sharing information and making contact with new volunteers.

Referral organisations are increasingly moving towards more technology based solutions operating without an intermediary or 'broker' to match and place clients. New web-based systems allow potential volunteers to register their interest on-line. All projects that 'fit' the specifications identified automatically receive an indication of interest. Although such new systems will be faster at sharing indications of interest, those without internet access will undoubtedly be disadvantaged. Indicative assessments¹⁹ suggest a higher proportion - than the national average - of Green Gym volunteers do not have internet access at home and/or are not comfortable using it. Consequently, the potential pool of Green Gym volunteers may be affected by a shift from f2f to web-based solutions.

Current referral partners are great advocates for Green Gym, well informed about the benefits of participation: **"Definitely, definitely going to keep promoting it. It's a great opportunity to have, so I'll definitely keep sending it out to people and telling people of the benefits"**. It is not clear if or how the same degree of enthusiasm and advocacy can or will be transmitted via web-based solutions and the transition to new systems may impact on the number of Green Gym volunteers recruited.

¹⁹ From the 'Design Jam' event held in 2015 when planning the National Evaluation, the pilot carried out before the National Evaluation and from the data collection process of the National Evaluation in which a large proportion of volunteers used paper questionnaires due to lack of internet access or lack of confidence using on-line options.

Relationships between Green Gym Project Officers (primarily responsible for recruiting volunteers) and referral partners have often been built up over a number of years. Typically, referral partners are given the opportunity to join a session at their local Green Gym. Experiencing Green Gym for themselves and becoming more informed about Green Gym allows referral staff to better inform their clients. All Green Gym Project Officers are expected to have good knowledge and awareness of local referral partners. It is not clear what central systems are in place to support and refresh this process.

What do referral partners like about Green Gym?

Referrers identified two features of Green Gym that set it apart from many other volunteering opportunities and made it possible for them to consider it as an option for a wide range of client groups: flexibility and intensity. The flexibility of Green Gym, encouraging regular participation but (unlike some other volunteering opportunities) not mandating it or making it a condition of joining, allows volunteers to 'fit it in' when they can – still maintaining domestic or other commitments - for example - term time only or short term volunteering, in-between jobs or attending for just an hour each week rather than staying for the whole three hour session. **“Others [other volunteering projects] want you to come in once a week on a set day every week ... but the GG is more flexible so if they don't feel like coming for a day they don't have to ... [this is important] especially if people are suffering with mental health [conditions]...”**

The flexibility and intensity of Green Gym, the social element and being outdoors are strong reasons for referring clients. The variety and mix of people, and acceptance within projects are positive assets. One referral partner emphasised the inclusivity of the Green Gym: **“It's really good that they get to inter-mingle and mix with people and for them - particularly being homeless or having experience of homelessness - they're going to feel quite a lot of stigma. Going to a project where they are just another volunteer and people chat to them ... without necessarily knowing their case history - it's a really big, BIG positive thing for them.”**

Maintaining attendance and low drop-out rates, as compared to some other volunteer opportunities, is a clear indication, for referral partners, of the effectiveness of Green Gym for their clients.

What feedback would referral partners like to receive?

Referring organisations do not automatically receive formal feedback about their clients from Green Gym. Referral partners receive status updates on an ad-hoc basis direct from their clients. Feedback received is very positive, their clients greatly enjoy Green Gym sessions and referral partners report clients have an increase in motivation, improvement in mood, increased confidence, and a new sense of purpose. **“... when we check in with them that day and say, you know “how did it go?” they'll be very, very effusive of it and [talk about] how much they enjoyed it... you can just sort of see it in their expression and how they are talking about something [Green Gym] that is a big thing rather than [saying] “well I'm just feeling really depressed today and I haven't done anything.”**

Although referral partners feel that they could contact Project Officers for an update, they tend not to. Referral partners are keen to know what type of horticultural or community greening activities their client has engaged in, what progress they are making towards any agreed objectives and how much their clients are enjoying the experience. Regular, formal

feedback from Green Gym would be a useful tool particularly for more vulnerable volunteers as a way to 'flag' to referral partners the need for additional client support. Moreover, formal feedback is useful for funding applications from referral partners keen to increase the number of Green Gyms in their area.

Barriers in referring volunteers to Green Gym

When asked, referral partners could think of few reasons that would hinder referrals, however, capacity and the need for more Green Gyms was an issue. **“...so now there is no need for me to look at that GP referral route but that was always the plan -that it would be kind of the exercise on prescription referral route but now we're at capacity ...we don't need to do that but that was always the plan.”**

Having more Green Gyms available is only part of the solution. Carers or support workers from statutory agencies assist certain client groups to take part in Green Gym. Without staffing availability to give support, additional Green Gym places cannot be utilised: **“The people that we've currently got coming to the Green Gym need quite a lot of support, they've got learning difficulties and they need a bit more one-to-one support, we wouldn't be able to manage an influx of new people [to Green Gym].”**

Referral partners mentioned difficulty with transport and timeliness. Not all Green Gyms are easy to access by public transport. Those particular Green Gyms are less suitable to refer clients with low mobility and/or without their own transport. In a small number of areas, referral partners work with local Green Gyms to offer outreach transport services to enable those who need it most to access Green Gyms. In addition, managing volunteers with wide ranging needs sometimes leads to a less than prompt start to Green Gym sessions. This has a knock on effect of reducing the Green Gym session for those volunteers who must leave promptly and are unable to stay on if the session overruns.

Case study – West Leeds PEP (Patient Empowerment Project)

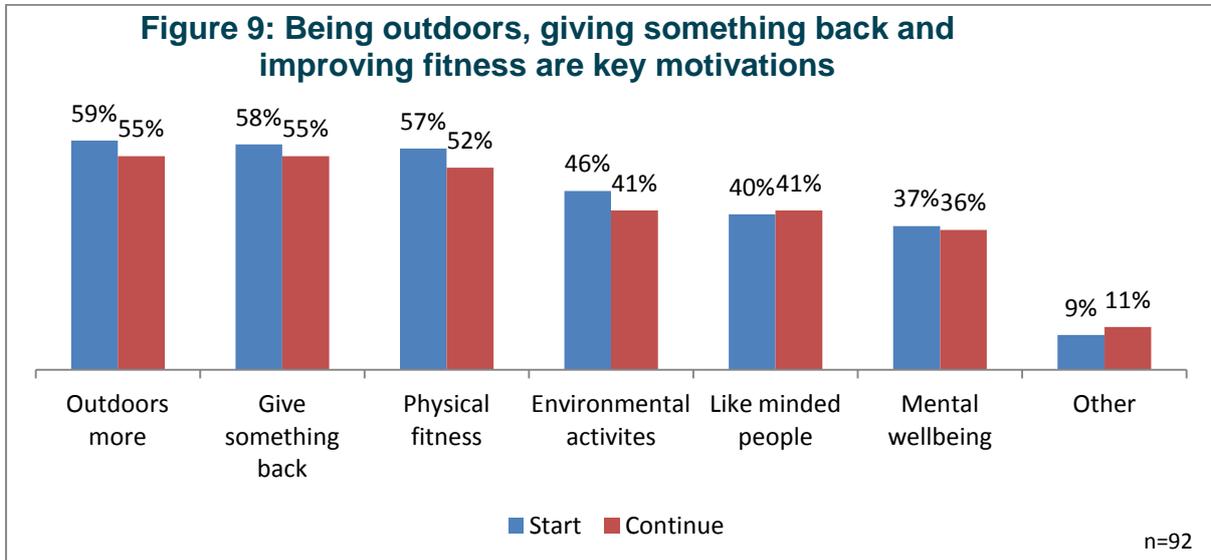
Hollybush Green Gym is a member of West Leeds Patient Empower Project (PEP). Funded by NHS West Leeds Clinical Commissioning Group, voluntary organisations to deliver a social prescribing service in conjunction with the 38 GP surgeries in West Leeds. Social prescribing extends the range of options available to patients who present to primary care with psychosocial and health problems that would benefit from increased social engagement and more physical activity.

Once referred by their GP, PEP makes contact to discuss their needs and interests and gives information on suitable projects. PEP staff support patients at their first session, helping them get started in a new group, service or activity. Referred patients manage their health and psychosocial issues using the skills, knowledge and confidence gained from Green Gym.



Section 10) Motivation to Join Green Gym

Why do volunteers join Green Gym?



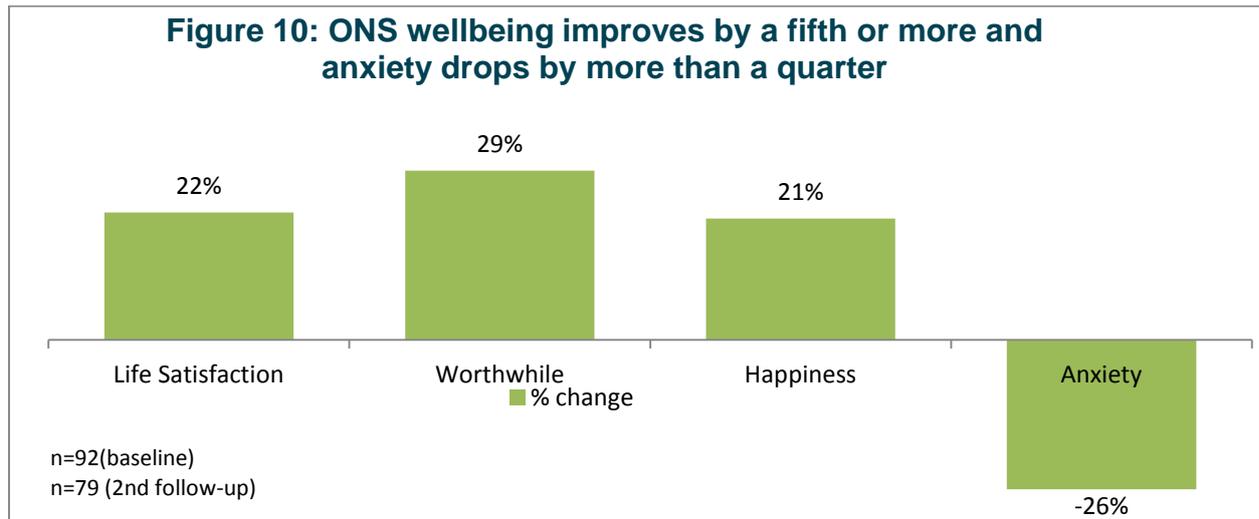
A desire to be outdoors more, giving something back to the local community and an increase in physical fitness were the most popular reasons given for both joining and continuing to attend Green Gym.

Interviewed volunteers spoke about enjoying being outdoors, getting fresh air and a wish to help others as key drivers in joining and continuing to participate in Green Gym. Interviewed volunteers (compared to the sample as a whole) were more focused on their own health needs as a reason for joining Green Gym. This is likely to reflect the more acute social and psychological needs of the interviewees as a group when compared to the survey sample as a whole.

Section 11) Wellbeing

Impact of Green Gym on Mental Wellbeing

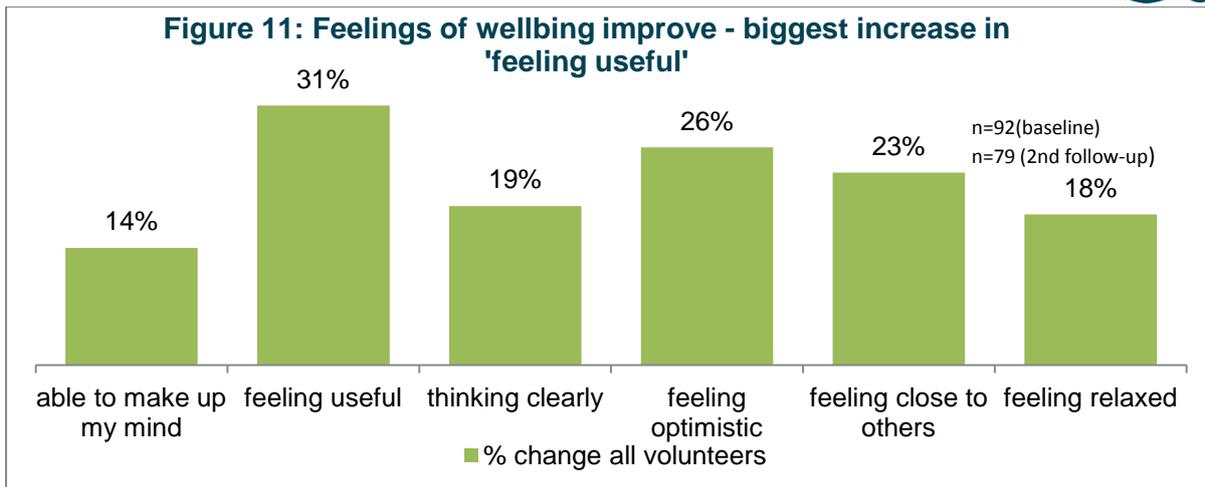
We used two scales to assess mental well being, Short Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) and ONS Personal Wellbeing questions. Wellbeing scores improved over the three month period for the sample as a whole, with a large decrease in anxiety. Nine out of ten volunteers attributed at least some of their wellbeing to participating in Green Gym. New volunteers showed a larger degree of improvement, when compared with the sample as a whole (see section 14 for more).



