



Assessing the Value and Benefits of Groundwork

Main Report

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Executive Summary

Introduction

This report sets out the findings of a study designed to **quantify the value and benefits of activities undertaken by the network of Groundwork Trusts** across England, Wales and Northern Ireland. The study was commissioned by Groundwork UK and involved a desk-based analysis of a range of quantitative and qualitative data. The purpose of this work was to assess the value for money that Groundwork Trusts as a whole achieve through the delivery of their environmental and regeneration-related programmes and projects. The research was carried out between July and September 2010.

The report is structured as follows:

- Chapter 2: summarises the nature and scale of Groundwork's activities
- Chapter 3: outlines the approaches to valuing benefits adopted by the study
- Chapter 4: applies the orthodox HM Treasury approach to valuing net impact
- Chapter 5: extends the analysis by exploring the value of environmental benefits
- Chapter 6: considers the wider benefits that may arise from Groundwork activities
- Chapter 7: pulls together the study's findings, and provides recommendations.

Background to Groundwork

Groundwork is a federation of charitable trusts with core objectives of helping people and organisations make changes in order to create better neighbourhoods, to build skills and job prospects, and to live and work in a greener, more environmentally responsible way. Its vision is to help create "a society of sustainable communities which are vibrant, healthy and safe, which respect the local and global environment and where individuals and enterprise prosper." Each Groundwork Trust is rooted in the area it serves: local programmes and services are tailored to the needs of partners and communities in that locality.

Between 2006/7 and 2008/9 annual income across Groundwork as a whole fell from over £121 million to less than £103 million, reflecting both economic trends and changes in funding regimes. Within this the proportion provided as 'base' funding by CLG has remained fairly constant (Groundwork's Project Development Fund). In crude terms this has enabled the Trusts to generate a further £90-100 million worth of additional funding each year, equivalent to a gross leverage ratio of 1:6.8. However, this is undoubtedly an overestimate, as other public bodies contribute to core funding as well. Over the same three year period expenditure on project activities has remained stable at around the £95 million mark.

Methodology and Data Sources

A thorough examination of all the available evidence on Groundwork's project-related activity revealed that, in essence, there were only two sources of information that provided the detail required to enable valuation methods to be applied:

- a selection of the Groundwork-wide Project Performance Measures (PPMs), representing monitoring data collected to gauge progress against targets agreed with CLG; and
- a limited number of evaluation studies and similar reports relating to individual Groundwork projects.

In order to make use of these two levels of data, the study team adopted two types of valuation approach: 'top-down' and 'bottom-up'.

For the 'top-down' approach the study team incorporated the main principles of the HMT approach to benefit-cost estimation into a framework that involved mapping the operational limits to the assessment; assessing the net outputs and outcomes produced by Groundwork; placing a monetary value on these net outputs and outcomes; comparing these values with expenditure to calculate benefit-cost ratios; and using sensitivity analysis to see how these ratios vary according to changes in the underlying assumptions.

The 'bottom-up' approach provided an illustration of the use of 'environmental valuation' at the project level. This focused specifically on local environmental amenity benefits, split into six categories: open space; community space; public realm; green routes; street cleanliness; derelict properties; and carbon dioxide emissions. The number of people benefiting from the projects was estimated by using local population statistics.

For both approaches the monetary values used in estimating how much the impact of Groundwork's activities were worth were based on those produced by the recent study for CLG, *Developmental Work to Value the Impact of Regeneration*.

Valuing Net Outputs and Outcomes

Monetary values were calculated for nine of the nineteen PPMs. The reported total for the three year study period were first adjusted to allow for 'additionality' factors such as deadweight, displacement, substitution, leakage and multiplier effects, using adjustment fractions derived from other evaluations of regeneration programmes, as reported in English partnerships guidance.