Qualitative evidence supports the gains represented by the survey results. All interviewed volunteers report an improvement or a stabilisation of existing mental health conditions. For some participating in Green Gym improved mental wellbeing by offering much needed respite from a challenging home life: **“I’ve got a son with special needs and the wife’s got mental health problems, so between us we survive on benefits... just coming here gives me a break.”**

A strong ethos of respect and feeling ‘safe’ in Green Gym is perceived as a significant factor in facilitating mental wellbeing. This is particularly the case for volunteers rebuilding lives after custodial sentences and those trying to overcome drug or alcohol misuse: **“There is no judgement [in Green Gym], no preconceived ideas about what you are or where you’ve been, what you did, what you haven’t done.”**

Volunteers spoke about the stigma attached to mental health conditions and discrimination they experienced as a result, making their difficulties worse. For those struggling with poor mental health, often combined with challenging personal and family conditions, Green Gym offers a safe space where they are given respect and treated with empathy, not ‘labelled’ because of their diagnosis, background or life experiences. For some it is a haven where individual needs and aspirations are supported, offering respite from the realities of life. For at least one volunteer Green Gym is a lifeline: **“It might sound a bit dramatic but I don’t think I’d be here now if it hadn’t been for [Green Gym].”**



Survey results indicate satisfaction with social life increased by over 20% over the three month evaluation period²⁰.

Mental health challenges and life changes leave some volunteers socially isolated, with little confidence, and heightened anxiety. Staying at home for an extended period of time and feeling 'stuck' indoors was a consistent theme: **"I wasn't going out at that time, I'd come out of hospital, I had been discharged, I'd gone through a big change in my life, total u-turn in my life with what happened and I was struggling and I was staring at walls basically."** When interviewed, reducing isolation and increasing opportunities for social contact is a key attraction of Green Gym for many volunteers. **"I don't know what I'd do if I didn't have [Green Gym] here, because I'm a loner you see, I just got me cat, that's it."**

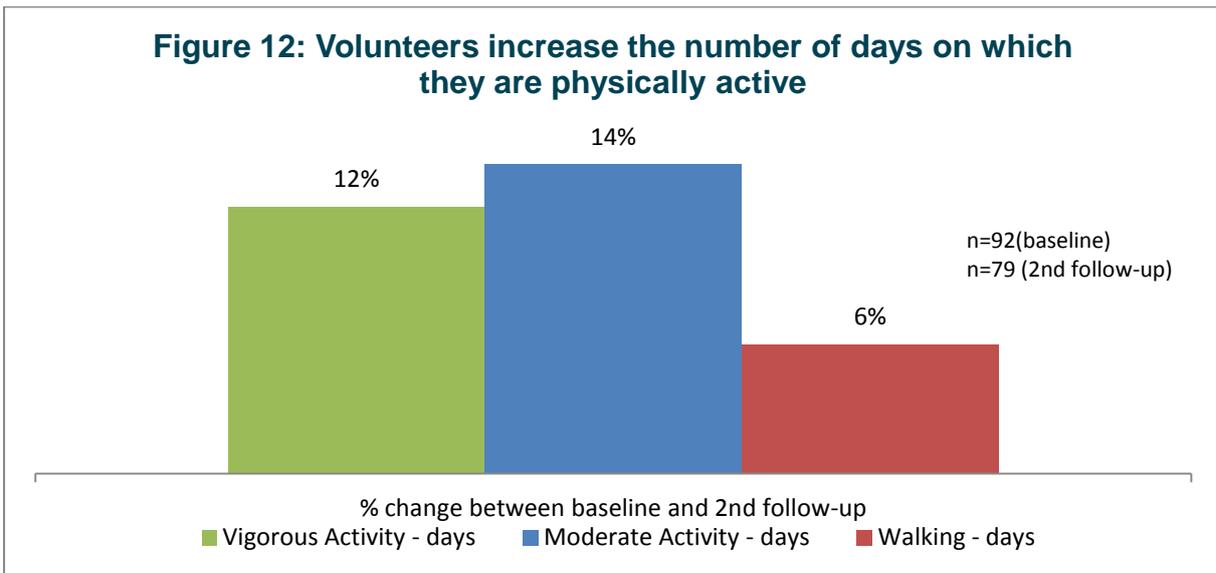
Green Gym is focused on outdoor activities that can be shared; by bringing people together volunteers meet others, make friends and increase opportunities for social engagement. For a number of volunteers weekly participation at Green Gym is the only time they speak to and spend time with others.

²⁰ The first baseline survey asked volunteers to rate how they felt before joining Green Gym.

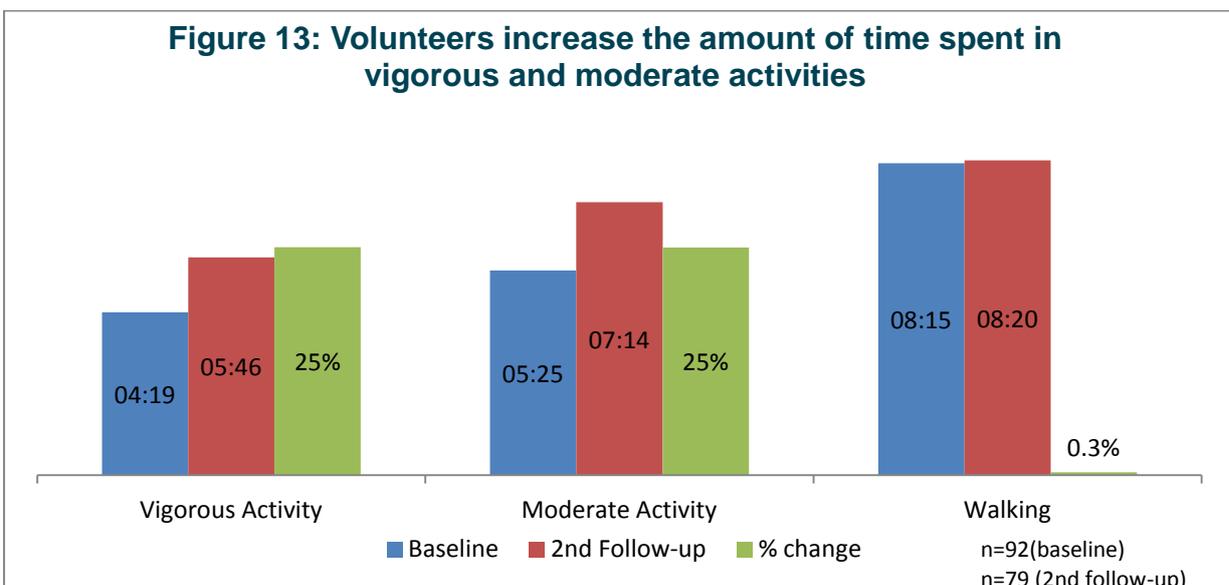
Section 12) Physical Activity

Increased Fitness

Using the International Physical Activity Questionnaire (IPAQ) we asked volunteers on how many days in the last week they had done any vigorous or moderate activity or had walked. Over the three month period, volunteers increased the number of days on which they were physically active. The largest increase is in the number of days volunteers engage in moderate activity, closely matched by an increase in the number of days volunteers engage in vigorous activity. Volunteers also indicated a small increase in days in which they would walk.



On average, volunteers spent 50% more time engaged in vigorous and moderate activities over a week at the end of the three month study period when compared with the time spent at the start of the study period. Volunteers were spending a little more time walking too. Nine out of ten attribute their physical activity level to participation in Green Gym.



Interestingly all volunteers, when interviewed, found it easy to articulate improvements in their mental wellbeing but thought changes in their physical health were more complex. Some volunteers suggest that improvements to physical health will simply mirror changes to mental wellbeing: **“I just feel better mentally, so I will feel better physically.”**

A number of volunteers equated being fitter with a change in dietary habits - eating more fresh vegetables and less junk food and take-aways. Two volunteers explain this as a result of growing vegetables themselves: **“I know how to grow fruit and veg now in the garden; I know how to cook seasonal veg, so I make a lot of soup now.”**

For one volunteer, the promotion of healthy living that is part of the Green Gym ethos, helped support lifestyle change, when he was diagnosed with diabetes: **“I think finding out I was diabetic, I had to change my diet anyway, so I cut out all sweets and cakes and everything so that had a bearing on my weight loss, but here, not that I've become vegetarian, but here it is something that they advocate. Not saying they push it down your throat all the time, but a lot of people are vegetarian, but I think they do try and promote healthy eating and healthy lifestyle.”**

Participating in Green Gym increases physical activity levels and supports the development of food skills, providing the tools to improve diet and nutrition as well as impacting on volunteer's self-esteem and confidence to do so.



Section 13) Employability Skills

Employment Skills

Interviewed volunteers saw participation in Green Gym as an opportunity to get back into work. Many hoped to update skills, gain experience or a reference through volunteering: ***“I used to do gardening years ago... so it's the sort of thing that I want to do as a job, but I've been many years' unemployed... so I thought it may be a good way to refresh my skills.”***

Green Gym supports transition into employment by providing structure and routine: ***“I think some of it is taken out of my hands, the jobs that need doing, you know, it's not all my responsibility to decide what they are, there's a structure here that makes me do stuff.”***

Green Gym provides opportunities for leadership roles for volunteers at an early stage. Becoming a Volunteer Officer is viewed as a way to gain experience and a further step towards paid employment: ***“I thought this would be a good opportunity, so I did it... so now I guess it will give me experience hopefully, [to get] a leadership role.”***

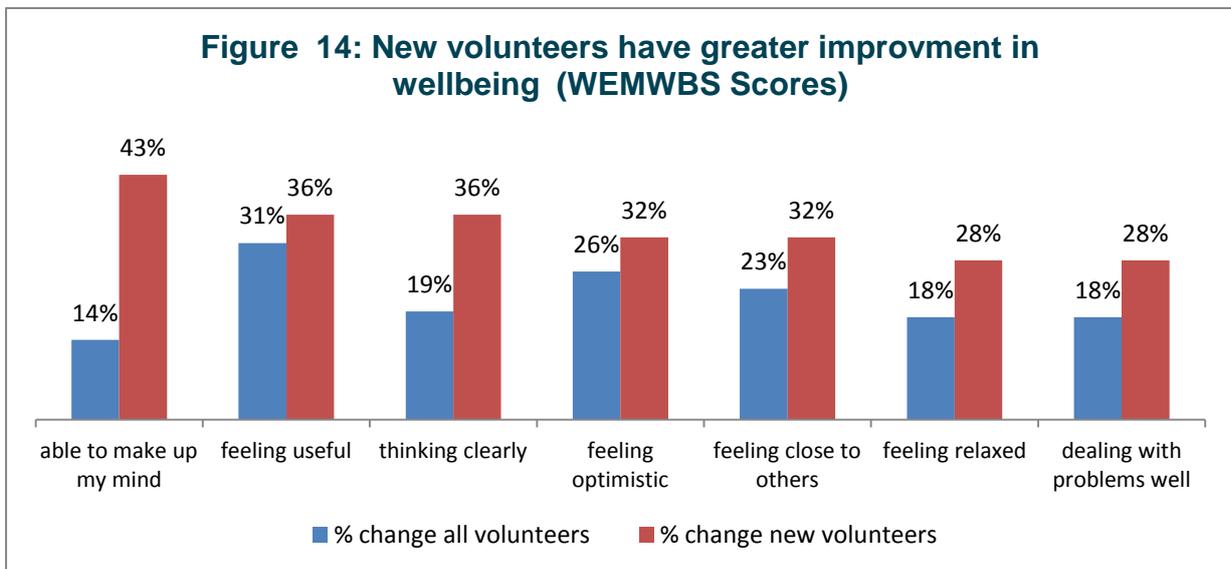
Getting back to work can be difficult. Green Gym volunteering can help restore confidence, teach new skills and establish a routine, helping people get their foot back on the job ladder. Moving from a Green Gym volunteering role to a Green Gym Volunteer Officer role and then on to paid employment in the local community is an established and successful route.



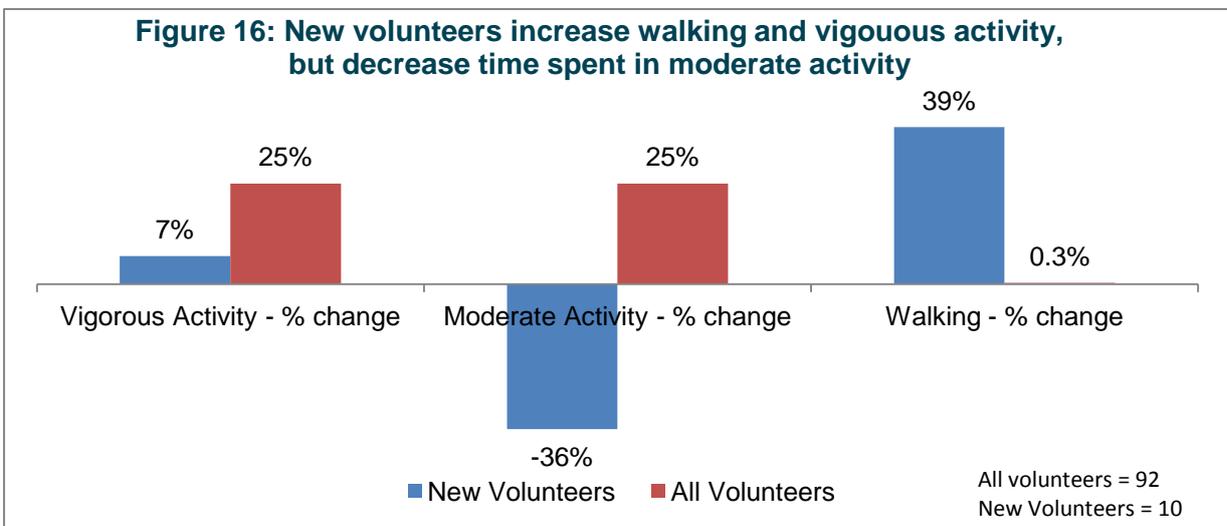
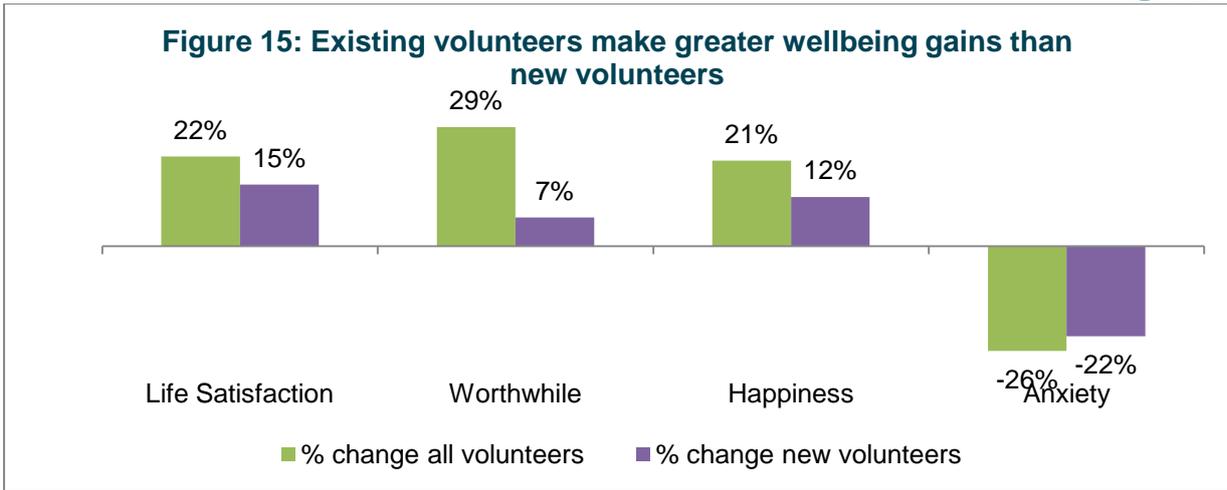
Section 14) New Volunteers

Ten volunteers taking part in the survey are new to Green Gym attending for four weeks of less. Six of the ten new volunteers are women and seven are aged over 40. Half are living with long term health conditions such as high blood pressure, diabetes and asthma and three are smokers. More than half are unemployed or retired. Two of the ten are from non-white ethnic minority groups.

New volunteers showed improvements in wellbeing on both WEMWBS and ONS Personal Wellbeing questions. However, new volunteers showed a larger degree of improvement on WEMWBS scales, but a smaller degree of improvement on ONS Personal wellbeing questions when compared with the sample as a whole.



One possible explanation is that WEMWBS and ONS Personal Wellbeing capture different elements of wellbeing. WEMWBS captures data on competence and how volunteers function on a personal and social level whereas ONS Personal Wellbeing captures more global assessments, evaluating life as a whole. It may be that a sense of competence and feeling connected to those around you change at a faster rate than broader assessments of life satisfaction and emotions such as happiness.



Interestingly, unlike other volunteers, those new to Green Gym greatly increased the amount of time spent walking and marginally increased the amount of time spent in vigorous activity, but decreased the amount of time spent in moderate activity. However, given the very small number of new volunteers included in this study (ten) all results (including wellbeing) are purely tentative.

A small number of new volunteers choose Green Gym because it offers a way to keep or increase fitness: “...it gives me an opportunity to get some exercise...” Even those who don’t join with increasing fitness in mind, recognise the benefits of being more physically active: “... I feel much fitter and sometimes I feel a sort of a soreness - which is a good soreness, which means I’ve actually worked my muscles out. My arms, my shoulders really feel like they’ve had a workout afterwards and my figure, I feel much better about it... I feel good about my body shape and maybe it has toned up a little bit, ‘cos I have lost a little bit of weight as well, so maybe that could be part of Green Gym, ‘cos it’s quite intense physical activity and I’m not just doing it once a week, it’s twice a week, so it’s probably the Green Gym that’s done it.”

Although when joining Green Gym none of our new volunteers set out to lose weight - there is a recognition that low mood can have a negative effect on food choices. Feeling better, as a result of participating in Green Gym, can facilitate more positive food choices: “...**when I isolate myself, my food and my diet go downhill – badly, and literally I will just sit at home and comfort eat. Being at [Green Gym] I’ve managed not to do that because of the [healthy] food there and you’re exercising while you’re there anyway...**”

To give a more insightful picture of the Green Gym journey, we interviewed six of the ten new volunteers at the start of their experience with Green Gym. Of these, four were interviewed a second time, after three months. We were unable to re-interview the remaining two, one had got a job and did not want to take part in the study, one was hospitalised and was non-contactable.

For our new volunteers, echoing what we’ve been told by established volunteers, finding respite, reducing isolation, finding purpose and creating routine, improving their social life and giving something back to the local community are all key benefits from participating in Green Gym.

As a carer for her elderly mother Helen feels isolated and lonely. She has lost touch with friends and family and finds it difficult to make new contacts because of her caring responsibilities. Sometimes, the demands of being a carer get her down and she suffers with depression. Green Gym gives her a chance to have a life of her own, outside of her caring role: **“that is the one place I can go where there isn’t any... pressure, so it’s nice to go and just be [myself].”**

The ability to ‘be yourself’ at Green Gym and not be defined by your domestic responsibilities or past experiences was a strong theme.

Steve is an ex-offender, supported by a Green Gym referral partner during his re-entry into society following imprisonment. Steve experiences fear and distrust from others after they find out about his past convictions. The social stigma makes him feel low and he avoids people and places he feels that are quick to stereotype him. At Green Gym, other volunteers don’t ask him about his past. This has given him the courage to communicate more: **“I find with myself, I’ve become a bit more confident, and I’m talking to people.”**

Green Gym volunteering provides a new sense of purpose and pride in making the local environment a better place:

Despite being retired, Rachel is keen to keep learning new skills and meeting new people. She enjoys the exercise she gets at Green Gym relishing feeling tired but exhilarated at the difference her work has made: **“It’s fun to do, you can see what you’ve done...at the end of a session you can see the changes you’ve made as a group .. I didn’t realise it would be that significant to me until we’d done a couple of jobs where you could actually see a huge difference.”**

As well as giving a connection to others and the local community, Green Gym offers a chance to reflect on inner most thoughts and feelings.

Tim is at a crossroads in his life. He’s left his job, become unemployed and feels in a state of turmoil. He struggles to make decisions about his life and future. Working outside with Green Gym he is able to think and plan, almost without realising it: **“I was working with the earth and nature, just tuning into what is right for me. It was really wonderful; I felt so at peace with myself...”**

Green Gym offers structure and routine. For one new volunteer, this has been crucial in his pathway back to work: **“...I didn’t really know what to do but the Green Gym gave me something, it gave me a solid commitment; I’ve got to be there on Monday and I’ve got to be there on Wednesday and I’d work the rest of my life around it, it felt like a nice introduction to getting back into the working world...and now I’ve been [offered a] job and I feel that Green Gym’s [responsible because it has] given me a structure to get up at a certain time in the morning and be somewhere...”**

Despite no prior experience before Green Gym, two of the new volunteers are planning a career in horticulture or environmental work.



All our new volunteers recognised the gains they had made as a result of participating in Green Gym and all planned to continue attending for as long as possible. However, weekday only Green Gyms can be incompatible with paid employment, making it difficult for those with jobs. Despite a large and vibrant employee engagement programme, weekend Green Gym volunteering options are limited: **“I’ll be working Monday to Friday normal office hours, it’s a bit tricky because Green Gym is always on weekdays, in the middle of the day as well, so it’s a shame to give it up, but I’ve got no choice...”** This volunteer would continue if Green Gym offered weekend sessions.



Section 15) Discussion and Next Steps

Objective 1: To build on the existing body of evidence - impact of Green Gyms on health and wellbeing and increased employability.

Green Gym is effective in both improving and maintaining both physical and mental health. The key mechanisms include supporting and increasing physical activity levels and for mental health, reducing social isolation by increasing opportunities for people to work together, outdoors, – in worthwhile activities.

Despite positive indications, our findings are limited by both a small sample size and a sample not wholly representative of the population of Green Gym volunteers. Moreover, only a very small proportion of volunteers in our study are 'new' to Green Gym. Most volunteers taking part are existing members. Any gains in health and wellbeing are likely to have already been made prior to our first (baseline) survey thus underestimating impact. While this study builds on the existing body of evidence, the very nature of the inclusive and tailored design of Green Gym makes it difficult to create more robust evaluation that typically require random sampling and a counterfactual:

Sampling choices are limited. Currently, it's not possible to draw a random sample of Green Gym volunteers across both community and direct delivery Green Gyms. Moreover it is currently not possible to contact volunteers (using contact details provided on joining Green Gym) for research purposes.

Next Steps: As part of the changes made to the TCV Green Gym licensing agreement for community led projects more emphasis will be given to data requirements, what records and data TCV will require (and support) community Green Gyms to collect, update and share as

a requirement of their licence agreement. Administrative changes will also be made to the consent TCV asks for from volunteers at direct delivery projects to enable re-contact for research purposes.

Creating a counterfactual is problematic. Those referred or signposted to Green Gym by 3rd party organisations typically have higher support requirements and a more acute need to participate in Green Gym. This group tends to be more socially isolated and experiencing, or at risk of experiencing, depression, anxiety or other mental health issues. Denying access (even for a short time) to such a vulnerable group for research purposes (in order to create a control group or similar) could be viewed as unethical.

Next Steps: A control group approach is inappropriate for Green Gym evaluations at this time. However, it may be possible to construct a comparison by surveying a group with similar health and wellbeing needs and demographics profile in an area without a Green Gym or similar resource. However, such an approach is likely to be complex and resource intensive.

Some Green Gym volunteers require a high level of support to participate in research.

Given the dispersed location of Green Gyms, competing pressures on the time of Green Gym Project Officers and the small size of the Green Gym research team, not all volunteer support needs can be met and a proportion of Green Gym volunteers willing but unable to take part in research without help - will be excluded.

Next Steps: We will continue to look for solutions harnessing technology to remove as much of the respondent burden as possible. Solutions being considered include a short battery of questions sent via text message and creation of an on-line panel. Use of participatory methods such as photovoice and digital storytelling are also being explored.

Objective 2: To make recommendations for the further development of systematic monitoring and measurement of Green Gym outcomes

Activity to deliver a systematic and comprehensive approach to monitoring is underway. A critical outcome of this study is the identification of a set of core measures to capture behavioural and health outcomes, data collection processes and information governance policies that will be used systematically and comprehensively across all Green Gyms.

Next Steps:

- A Green Gym research strategy will support the introduction of systematic monitoring and measurement of Green Gym outcomes.
- Focusing on a small set of national indicators²¹ with salience to Public Health England and NHS England, standardised monitoring information will be collected on physical activity levels and mental wellbeing at regular points in the volunteer's journey.
- We will investigate collection of biometric measures using wearable tech and the possibility of data collection carried out by mobile NHS Health Check teams.

²¹ tested with Green Gym volunteers in this study and previous pilot study

Objective 3: To identify opportunities for learning, change and improvement to the Green Gym programme

The Green Gym programme is working towards a culture of learning, change and improvement. Over time, both the organisational vision for Green Gym programme learning and development and professional development activities for staff to support this vision will become clear. As we move towards this, a range of organisational support systems to enable and sustain cultural change will be put in place. In the meantime, current structures and processes do not always support opportunities for learning, change and improvement to the Green Gym programme.