Once this was done the unit values based on the findings of the CLG study were applied to the numbers to provide an overall estimate of the monetary value of Groundwork's net impact. This standard estimate showed that the total value of its outputs and outcomes increased from £154 million in 2006/7 to £205 million in 2008/9. In relation to project-related expenditure, these figures converted into benefit-cost ratios (BCRs) of 1.7 and 2.2 respectively. Taken across the three years, the total value of the benefits generated by Groundwork was estimated as being £550 million, for a combined expenditure of £277 million. This equates to a BCR of 2.0, meaning that for every £1 spent by Groundwork, £2 worth of benefits was generated in return. According to Department for Transport guidance, all of these ratios fall within the band labelled 'medium to high value for money'.

Further sensitivity analysis suggested that the benefit-cost ratio probably fell somewhere in a range between 1.3 and 2.7, depending on how conservative or optimistic were the assumptions being made.

Environmental Benefits

There were 15 projects for which sufficient information was available to demonstrate the application of environmental valuation. Information was extracted for each of these on nature and context of the project, aims and objectives, expenditure incurred, size and characteristics of the local population and patterns and frequency of use.

The unit values derived from the CLG study were then applied to each project according to the reported scale of their immediate outputs and the estimated size of the beneficiary population. Because of the wide differences in project size, estimated aggregate benefits inevitably varied over a wide range. However, this variation persisted even when the figures were standardised into benefit-cost ratios. These ranged from 0.1 to 6.9, but with a majority of these having ratios of over two. Those that scored below one appeared to suffer from only being assessed with respect to one type of impact, such as carbon emissions, rather than in terms of the full range of their likely benefits. This may not mean that these projects were poor value for money, as the initial figure might suggest.

Wider Benefits

Overall it may be claimed that together the two main approaches used in the study appear to capture most of the key impacts that might be expected to flow from Groundwork's portfolio of projects and programmes. However, it is highly probable that several more indirect impacts might not have been fully captured, or even have been left undetected. This relates especially to issues concerning health on the one hand, and savings to the public purse on the other.

For example, the full value of health-related benefits are unlikely to be captured in the estimated values based on the PPM figures. Indeed, many of these health impacts are indirect or 'downstream'. A key way in which such hidden benefits could arise is improved physical and mental health through increased physical activity and contact with nature and green space. Similarly, the involvement of volunteers in Groundwork's environmental projects is also likely to bring both physical and particularly mental health benefits. Moreover, the greater sense of ownership and community cohesion stemming from local groups taking charge of open spaces has been shown to result in unanticipated gains in social capital and natural capital for those involved. Such matters are not explicitly included in the PPMs and thus may well go unrecorded. Clearly there is a strong case for trying to incorporate them into future assessments of Groundwork's impact.

At the same time, the range of activities delivered by Groundwork UK is likely to result in considerable savings to the public purse (i.e., reduction in Exchequer costs). These are not necessarily captured by the PPMs, nor by the ways in which these have been valued in this study (for example, in the case of job entries). One way of assessing these savings would be to apply methods similar to those used for some 'Invest to Save Budget' (ISB) projects. However, much more developmental work is required, both in terms of ensuring appropriate data on the part of Groundwork, and in terms of valuation 'ready-reckoners' and techniques more generally.

Conclusions and Recommendations

This study followed 'top-down' and 'bottom-up' approaches to assessing the monetary value of the benefits that result from Groundwork's regeneration activities. The 'top-down' assessment estimated that Groundwork's impact had a monetary value of just over £550.3 million over the three years 2006/7 to 2008/9, double Groundwork's expenditure on project activity, or a benefit-cost ratio (BCR) of 2.0. According to DfT guidance, this represents **medium to high value for money**.

The 'bottom-up' assessment generated a much wider spread of 'value for money' estimates, principally because of variations in the nature of individual projects and the availability of data for them. Of the 11 projects for which a benefit cost ratio could be calculated, six had an estimated ratio greater than two, indicating high value for money. Some of those with negative ratios did not take into other possible impacts such as training, moves into employment, health improvement and crime reduction.

Indeed, the difficulty of capturing wider indirect effects suggests that Groundwork's overall impact may be somewhat greater than this study has shown. How much greater is, however, a matter of speculation.