Better understanding is needed of the most effective ways of reaching, recruiting and retaining Green Gym volunteers. Despite the attraction of Green Gym to a broad range of users, more understanding is required of the different needs and motivations driving Green Gym participation across and between particular target groups. Green Gyms do not routinely collect information on the volunteer experience or volunteer perceptions. Despite recognition of the need to hear from those they wish to help, there is no systematic process used to do this, leading to a range of adhoc, inconsistent and informal approaches. Moreover, once collected, no systems or templates exist to enable aggregation or analysis at a higher level or the ability to share and use this information to drive strategic developments or improvements to the Green Gym programme.

Better understanding of the volunteer experience would enable the Green Gym programme to be more responsive to those they support and to understand how changes in health behaviours are mediated through the Green Gym experience. Most significantly, this would enable Green Gyms to learn from volunteers what is, and is not, working. Without this insight it is difficult for Green Gym to continue to specialise, increase expertise and better meet needs to ensure the most effective volunteer experience.

A key part of understanding the most effective ways of reaching, recruiting and retaining Green Gym volunteers is establishing ongoing lines of communication with key referral sources. Green Gym is active in promoting referrals by clearly communicating who is eligible to join, via the Green Gym (and 3rd party) website, social media, Green Gym leaflets, brochures and in cover letters and emails sent to referral partners. However, little follow-up to gain feedback from referral partners to better understand their needs or regular feedback to referral partners on clients referred, is practiced.

Next Steps:

- Consideration will be given to volunteer segmentation activities as part of the Green Gym research strategy.
- A key metrics dashboard will be developed to include, amongst other performance indicators, volunteer feedback.
- We will establish lines of communication with primary referral sources.
- We will establish a feedback cycle from referral partners
- We will provide regular feedback to key referral partners



Section 16) Recommendations

Green Gym has embarked on an ambitious journey to scale-up the number of Green Gyms from 140+ to over 600 in a 5 year period. A solid outcomes evidence base is crucial and will facilitate the funding and commissioning of Green Gyms from public health partners, local authorities and trusts and foundations.

Drawing on both survey and qualitative evidence, Green Gym has contributed to an improvement in health, both physically through increased activity levels, and mentally through improved mental wellbeing and reduced social isolation. However, further work is required to build internal insight capability to underpin Green Gym's ability to continue to offer inclusive and tailored projects to meet a wide range of needs.

Objective 1: To build on the existing body of evidence - impact of Green Gyms on health and wellbeing and increased employability.

Recommendations:

- More robust evaluations using a comparison group, but not withholding access to potentially vulnerable Green Gym volunteers.
- Licensed Green Gyms will be supported to collect and share (with TCV) core monitoring data on health and wellbeing and employability metrics.
- Written consent will be recorded to facilitate recontact with Green Gym volunteers for research purposes.
- Technology will be used to ensure research is as inclusive as possible.

Objective 2: To make recommendations for the further development of systematic monitoring and measurement of Green Gym outcomes

Recommendations:

- A Green Gym research strategy will support the introduction of systematic monitoring and measurement of Green Gym outcomes
- A set of core measures to capture behavioural and health outcomes, data collection processes and information governance policies that will be used systematically and comprehensively across all Green Gyms

Objective 3: To identify opportunities for learning, change and improvement to the Green Gym programme

Recommendations:

- Consideration will be given to volunteer segmentation activities as part of the Green Gym research strategy
- A key metrics dashboard will be developed to include – amongst other performance indicators – volunteer feedback
- Regular feedback will be gained from and timely updates will be provided to key referral partners



Section 7) Appendices

Appendix A: Previous Green Gym Research

Date and Title	Author	Details	Methods	Discussion
1999 The Green Gym – Evaluation of a Pilot Project in Sonning Common. Report No. 8	Reynolds, V. Oxford Centre for Healthcare Research and Development (OCHRAD) at Oxford Brookes University	A pilot evaluation that took place at the original Green Gym in Sonning Common.	<ul style="list-style-type: none"> ▪ Physiological tests to measure changes in participants’ fitness over a sixth month period. ▪ SF-36 Health Survey completed by participants (a multipurpose short form health survey of 36 questions). 	Small scale pilot
2002 Well-Being Comes Naturally: An Evaluation of the TCV Green Gym at Portslade, East Sussex. Report No. 17	Reynolds, V. Oxford Centre for Healthcare Research and Development (OCHRAD) at Oxford Brookes University	This further study was conducted with similar objectives to the Sonning Common study.	<ul style="list-style-type: none"> ▪ A set of validated questionnaires (including SF-12, a standardised health status survey). ▪ Physiological measurements. <p>Both administered at three time points: baseline, three months and six months.</p>	A high dropout rate, only 18 of the initial 37 participants are remaining at six months.
2008 National Evaluation of TCV’s Green Gym. Report No. 29.	Yerrell, P. School of Health and Social Care Oxford Brookes University	Building on earlier evaluations and to provide more evidence on the health benefits. Undertaken between July 2003 and August 2007. A total of 703 participants from 52 Projects completed the introductory questionnaire, and of those 194 also completed the continuation questionnaire.	<ul style="list-style-type: none"> ▪ An introductory questionnaire and a continuation questionnaire (to be completed after a minimum of three months) distributed by Project Project Officers during sessions. <p>The questionnaires combined SF-12, modified questionnaires developed by TCV, demographic questions of participants, and a self-report physical activities inventory that was ‘translated’ into Metabolic Equivalent Tasks as a measure of energy expenditure.</p>	Unrepresentative sample - few questionnaire returns from ethnic minority groups, with 97% of respondents being ‘white.’

<p>2008 Inspiring people, improving places: the positive impact and behavioural change achieved through environmental volunteering with BTCV.</p>	<p>BTCV</p>	<p>Evaluation to identify economic benefits of the work of BTCV by assessing Social Return on Investment.</p>	<ul style="list-style-type: none"> ▪ Surveys ▪ Social Return on Investment (found to be £1.53 for every £1 invested in Green Gyms). 	<p>Report does not include information on research methods.</p>
<p>2008-2009 BTCV Norwich Green Gym Evaluation Findings</p>	<p>Yerrell, P. School of Health and Social Care Oxford Brookes University Report written by TCV</p>	<p>35 participants completed the introductory questionnaire and of these 12 also completed the continuation questionnaire.</p>	<ul style="list-style-type: none"> ▪ National Evaluation of Green Gym Questionnaires (NEGGQ). The NEGGQ represents a series of validated questionnaires and physiological measurements first used during the Green Gym pilot at Portslade, including the SF-12. Questionnaire was administered at 0 months and then at 6 months. 	<p>High drop-out rate.</p>
<p>2009 School Green Gym: Evaluation findings: health and social outcomes</p>	<p>Yerrell, P. School of Health and Social Care Oxford Brookes University Report written by TCV</p>	<p>122 children completed evaluation questionnaires, aged between 7 and 11. 65 boys and 57 girls took part.</p>	<ul style="list-style-type: none"> ▪ A questionnaire to monitor the changes in physical activity levels, benefits to physical and mental health and self-confidence. The questionnaire included the PedsQL (Paediatric Quality of Life Inventory™) that provides three measures: Physical Health Summary Score, Psychosocial Health Summary Score and a Total Scale Summary Score. <p>Introductory questionnaires are administered before children began Green Gym and then continuation questionnaires after they had completed the 10 week programme.</p>	<p>Lack of follow-up beyond 10 week programme.</p>



<p>2012 Wellbeing Comes Naturally: A Summative Evaluation Report</p>	<p>CAG Consultants</p>		<ul style="list-style-type: none"> ▪ SF-12 health survey at the beginning of the programme and after 4 weeks. Volunteers are also invited to respond to the additional ten ‘social capital’ questions. ▪ Project reporting – project staff reported quarterly to the TCV National Programmes Team, including both quantitative and qualitative information. ▪ Participant scrapbooks – stories of their journeys with the support of the project delivery workers. ▪ Project officer interviews (face to face) – in-depth digitally recorded interviews face-to-face as well as by telephone. ▪ Volunteer interviews – digitally recorded. ▪ Participating community organisation interviews (phone) <p>Questionnaires using the new World Bank social capital questions, and National Office of Statistics community connectivity questions</p>	<p>High drop-out rate with only 6% completing the 3rd follow-up SF-12</p>
<p>2015 Western Green Gym Year 2 Evaluation (N Ireland)</p>	<p>Dr Katrina Collins Williams with TCV</p>	<p>Part of evaluation below</p>	<ul style="list-style-type: none"> ▪ Joining questionnaires ▪ Case-studies ▪ Pedometers, smart phone apps and wearable sports monitors ▪ Weight loss tracking over 24 weeks of 10 groups ▪ Survey on health, well-being and social well-being including: SWEMB eg. stress, anxiety and self-confidence; mood and enjoyment; self-report on physical activity levels: week 1; week 12; week 24; and week 36; and self-report on pro-environmental behaviours. 	<p>High drop-out rate with only 44% completing pre and post questionnaires.</p>

<p>2014 (ongoing) The Conservation Volunteers - Green Gym Programme for the Public Health Agency Evaluation of the Impact of Green Gyms</p>	<p>Dr. Katrina Collins with TCV</p>	<p>An independent evaluation of the Green Gyms across Northern Ireland.</p>	<ul style="list-style-type: none"> ▪ Quantitative methods through surveys, ratings scales and specific monitoring of biometrics (levels of physical activity). ▪ Qualitative methods such as focus groups, case studies and personal testimonies provide validity to the numeric information through rich individual experiences that explain the observed changes. ▪ The ‘Most Significant Change’ approach will be adopted to gather stories from participants and project staff to inform the case studies and personal testimonies. <p>A mixed methods design will be used that responds to the dynamic nature of the programme offered by TCV and takes account from an evaluation perspective the multivariate effect of environmental volunteering</p>	
<p>2015 (not reported on) Green Gym - Have Your Say survey</p>	<p>Julie Waites and Jon Huggett, NESTA with TCV</p>	<p>As part of the SIF work an extra survey was developed....?</p>	<ul style="list-style-type: none"> ▪ Short survey with a mixture of open questions on how long they’ve come and how they participate, motivation, and what “difference” GG makes to their lives. ▪ Self-report Likert scales including physical activity, group volunteering importance. 	

Appendix B: Codes used to analyse volunteer interviews

Codes – Better Health and Wellbeing	Impact Pathway
<p>Physical Psychological Activity Diet</p>	<p>Conservation skills and knowledge of the environment Health literacy Safe physical activity Safe tool use</p> <p style="text-align: center;">↓</p> <p>Increased management of green spaces and pro-environmental behaviour Increased the time spent in outdoor green spaces Improved diet Become physically active</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Increased fitness</p>
Codes – Better Health and Wellbeing	Impact Pathway
<p>Psychological Social Altruism Support Ethos</p>	<p>Social interaction skills</p> <p style="text-align: center;">↓</p> <p>Increased interaction outside the sessions Sharing different perspectives</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Better mental health</p>
Codes – Increased Employability	Impact Pathway
<p>Outdoors Motivation Change Skills Hopes</p>	<p>Intergenerational skill sharing Leadership Community resilience Individual resilience Self efficacy / esteem</p> <p style="text-align: center;">↓</p> <p>Form community groups / networks</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Increased knowledge and confidence</p>

Evaluation Report – 2016

<p>Outdoors Skills Hopes</p>	<p>Conservation skills and knowledge of the environment</p> <p>↓</p> <p>Increased management of green spaces and pro-environmental behaviour Increased the time spent in outdoor green spaces</p> <p>↓</p> <p>Increased knowledge and confidence</p>
<p>Codes – Increased Employability</p>	<p>Impact Pathway</p>
<p>Aspirational Structure Motivation Change Skills Hopes</p>	<p>Individual resilience Self efficacy / esteem Job readiness skills</p> <p>↓</p> <p>Increased confidence and become more skilled to find a job</p> <p>↓</p> <p>Increased knowledge and confidence</p>
<p>Codes – Better Health and Wellbeing</p>	<p>Impact Pathway</p>
<p>Mental Health Psychological Social Support Change Skills</p>	<p>Social interaction skills</p> <p>↓</p> <p>Increased interaction outside the sessions</p> <p>↓</p> <p>Reduced isolation</p>

Appendix C: Survey Questionnaire



**TCV Green Gym National Survey
(BASELINE)**

Dear Green Gym participant,

Thank you for agreeing to take part in this survey. The Conservation Volunteers (TCV) and NEF Consulting are working together, gathering evidence to demonstrate the value of providing Green Gym groups with the aim of improving both your health and the environment at the same time. The responses you give today will provide a key part of this understanding.

We estimate that completing this survey should take around 15 minutes. We will come back to you in 2016 to ask you to complete two shorter follow-up surveys.

We will treat all information that you give in confidence. When we report the findings of the evaluation we will not identify any individual. If you have any questions please do not hesitate to contact us by telephone or email, details are below.

Many thanks,

Joy

Joy Beishon

Head of Green Gym Research

E: j.beishon@email.tcv.org.uk

T: 020 3794 8021

M: 07855 807 083

Evaluation Report – 2016

1. *Your consent:*

	Yes	No
I consent to The Conservation Volunteers (TCV) re-contacting me to take part the follow-up surveys.	<input type="checkbox"/>	<input type="checkbox"/>
I consent to The Conservation Volunteers (TCV) re-contacting me to take part in further research.	<input type="checkbox"/>	<input type="checkbox"/>

Respondent signature

Respondent name

Date

2. IF YOU TICKED 'NO' TO EITHER QUESTION, what is your reason for not taking part? (Please tick all that apply)

- I don't come to Green Gym very often
- I'm not going to come to Green Gym in January and February 2016
- I don't have time to take part
- I need help to complete the questionnaire
- I don't feel comfortable sharing information on a questionnaire
- I don't have access to the internet/email account
- Other (please specify):

Evaluation Report – 2016

Part A: About yourself....

This section collects information about you that enables us, and you, to track your progress overtime. Just a reminder that all answers you give will be treated in confidence and your answers will not be shared with a third party.

3. What is your full name? (please write in BLOCK CAPITALS)

4. What is the name of your Green Gym group?

- Abingdon Green Gym
 - Barnet Green Gym
 - Bromley Green Gym
 - Camden Green Gym - Thursday
 - Camden Green Gym - Tuesday
 - Darlaston Community Gardens
 - Hollybush - Friday gardening group
 - Hollybush - Wednesday Gardening group
 - Horsham Green Gym
 - Hounslow Pevensey Road
 - Lloyd Park Green Gym
 - Sonning Common Green Gym
 - Trafford Green Gym
 - Watford Cassiobury Green Gym
 - West Hampstead Green Gym
 - Whitehall Green Gym
 - Witton Country Park Green Gym
 - Other - Please give the name and postcode of your Green Gym group:
-

Evaluation Report – 2016

5. How long have you been attending a Green Gym regularly (i.e. once a month or more)?

- I'm new to Green Gyms*
- 1 - 4 weeks*
- 1 - 6 months*
- Between 6 months and 2 years*
- Between 2 and 5 years*
- Longer than 5 years*

6. How often have you attended a Green Gym over the last 2 months?

1. More than twice a week	2. About twice a week	3. About once a week	4. About once every two weeks	5. About once a month	6. About once every two months	7. Less than once every two months	8. This is my first time

7. What is your home postcode? (please write in BLOCK CAPITALS)

8. What is your date of birth? (DD/MM/YYYY)

9. Sex

1. Male	2. Female	3. I'd prefer not to say

10. Do you have any of the following physical health conditions or illnesses?

- High blood pressure*
 - High cholesterol*
 - Diabetes*
 - Overweight or obese*
 - Any other physical health condition or illness lasting or expected to last for 12 months or more (if so, please specify)*
-

11. Are you a smoker?

- Yes*
- No*
- Occasionally*

12. Do you have any of the following mental health conditions or illnesses?

- Depression and/or anxiety issues*
 - Post-traumatic stress disorder (PTSD)*
 - Any other mental health condition or illness lasting or expected to last for 12 months or more (if so, please specify)*
-

13. Which of the following applies to you?

- Ex-service personnel*
- Ex-offender*
- Long-term unemployed i.e. unemployed for more than 6 months*
- Retired*

14. What is your ethnic group? Choose one option that best describes your ethnic group or background

White:

- British/ English/ Welsh/ Scottish/ Northern Irish*
- Irish*
- Gypsy or Irish Traveller*
- Any other White Background*

Mixed/ Multiple Ethnic Groups:

- White and Black Caribbean*
- White and Black African*
- White and Asian*
- Any other Mixed / Multiple ethnic background,*

Asian / Asian British:

- Indian*
- Pakistani*
- Bangladeshi* *(See next page for further options)*
- Chinese*
- Any other Asian background*

Black/ African/ Caribbean/ Black British:

- African*
- Caribbean*
- Any other Black / African / Caribbean background*

Other Ethnic Group:

- Arab*
- Any other Ethnic Group*

15. Out of the following options, which best describes your highest level qualification? (please tick one)

- Degree, or Degree equivalent and above
- Other educational qualification for which you received a certificate (E.g. Certificates of Higher Education, A/AS Levels, NVQs 1-4, GCSEs, Entry Level Certificates)
- Any professional, vocational or other work-related qualification for which you received a certificate
- No Qualifications

16. Which of the below best describe your TOP THREE reasons for joining Green Gyms?

- to increase my physical fitness
 - to increase my mental wellbeing
 - to be outdoors more
 - to meet like-minded people
 - to give something back to my community
 - to get involved with environmental conservation activities
 - Other (please specify)
-

17. Which of the below best describe your TOP THREE reasons for continuing to come to Green Gym?

- I want to increase or maintain my physical activity
 - I want to increase or maintain my mental wellbeing
 - I want to be outdoors more
 - I want to meet like-minded people
 - I want to give something back to my community
 - I want to get involved with environmental conservation activities
 - Other (please specify)
-



18. Did any of the following organisations recommend Green Gyms for you personally and suggest you attend? (please tick all that apply)

- Social Services*
 - NHS (e.g. your doctor or nurse)*
 - Employment organisation (e.g. Jobcentre)*
 - Training organisation (e.g. School, College or University)*
 - Volunteering Agency*
 - Other (please specify):*
-

Part B: Tracking your levels of activity...

This section is used to look at your levels of activity.

Think about all the **vigorous** activities that you did in the **last 7 days**. **Vigorous** physical activities refer to activities that take hard physical effort and make you breathe much harder than normal. Think only about those physical activities that you did for at least 10 minutes at a time.

19. During the last 7 days, on how many days did you do vigorous physical activities like heavy lifting, digging, aerobics, or fast bicycling?

_____ days per week

No vigorous physical activities → Skip to question 21

20. How much time did you usually spend doing vigorous physical activities on one of those days?

_____ hours per day

_____ minutes per day

Don't know/Not sure

Think about all the **moderate** activities that you did in the **last 7 days**. **Moderate** activities refer to activities that take moderate physical effort and make you breathe somewhat harder than normal. Think only about those physical activities that you did for at least 10 minutes at a time.

21. During the last 7 days, on how many days did you do moderate physical activities like carrying light loads, bicycling at a regular pace, or doubles tennis? Do not include walking.

_____ days per week

No moderate physical activities → Skip to question 23

22. How much time did you usually spend doing moderate physical activities on one of those days?

_____ hours per day

_____ minutes per day

Don't know/Not sure

Think about the time you spent **walking** in the **last 7 days**. This includes at work and at home, walking to travel from place to place, and any other walking that you have done solely for recreation, sport, exercise, or leisure.

23. During the last 7 days, on how many days did you walk for at least 10 minutes at a time?

_____ days per week

No walking → Skip to question 25

24. How much time did you usually spend walking on one of those days?

_____ hours per day

_____ minutes per day

Don't know/Not sure

The last question is about the time you spent **sitting** on weekdays during **the last 7 days**. Include time spent at work, at home, while doing course work and during leisure time. This may include time spent sitting at a desk, visiting friends, reading, or sitting or lying down to watch television.

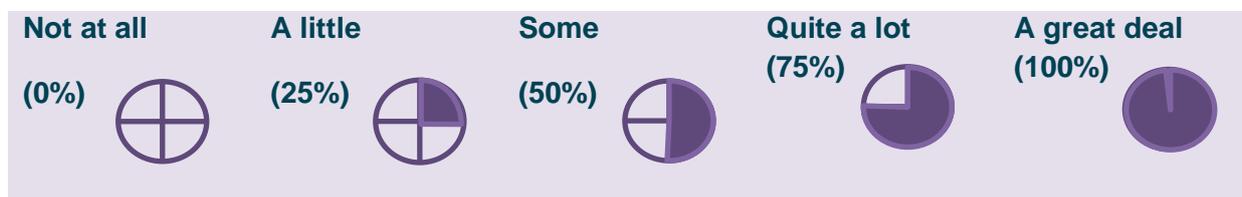
25. During the last 7 days, how much time did you spend sitting on a week day?

_____ hours per day

_____ minutes per day

Don't know/Not sure

26. To what extent do you think your level of physical activity is related to your participation in Green Gym activities?



Part C: Tracking your wellbeing...

This section is used to look at your personal and social wellbeing.

27. Below are some statements about feelings and thoughts. Please tick the box that best describes your experience of each over the last 2 weeks.

	None of the time	Rarely	Some of the time	Often	All of the time	Don't know
I've been feeling optimistic about the future						
I've been feeling useful						
I've been feeling relaxed						
I've been dealing with problems well						
I've been thinking clearly						
I've been feeling close to other people						
I've been able to make up my own mind about things						

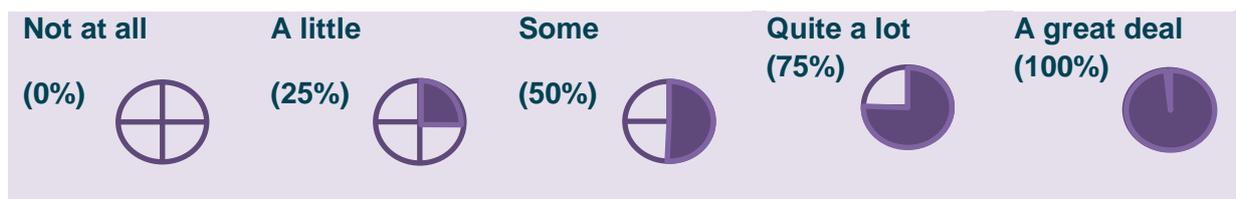
28. Now, how would you have answered these same questions before you joined Green Gyms?

NOTE: SKIP THIS QUESTION IF YOU HAVE BEEN ATTENDING GREEN GYMS FOR LONGER THAN 2 YEARS.

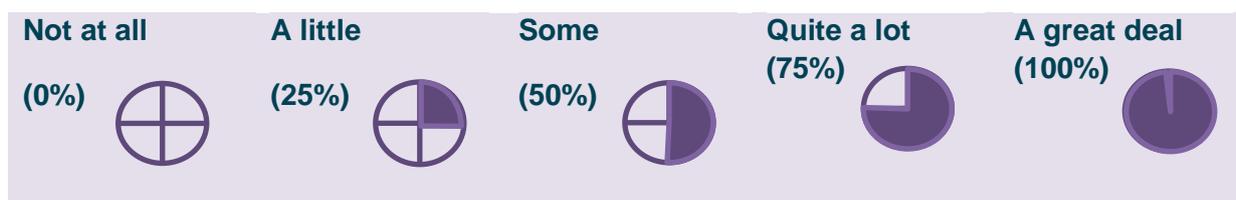
	None of the time	Rarely	Some of the time	Often	All of the time	Don't know
I've been feeling optimistic about the future						
I've been feeling useful						

I've been feeling relaxed						
I've been dealing with problems well						
I've been thinking clearly						
I've been feeling close to other people						
I've been able to make up my own mind about things						

29. Thinking about your answers above, to what extent do you think your wellbeing is related to your participation in Green Gym activities?



30. Thinking about your answers above, to what extent do you think your wellbeing is as a result of being outdoors participating in Green Gym activities? I.e. would you have experienced the same wellbeing levels if you had participated in a similar indoor activity or community group?



Some further personal wellbeing questions.

31. Overall, how satisfied are you with your life? Please use a scale of 0 to 10, where 0 is not at all satisfied and 10 is completely satisfied, to answer the following questions.

<i>Not at all satisfied</i>											<i>Completely satisfied</i>
0	1	2	3	4	5	6	7	8	9	10	

32. Overall, to what extent do you feel the things you do in your life are worthwhile? Please use a scale of 0 to 10, where 0 is not at all worthwhile and 10 is completely worthwhile, to answer the following questions.

<i>Not at all worthwhile</i>											<i>Completely worthwhile</i>
0	1	2	3	4	5	6	7	8	9	10	

33. Overall, how happy did you feel yesterday? Please use a scale of 0 to 10, where 0 is not at all happy and 10 is completely happy, to answer the following questions.

<i>Not at all happy</i>											<i>Completely happy</i>
0	1	2	3	4	5	6	7	8	9	10	

34. Overall, how anxious did you feel yesterday? Please use a scale of 0 to 10, where 0 is completely anxious and 10 is not at all anxious, to answer the following questions.

<i>Completely anxious</i>											<i>Not at all anxious</i>
0	1	2	3	4	5	6	7	8	9	10	



Now, how would you have answered these same questions before you joined Green Gym?