The report finishes with a set of recommendations about how valuation studies for Groundwork of the type reported here could be improved in future, grouped under three headings:

- improving output and outcome data collection
- valuing environmental benefits of Groundwork activities; and
- assessing the wider impacts of Groundwork projects.

1. Introduction

This report sets out the findings of a study designed to **quantify the value and benefits of activities undertaken by the network of Groundwork Trusts** across England, Wales and Northern Ireland. The study was commissioned by Groundwork UK and involved a desk-based analysis of a range of quantitative and qualitative data. The purpose of this work was to assess the value for money that Groundwork Trusts as a whole¹ achieve through the delivery of their environmental and regeneration-related programmes and projects. The research was carried out between July and September 2010.

The study was **designed to complement other mechanisms through which Groundwork is monitored and evaluated**. In relation to the former, and in line with the Department of Community and Local Government's (CLG) standard financial and monitoring controls for organisations receiving government grant, its relationship with Groundwork is supported by:

- an annual funding agreement
- a three year delivery plan (agreed with CLG and reviewed annually), which specifies annual targets across a range of project performance measures (PPMs) aligned to CLG's Departmental Strategic Objectives (DSOs)
- annual financial statements and audit reports
- quarterly grant claims and an annual statement of grant expenditure; and
- an interim (December) and final (July) Annual Performance Report, which tracks performance against the delivery plan targets, DSOs and related indicators.

In addition Groundwork has employed external contractors to carry out performance evaluations of Trusts. For the last five years, this work has been undertaken by CLES (Centre for Local Economic Strategies)². The current evaluation methodology involves CLES selecting a number of individual Groundwork Trusts (usually 10-12 per year) which are evaluated both as a whole and via a detailed review of three or four recent projects. These individual evaluations involve desk reviews and a range of interviews with strategic and project specific stakeholders. They cover performance, programme and project information as well as strategic documents outlining local priorities (e.g. Local Area Agreements (LAAs), service level agreements). Each report is shared with the individual Trust examined, and the full set submitted to Groundwork UK.

Since 2007 these reports have included an overall 'impact evaluation score' to summarise the key strengths and weaknesses of the individual Trust being scrutinised. 'Added value' is one of the seven components that contribute to this, but the assessment behind this is based principally on qualitative evidence. In other words, the analysis reported in this report represents the first ever attempt at estimating a

¹ For simplicity, in the rest of the report this federation of Groundwork Trusts is referred to by the generic title 'Groundwork'.

² CLES is an independent not for profit think tank which undertakes independent research on economic development and regeneration. Their consulting arm, CLES Consulting, is the current provider of evaluation services (through a competitively tendered contract) for Groundwork UK.

monetary value for the benefits that result from Groundwork's activities, and relating that to the financial expenditure incurred to implement those activities.

The **structure of the remaining sections of this report** is as follows:

- Chapter 2: summarises the nature and scale of Groundwork's activities across England, Wales and Northern Ireland, including evidence in relation to expenditure and measurable achievements
- Chapter 3: outlines the approaches to valuing benefits adopted by the study, and outlines the data sources used and their strengths and weaknesses
- Chapter 4: applies the orthodox 'additionality' approach to valuing net outputs and outcomes following HM Treasury guidelines
- Chapter 5: extends the analysis by exploring the value of environmental benefits
- Chapter 6: considers some of the wider benefits that potentially arise from Groundwork activities, including savings to the public purse
- Chapter 7: pulls together the study's findings on the estimated monetary value of the benefits accruing from Groundwork activities in relation to the costs incurred, and provides recommendations about how such valuation work might be strengthened in future.