NOTE: SKIP QUESTIONS 34 – 37 IF YOU HAVE BEEN ATTENDING GREEN GYMS FOR LONGER THAN 2 YEARS.

35. Thinking about before you joined Green Gym - overall, how satisfied were you with your life? Please use a scale of 0 to 10, where 0 is not at all satisfied and 10 is completely satisfied, to answer the following questions.

<i>Not at all satisfied</i>						<i>Completely satisfied</i>				
0	1	2	3	4	5	6	7	8	9	10

36. Thinking about before you joined Green Gym - overall, to what extent did you feel the things you did in your life were worthwhile? Please use a scale of 0 to 10, where 0 is not at all worthwhile and 10 is completely worthwhile, to answer the following questions.

<i>Not at all worthwhile</i>						<i>Completely worthwhile</i>				
0	1	2	3	4	5	6	7	8	9	10

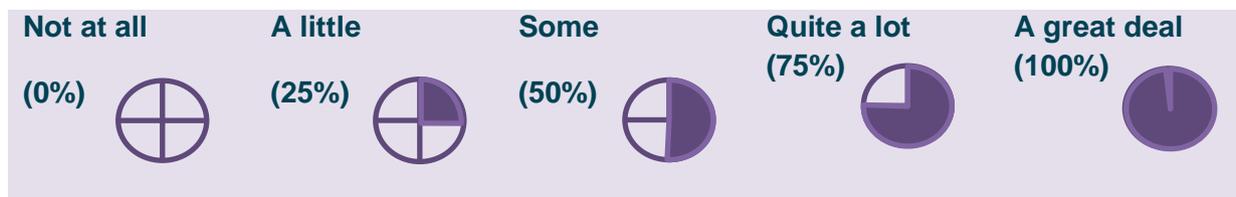
37. Thinking about before you joined Green Gym - overall, how happy did you feel? Please use a scale of 0 to 10, where 0 is not at all happy and 10 is completely happy, to answer the following questions.

<i>Not at all happy</i>						<i>Completely happy</i>				
0	1	2	3	4	5	6	7	8	9	10

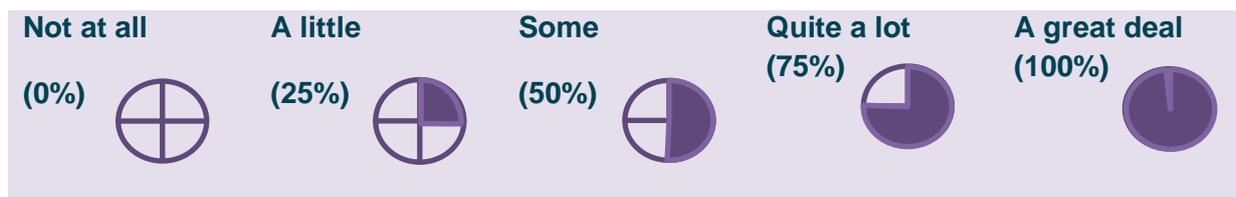
38. Thinking about before you joined Green Gym - overall, how anxious did you feel? Please use a scale of 0 to 10, where 0 is completely anxious and 10 is not at all anxious, to answer the following questions.

<i>Completely anxious</i>						<i>Not at all anxious</i>				
0	1	2	3	4	5	6	7	8	9	10

39. Thinking about your previous answers, overall to what extent do you think your feelings of satisfaction, worthwhileness, happiness and anxiety are related to your participation in Green Gym?

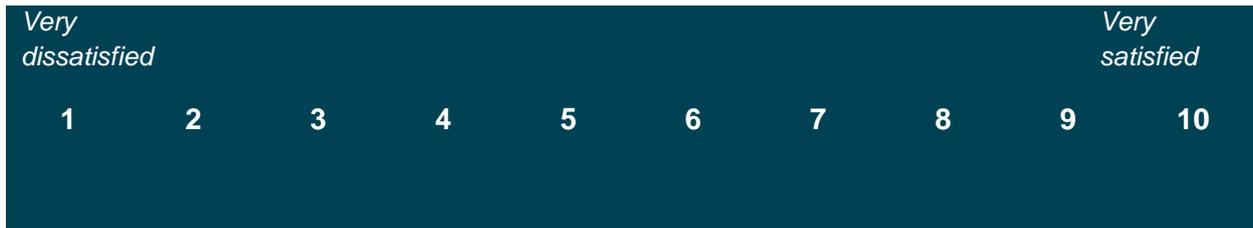


40. Thinking about your previous answers, overall to what extent do you think your feelings of satisfaction, worthwhileness, happiness and anxiety are a result of being outdoors? I.e. would you have experienced the same wellbeing levels if you had participated in a similar indoor activity or community group?



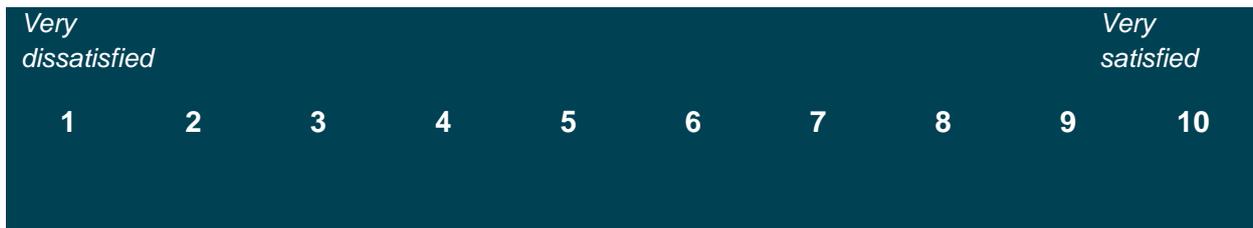
The next questions are about your social wellbeing.

41. Could you please tell me on a scale of 1 to 10 how satisfied you are with your social life, where 1 means you are very dissatisfied and 10 means you are very satisfied?

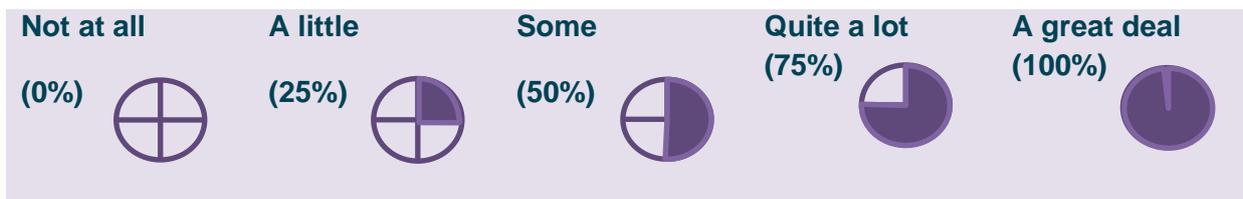


42. Now, how would you have answered this same question before you joined Green Gyms?

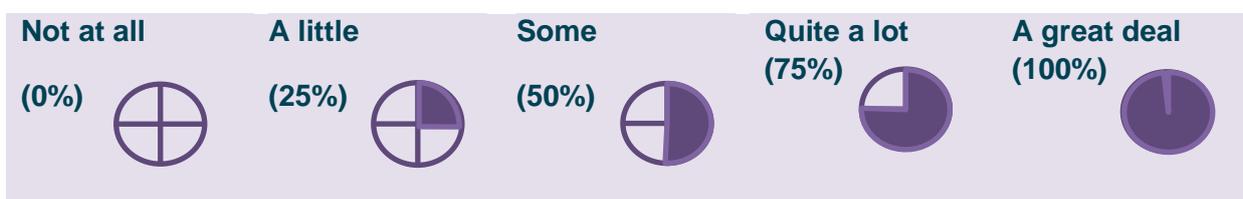
NOTE: SKIP THIS QUESTION IF YOU HAVE BEEN ATTENDING GREEN GYMS FOR LONGER THAN 2 YEARS.



43. Thinking about your answers above, to what extent do you think your social wellbeing is related to your participation in Green Gym activities?



44. Thinking about your answers above, to what extent do you think your social wellbeing is as a result of being outdoors participating in Green gym activities?

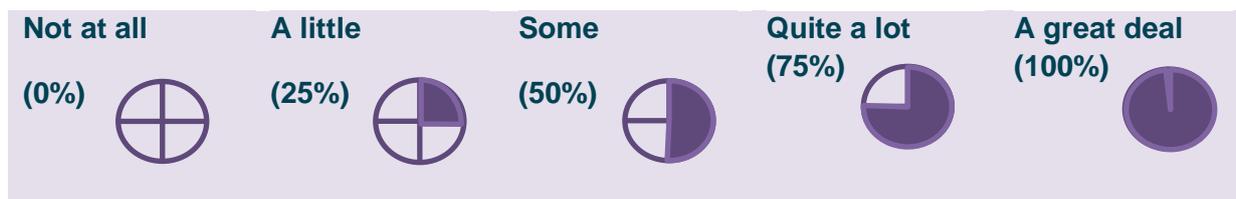


Now, a question about the wider local area around your Green Gym – the area within 15-20 minutes walking distance.

45. To what extent would you agree or disagree that people in this neighbourhood pull together to improve the neighbourhood?

- Definitely agree
- Tend to agree
- Tend to disagree
- Definitely disagree
- Nothing needs improving
- Don't know

46. Thinking about your answer above, to what extent do you think it is related to your participation in Green Gym?



Thank you for taking part in this survey!

Appendix D: Table of Qualitative Interviews

Gender	Referral	Health Issues	Socio-economic	New Volunteer
F	Self	Overweight	Long-term unemployed	No
F	Social Prescribing Referral	Epilepsy Depression	Long-term unemployed	No
M	Self	N/A	Undisclosed	Yes
M	Mental Health Services	High Blood Pressure Overweight Disabled Depression	Long-term unemployed	No
M	Criminal Justice Organisation	N/A	Ex-Offender	Yes
M	Self	Diabetes Anaemia Depression	Long-term unemployed	No
M	Job Centre	Overweight Depression	Retired	No
F	Self	N/A	Undisclosed	Yes
M	Self	High Blood Pressure Overweight Asthma Depression	Long-term unemployed	No
M	Social Services	N/A	Long-term unemployed	No
M	Alcohol services	N/A	Long-term unemployed	No
M	Job Centre	Diabetes Depression	Long-term unemployed	No
F	Self	N/A	Long-term unemployed	Yes
M	Community Organisation	Overweight Depression	Long-term unemployed	No
F	Self	Asthma	Retired	Yes
M	Self	N/A	Long-term unemployed	No
F	Alcohol Services	N/A	Undisclosed	Yes
M	Mental Health Services	High Blood Pressure Depression Osteoarthritis.	Long-term unemployed	No

Appendix E: Topic Guide for Volunteer Interviews

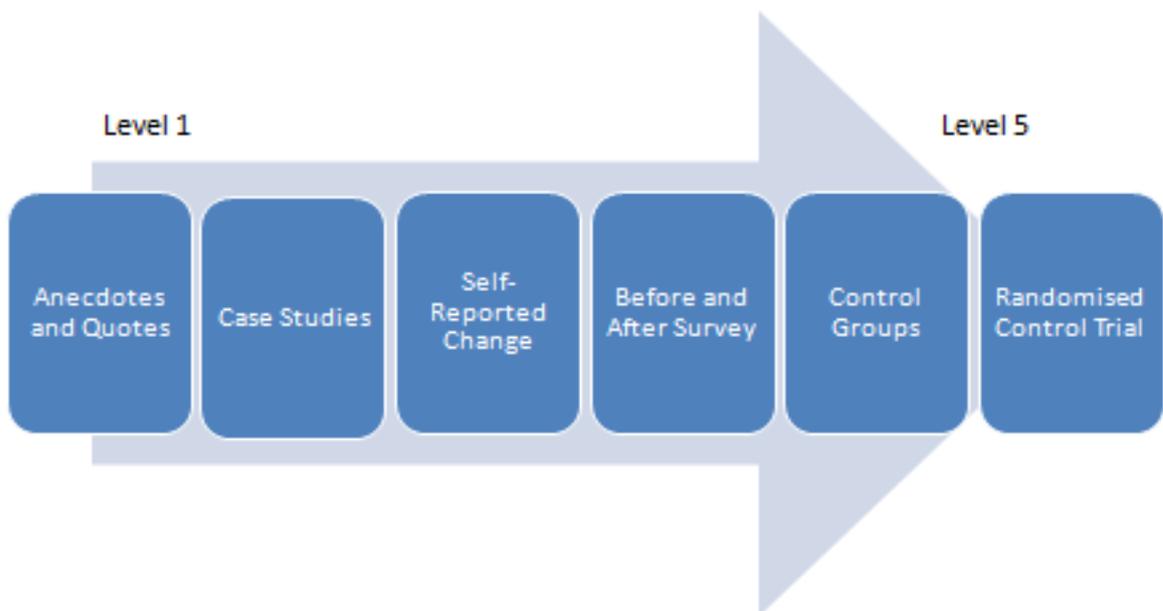
Interview schedule for volunteers	
Past	
Question	Prompts
How did you find out about GG?	Pathway (organisational) Personal / community relationships Media/local press/opportunistic
IF REFERRED/SIGNPOSTED/ADVISED BY AGENCY OR 3 RD PARTY: Who/ which agency referred/signposted/adviced you to come to GG?	Do you still see (referrer)? Why?
IF REFERRED/SIGNPOSTED BY AGENCY OR 3 RD PARTY: What did they tell you about GG?	How did that make you feel? Encouraged/motivated/nervous/unsure/other
Have you ever done anything like GG?	Activity before GG
How were you feeling before you started coming to GG?	Physically/psychologically/life & family 'issues'/social connectivity/other?
What were you hoping to get from GG?	How/in what way? What outcomes - Physical activity, mental health, social connection, giving something back
Present	
How often do you come to GG?	Why? Would you like to come more/less often?
What do you like most about GG?	Why?
Is there anything that would make it even better for you?	Why?
How have you been feeling since you started coming to GG?	Why do you think you have been feeling like that?
Do you think that GG has contributed to any changes in your life?	How/in what way? What outcomes - physical activity, mental health, social connection, giving something back/other?
Future	
Are you planning to continue coming to GG? IF YES: What are you hoping to get from continuing to come to GG?	How/in what way? What outcomes - physical activity, mental health, social connection, giving something back
IF REFERRED/SIGNPOSTED/ADVISED TO ATTEND GG BY AGENCY OR 3 RD PARTY: How much does your GP/Nurse/Social Worker know about how you have been feeling since coming to GG?	How is information transmitted – formally/informally and by whom? If no feedback given would volunteer like to share feedback with referring agency? If yes – what outcomes and how?
Would you recommend GG to others/friend/family	Why/why not?

Appendix F: Topic Guide for Referral Agencies

Interview schedule – referral agencies	
Referral process and feedback	
Question	Prompts
How did you first hear about Green Gym?	Professional/ personal / community contacts/conference/media
When did you first start sending clients to GG?	Why? What led you to use GG this time?
What process do you use?	Signposting (use of website/hard copy)/formal referral (advance contact with GG leader), other methods
If you could – what changes would you make to this process?	Why? Speed/time/efficiency/cost effectiveness/reporting
Thinking about xxx [name of client] what sort of feedback do you receive from the GG about xxx?	Useful? Why/how do you receive the feedback
What sort of feedback would you like?	Why? Attendance/distance travelled/specific outcomes?
What sort of feedback do you get from xxx about their GG experience?	Useful? Why/how How often they attend
What sort of information would you like to receive from xxx about their GG experience?	Why? How often they attend/changes in wellbeing/physical activity/new friendships/other
Reason for Referral/Signposting and Benefits	
Why did you think GG would be a good option for xxx?	What were you hoping that GG was going to do for xxx? To your knowledge - had xxx ever done anything like GG before? / What were their physical activity levels?
(If you've had contact with xxx since they joined GG) – would you say they have benefited from Green Gym?	What and why? Physical activity/psychological wellbeing/social engagement
Do you think that GG has contributed to any positive changes in xxx's life?	What/How?
Perceptions of Green Gym	
Thinking about your client groups – which groups do you think would benefit most from GG?	Why? In what way? Disease groups/physical/mental health/age groups/socio-economic groups/disadvantaged groups
What do you like most about GG?	Why?
Is there anything you dislike?	Why?
Is there anything that GG could do better?	What? How?
Are you planning to continue referring to GG?	Why?

Appendix G: NESTA Levels of Evidence

NESTA Levels of evidence





Appendix H: Green Gym Volunteer Welfare Form

Volunteer welfare information

The Conservation Volunteers is committed to providing a safe, healthy and inclusive working environment for all its volunteers. We expect you, the volunteer, to contribute positively to this environment by respecting our policies, procedures and working practices. Please complete the personal information requested below so we can establish your health and welfare needs and improve your volunteering experience.

**All information is treated in the strictest confidence.
(*Mandatory information for volunteering)**

Your details

Mr	Mrs	Miss	Ms	(please circle)
*First name				
*Last name				
*Address				
*Postcode				
*Telephone/mobile				
E-mail				
*Date of Birth &/or age				

Your emergency contact details

*First name
*Last name
*Relationship to you
*Address
*Postcode
*Telephone/mobile: Daytime: Evenings:

The Conservation Volunteers and you
Please circle where appropriate:

In order to celebrate the work of our volunteers we often take photographs of our activities. Are you happy for us to use photographs of you for publicity purposes? **Yes** **No**

Your health and welfare

*I understand that it is advisable to have protection against tetanus when working outdoors -
Yes / No (if yes describe below)

*To help us plan your First Aid and welfare provision please answer the following: Is there any work you may find difficult for health reasons?
Yes / No (if yes describe below)

*Are you taking any medication that a first aider or doctor would need to be aware of?
Yes / No (if yes describe below)

*Is there any information we may need to ensure your safety e.g. colour blindness, hearing impairment, learning difficulties - **Yes / No (if yes describe below)**

Continue on separate sheet if required

Your volunteer declaration - Data Protection Act 1998.

The personal data on this form will be used by The Conservation Volunteers to send you information about us. It will only be used by The Conservation Volunteers and will not be made available to any third party.

“I am involving myself of my own free will and declare that to the best of my knowledge the information given is correct and I know of no reason why I should not participate. I consent to the personal details supplied on this form being used by The Conservation Volunteers for the purposes outlined. I consent to follow The Conservation Volunteers policies and procedures when involved in their projects”.

*Your signature:
*Date:

You and The Conservation Volunteers

Is this your first time with us? **Yes / No**

Have you volunteered for any other organisation in the last year? **Yes / No**

Have you been referred to us by an Agency? **Yes / No**

If yes please tell us the name of the Agency:

Are you on a corporate volunteering programme? **Yes / No**

If yes please tell us your employer:

Your preferred contact methods

By telephone: _____

Via email: _____

By post: _____

I would prefer you not to contact me **Yes / No**

We would like to use your contact details to send you our Roots newsletter and information about our charitable work, including fundraising. **Yes / No**

How you heard about us – please tick

- Internet
- Employment /careers office
- Volunteer centre
- Newspaper /Magazine
- Referred by an agency
- Word of mouth

Equal opportunities

The Conservation Volunteers aims to provide a working and volunteering environment in which everyone feels equally valued. We strive to meet this aim by continually monitoring our work and you can help by telling us a bit more about yourself.

Your economic activity – please tick

- Employed
- Self - employed
- Unemployed (in training)
- Unemployed (not in training)
- Retired
- Permanently sick or disabled
- Looking after home/family
- Economically active full-time student
- Economically active part-time student
- Economically inactive student
- Other economically inactive
- Other /unknown

Your cultural background – please tick

- White British
- White Irish
- White Other
- Mixed – White and Black Caribbean
- Mixed – White and Black African
- Mixed – White and Black Asian
- Mixed – Other
- Asian or Asian British – Indian
- Asian or Asian British – Pakistani
- Asian or Asian British – Bangladeshi
- Asian or Asian British – Other
- Black or Black British – Caribbean
- Black or Black British – African
- Black or Black British – Other
- Chinese
- Traveller/Roma/Irish traveller
- Other: _____

Your sexual orientation - please tick

- Bisexual
- Gay man
- Gay woman/lesbian
- Heterosexual/straight
- Other
- Prefer not to say

Do you have a disability - Yes / No

Thank you for giving us your information.

Appendix I: Green Gym Pilot Study

Pilot Green Gym Study

Executive Summary Report

Key Findings:

On the basis of findings from the pilot study we are able to infer that:

- Due to the inclusive nature of Green Gym, a large proportion of the national evaluation will need to be administered in-person. This has significant resource implications.
- Most volunteers taking part in the national evaluation will be existing volunteers – not new to Green Gym. As such, it is likely that any gains made in both physical and psychological health (as a result of Green Gym participation) will already have been achieved.
- Data quality of retrospective questions may be weak, but can be improved by giving volunteers access to answers previously given to the same question.
- The collection of biometric data is resource intensive as (without the use of technology devices) it cannot be done using self-complete methods. This has significant resource implications.
- For reasons outlined above – (the small numbers of new volunteers in comparison with the number of existing volunteers) and the time-frame of the national evaluation (3 months) – means that biometric data is unlikely to demonstrate significant improvement.
- As demonstrated in the pilot, the collection of biometric data is most useful as a vehicle to engage volunteers in broader healthy conversations.

1. Introduction and Methodology

1.1 Preface

The scaling up of Green Gyms across the country is being supported by Nesta and the Cabinet Office, through the Centre for Social Action Innovation Fund. The plan is to grow Green Gym to 600 by 2020.

The pilot study and the national evaluation of Green Gym are being supported by Nesta as part of the scaling up project, strengthening the evidence base to support funding bids, with particular attention to the needs of public health commissioners.

1.2 Introduction

This report is a summary of the findings of a pilot study conducted to inform the national (England only) Green Gym evaluation. The report contains a review on both potential tools and data collection strategies for the national evaluation of Green Gym.

The Conservation Volunteers (TCV) has commissioned the New Economics Foundation (NEF) to support the delivery of the national evaluation of Green Gym. Both the pilot and the national evaluation have been and will be led and carried out by TCV with NEF offering analytical expertise and acting as a 'critical friend' in the evaluation process.

1.3 Context

Green Gym brings together local volunteers on a regular (often weekly) basis to revitalise outdoor spaces. Green Gym enables people to increase their level of physical activity and improve their health whilst also improving their local environment. Green Gym is free at point of contact. Green Gyms are particularly successful in reaching people and communities where health inequalities are most common and evident, and where public space may not be utilised to its full potential. A quarter of the current 130 Green Gyms are located in the top 20% most deprived places in the UK.



Despite sharing a basic format, there is no ‘one size fits all’ model for Green Gym and each is adapted to the needs of the local community and its volunteers. As a consequence, each Green Gym may have as many differences as similarities.

In general, Green Gyms meet weekly for around 3 hours with a coffee break in the middle. Most Green Gyms begin with instructions on how to use the tools for the activities planned for that sessions and warm-up and stretching exercises before the tasks begin. At the end of the session, once the tools have been put away, volunteers take part in a series of cool-down and stretching exercises to conclude the Green Gym session.

1.4 Sample

The pilot was designed to take into account a variety of geographic areas, different types of Green Gym and a wide range of volunteers – including those referred by 3rd party agencies and those self reporting. The pilot Green Gyms received no additional support to take part in the pilot.

Three Green Gyms were selected to take part in the pilot were:

Watford (Hertfordshire)

Darlaston (Birmingham)

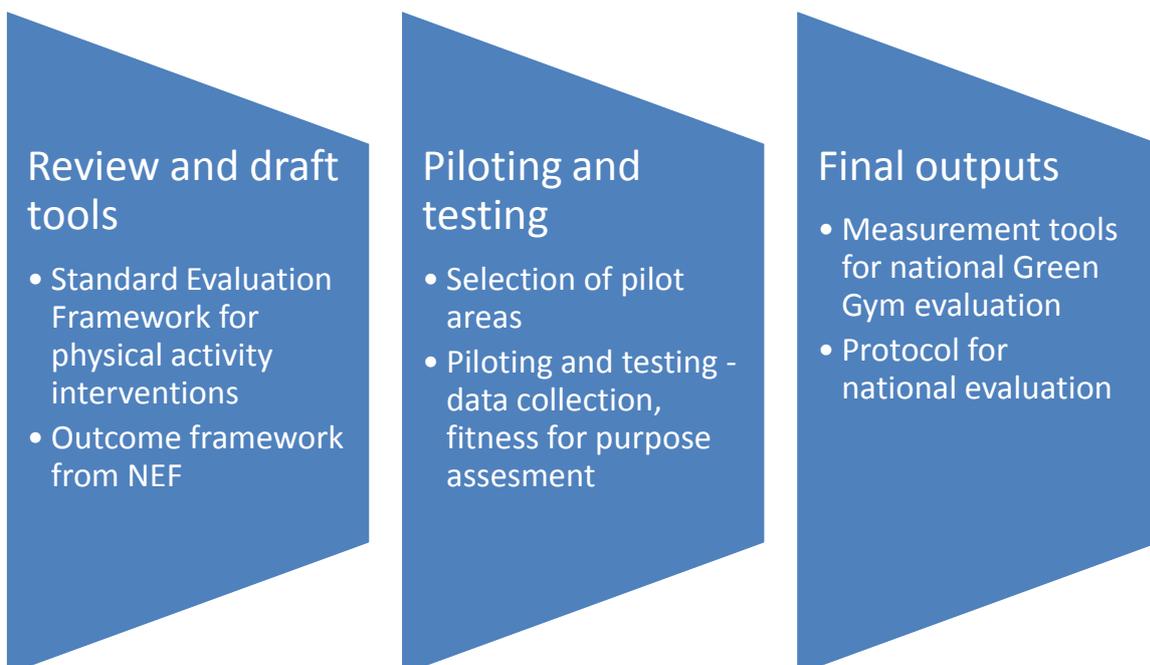
West Hampstead (London)

2. The Pilot Evaluation: Aims and Objectives

The purpose of the pilot study was fourfold, namely:

- To assess the most appropriate subjective (self-report questionnaire) tools to measure the health and wellbeing of Green Gym volunteers
- To gain an in-depth understanding of the acceptability (or otherwise) of collecting objective biometric data from Green Gym volunteers
- To use the information above to determine which subjective and objective tools to use in the national evaluation.
- To identify which factors (if any) impact on the organisation and delivery of Green Gym and therefore may influence Green Gym (and volunteer officer) Project Officers willingness to take part in the national evaluation

The purpose of the pilot study was not to identify ‘distance-travelled’ or behavioural change between measurements.



2.2 Measurement Tools

A preliminary assessment of health and well being self-report tools that could be used had been undertaken by NEF as part of an outcome framework document. Four outcome areas were identified:

- Physical activity
- Mental wellbeing
- Social cohesiveness
- Diet

Using the Standard Evaluation Framework for physical activity interventions ²²as a guide, three approaches to measuring physical activity were identified:

- Measure type and amount of physical activity within Green Gym
- Measure of total physical activity – inside and outside of Green Gym
- Proportion of achieving (Department of Health) recommended physical activity levels

In addition – a broader and more objective measure of physical health was obtained through waist circumference measurements and blood pressure readings.

Two approaches to mental wellbeing were used - the Short Warwick Edinburgh Mental Wellbeing scale (WEMWBS) and the ONS wellbeing questions.

Social cohesiveness was assessed using frequency of contact with family, friends and social contact more generally.

A two-item food frequency question was used to assess '5 a day'.

²² https://www.noo.org.uk/core/frameworks/SEF_PA

Green Gym Pilot Measurement

Group A

Demographic, Socioeconomic and General Health Status Data

Physical Activity – self report questions from Active People Survey (Sport England)

Diet – two item food frequency – Public Health Indicators

Wellbeing – self report – ONS questions

Social Connectivity – self report – Social Trust – Understanding Society

Waist Circumference – tape measure – Guidelines from National Obesity Forum

Blood Pressure – taken by interviewer using digital monitor

Group B

Demographic, Socioeconomic and General Health Status Data

Physical Activity – self report questions from NHS Fitness Self-Assessment Tool

Diet – two item food frequency – Public Health Indicators

Wellbeing – self report – short Warwick-Edinburgh

Social Connectivity – self report – Personal relationships and trust – European Quality of Life Survey

Waist Circumference – coloured ribbon

Blood Pressure – taken by interviewer using digital monitor

Group C

Demographic, Socioeconomic and General Health Status Data

Physical Activity – tracked and recorded by GG leader

Diet – two item food frequency – Public Health Indicators

Wellbeing – self-report – NEF National Accounts

Social Connectivity – self report – Personal relationships and trust , bespoke version – European Quality of Life Survey

Waist Circumference – coloured ribbon

Blood Pressure – taken by participant using digital monitor

2.3 Pilot Research Methodology

The core pilot evaluation methodology consisted of three steps:

- Sampling Green Gyms to take part - engaging and recruiting through Green Gym Project Officers
- Gaining consent from volunteers willing to participate (and opt out sheets from those who choose not to take part)
- Data collection and site visits.

A series of site visits took place over a six-week period. Time was spent in each location to gain an understanding of the structure and operation of each Green Gym and to identify the level of support required to enable volunteers to participate in the study.

Length of time between site visits varied due to local conditions and volunteer availability but was approximately 2 weeks apart for Watford and West Hampstead with a longer period between visits at Darlestone. Dates of site visits can be found in table 1 below.

Table 1- Dates of Site Visits			
Group	Birmingham Darlestone	Hertfordshire Watford	London West Hampstead
Baseline	13 Oct	30 Sept	2 Oct
First follow up	3 rd Nov	14 Oct	16 Oct
Second follow up	n/a	28 Oct	30 Oct

At each visit participating volunteers completed, or were assisted to complete, self-report questionnaires covering health, wellbeing and social connectivity. In addition, blood pressure and waist circumference measurements were taken by research staff and supporting volunteer officers.

3. Consent

Most Green Gym volunteers consented to taking part in the pilot study, however, only two thirds of consenting volunteers actually took part in the pilot study – see table 2. Although available at the point of giving consent not all volunteers were available a week or more later when offered a questionnaire. Not all volunteers are weekly attendees and holidays and ill health meant that a third of consenting volunteers were unable to take part.

Information was collected on those who decided not to participate. Reasons given were broadly split between those who were not sure if they would continue to attend Green Gym. For some this was their first visit and they were undecided on returning, others were actively looking for work or had job offers or other commitments and knew they would definitely not be returning to Green Gym. One volunteer felt too anxious to take part.

Table 2- Consent and Participation			
Group	Opted out	Consent Given	Took Part
Birmingham Darleston	1	9	6
Hertfordshire Watford	8	9	5
London West Hampstead	2	11	8
Total	11	29	19

Key Learning

Once consent is given, opportunity to take part in the research should happen simultaneously and without delay.

4. Findings

4.2 Capacity to participate

Half of those who took part required significant support to do so. This included, but was not exclusive to volunteers with mild to moderate learning difficulties. Some volunteers struggled to read and comprehend the written word fluently. This often appeared linked with a lack of confidence to attempt the task.

Of those able to read fluently, a proportion was unsure how to interpret a small number of questions and struggled to grasp the concepts embedded within questions. Lengthy questions were found to be particularly challenging. See Figure 1 for an example.

Holding two examples front of mind, working out the level of activity in an ‘average’ week and classifying the proportion was confusing for some participants.

Figure 1: Example of complex and lengthy questions as seen in survey B

The Department of Health recommends adults are moderately active for 150 minutes (2.5 hours) or vigorously active* for 75 minutes (1.25 hour) each week. In an average week, how close are you to achieving this? (for examples, see box below)

- I achieve significantly more than this every week (>125%)
- I achieve slightly more than this every week (100%-125%)
- I achieve this every week (100%)
- I'm almost there, but not quite (75%-100%)
- I do just over half of what's recommended (50%-75%)
- I do just under half of what's recommended (25%-50%)
- I'm a long way off (0%-25%)

Questions with lengthy examples (for instance the difference between vigorous and muscle strengthening exercise) had a mixed reception. Some participants found the concrete examples useful as a way of identifying their level of activity. Conversely, other respondents found little distinction between vigorous and muscle strengthening activity and therefore found these questions more complex to answer – see Figure 2.

Figure 2: Definition of vigorous and muscle strengthening exercise as seen in survey A

Vigorous exercise: *“where you're breathing hard and fast and your heart rate has increased significantly. If you're working at this level, you won't be able to say more than a few words without pausing for a breath”*

- *E.g. heavy or rapid shovelling (more than 10 lbs per minute), digging ditches, or carrying heavy loads, Felling trees, carrying large logs, swinging an axe, hand-splitting logs, or climbing and trimming trees, Pushing a non-motorized lawn mower*

Muscle-strengthening exercise: *“exercise that increases skeletal muscle strength, power, endurance, and mass”*

E.g. sawing, lifting weights, working with resistance bands, heavy gardening, such as digging and shovelling, climbing stairs, hill walking, cycling, dance, push-ups, sit-ups and squats, yoga.

A number of volunteers had difficulty reading or simply lacked the confidence to complete the questionnaire alone. Two of the pilot Green Gyms supported volunteers with mild to medium learning difficulties. Although supported by specialist support workers to take part – it is not clear –that they always fully understood the questions being asked of them.



Moreover, some volunteers may have reported what they thought we wanted to hear, instead of what really occurred. Even though it is impossible to eliminate all bias in a study, the use of retrospective questions ensures that individuals evaluate their pre-post behaviours using the same frame of reference.

Key learning

Many volunteers are unable to complete questionnaires without support.

Green Gym volunteers with learning disabilities, low literacy or low levels of confidence will require support to participate in the Green Gym national evaluation. Language, format, layout of national evaluation tools to follow Mencap’s accessible information guidelines.

4.3 Retrospective Questions

It is likely that our plans for a pre/post evaluation Green Gym survey will be designed to determine changes in volunteers’ physical activity levels, mental wellbeing and social connectivity. However, evaluation with a pre/post format has two problems. The first is incomplete data sets, where either pre- or the post- only are filled out.

Most of those taking part in the evaluation (as with the pilot study) will be existing rather than new volunteers. There will be no ‘pre’ or real baseline (before joining Green Gym) measurements for these volunteers.

The second problem is referred to as "response-shift bias," where participants overestimate their behaviours on the pre-survey and underestimate their behaviours on the post-survey due to a change in frame of reference¹. These problems can be circumvented by using retrospective questions. Two sets of questions are asked, firstly asking about their behaviour or feelings now (after participating in Green Gym) and secondly asking about their behaviour or feelings before joining Green Gym. See figure 3.

Figure 3	Not at all satisfied										Completely satisfied	
	0	1	2	3	4	5	6	7	8	9	10	
Overall, how satisfied are you with your life?												
Thinking back to before you joined Green Gyms; overall, how satisfied were you with your life?												

Most volunteers found retrospective questions difficult to answer. Asking volunteers to remember how they felt before joining Green Gym was particularly challenging for long-standing volunteers. However- asking volunteers how they felt two weeks ago caused considerable puzzlement and concerns about poor recall. Volunteers reported that it was

difficult to remember how they felt weeks or longer ago – unless associated with a key event.

Volunteers were able to answer retrospective questions, but relied on fragmentary recall and extensive inferences to so. Volunteers were feel confident (and often felt uncomfortable) answering retrospective questions.

However, when given access to their previous score on the same question (a comparison point), volunteers felt more confident and able to give an assessment of change (or no change) in the intervening period.

Key Learning

Volunteers do not remember feelings and events from the past flawlessly, and the characteristics of the individual, the type of data collected and the period of recall all influence the accuracy of recall.

Accuracy of recall can be increased by reminding of the score given in the last interview (where possible), and asking for any change (or no change) in score since.

4.4 Collecting Biometric Data

Volunteers were comfortable having their blood pressure and waist measurements taken at Green Gym sessions. Volunteers wanted to know their personal measurements and the interpretation of them. Conversations, often driven by volunteers, expanded into wider health and lifestyle conversations and there was a marked willingness to engage in healthy conversationsⁱⁱ.

A number of volunteers suggested Green Gym an ideal place to have healthy conversations that included (but went beyond) encouraging physical activity, dietary advice and encouraging psychological wellbeing.

Key learning

There is an opportunity to engage in healthy conversations and promote healthy lifestyle choices to volunteers and signpost to relevant healthcare services.

Promoting healthy lifestyle choices to volunteers and signposting to relevant healthcare services will put pressure on the time available for Green Gym activities and will require training and support for Green Gym staff delivering and engaging in healthy conversations.

4 Summary

On the basis of findings from the pilot study we are able to infer that:

1. Due to the inclusive nature of Green Gym, a large proportion of the national evaluation will need to be administered in-person. This has significant resource implications.
2. Most volunteers taking part in the national evaluation will be existing volunteers – not new to Green Gym. As such, it is likely that any gains made in both physical and psychological health (as a result of Green Gym participation) will already have been achieved.
3. Data quality of retrospective questions may be weak, but can be improved by giving volunteers access to answers previously given to the same question.
4. The collection of biometric data is resource intensive as (without the use of technology devices) it cannot be done using self-complete methods. This has significant resource implications.
5. For reasons outlined in point 3 (the small numbers of new volunteers in comparison with the number of existing volunteers) and the time-frame of the national evaluation (3 months) - the collection of biometric data is unlikely to demonstrate significant improvement for the sample as a whole.
6. As demonstrated in the pilot, the collection of biometric data is most useful as a vehicle to engage volunteers in broader healthy conversations.

¹ A frame of reference is a complex set of assumptions and attitudes which we use to filter perceptions to create [meaning](#). The frame can include [beliefs](#), [schemas](#), [preferences](#), [values](#), [culture](#) and other ways in which we bias our understanding and judgment.

¹ A healthy conversation takes place opportunistically between at least two people, and involves an individual being encouraged to consider their lifestyle and health with a view to identifying small but important changes. This may involve offering brief advice and signposting to other services. Taken from - Healthy Conversations and the Allied Health Professionals, Public Health England, 2015 https://www.rsph.org.uk/filemanager/root/site_assets/our_work/reports_and_publications/2015/ahp/final_for_website.pdf

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CabinetOffice

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