2. Background to Groundwork

Groundwork's Vision

Groundwork is a group of charitable trusts helping people and organisations make changes in order to create better neighbourhoods, to build skills and job prospects, and to live and work in a greener, more environmentally responsible way. The first Groundwork Trust (GT) grew from a pilot in the North West of England in the early 1980s. Building on the success of that first model, 47 additional trusts were subsequently established across England, Wales and Northern Ireland. Most of these served one or two adjacent local authority areas, though a few provided wider regional coverage. Over the last three years the number of Trusts has reduced to just over 30 as a result of regional mergers. Although nominally independent, the growth in the number of Trusts during the 1980s and 1990s and the need to coordinate their activities led to them agreeing to operate as a federation with broad common goals and objectives. Groundwork UK was created to support the federation as a whole and to manage the relationship with central government.

Groundwork UK's vision³ is to help create "a society of sustainable communities which are vibrant, healthy and safe, which respect the local and global environment and where individuals and enterprise prosper." This involves a wide range of initiatives which support economic, social and environmental improvement. These include activities that help people make their own decisions about their area; that build people's skills and improve their job prospects; that motivate and develop young people; that redesign neglected open spaces for contemporary use; and that promote greener ways of living and working.

Groundwork's 2010 Manifesto⁴ identifies a number of specific objectives including:

- provision of support for communities in order to help them make the most of opportunities, particularly in areas of greatest need and least capacity
- coordinated action to ensure everyone has a warm, insulated home and encouraging people to reduce their domestic carbon emissions
- increased efforts to ensure people's homes and neighbourhoods are protected against the unavoidable impacts of a changing climate
- actions to change people's behaviour in order to limit personal environmental impacts
- promotion of a green economy through programmes of investment and the creation of 'green' jobs
- encouragement to young people to be positive agents of change in their neighbourhoods.

In broad terms these objectives are assembled under three key priority spheres: Places, which involves environmental enhancement and neighbourhood renewal; People, which promotes community development and individual advancement; and Prosperity, which

³For more details see: <http://www.groundwork.org.uk/>

⁴<http://www.groundwork.org.uk/policy--learning/groundwork-manifesto-2010.aspx>

seeks to improve local economies by introducing greener ways of living and working (Table 1). However, given the generally holistic and cross-cutting nature of most Groundwork projects, it is often difficult to ascribe its activities exclusively to just one of these Priorities.

Table 1: Groundwork Priorities

| Priority | Objective |
|-------------------|---|
| Places | Delivering environmental improvements that create cleaner, safer and greener neighbourhoods |
| People | Creating opportunities to learn new skills and become more active citizens |
| Prosperity | Helping businesses and individuals to fulfil their potential |

Groundwork: Structure and Governance

Groundwork is a federation of independent charities. Each GT is a member of the federation, and signs up to a series of common aims, objectives and processes. GTs are rooted in the area each serves: local programmes and services are tailored to the needs of partners and communities in that locality.

Groundwork UK is the national body of the Groundwork Federation and is responsible for acting as a national voice and monitoring internal agreements and contracts. Groundwork UK is governed by a Federation Board. Over the last three to four years regional units have been developed in each English region and Wales to co-ordinate Groundwork activity there. Some of these have involved the merger of smaller units into a larger organisation that operates in a manner similar to a traditional GT, providing environmental, training and education services. In other regions they serve to co-ordinate the work of existing local GTs. Groundwork Northern Ireland has always operated Groundwork services across the whole of the province.

Specialist staff employed by GTs include community development workers and project officers, landscape architects, employment and training specialists, education workers, business advisers, and youth workers.

Funding and Activity 2006-2009

Table 2 tabulates broad sources of income across all GTs for the three financial years 2006/7 to 2008/9. Annual income fell over this period from over £121 million to less than £103million, reflecting both economic trends and changes in funding regimes. Within these totals there was an increase in the relative proportion of funding from some sources, notably local authorities and the private sector, and commensurate declines in the relative proportions of funding from the European Union and 'other sources'.

In terms of the 'base' funding provided by CLG (Groundwork's Project Development Fund), this remained fairly constant in percentage terms. In crude terms it could be argued that this financial support has enabled a further £90-100 million worth of additional funding to be brought through Groundwork each year. Over the three years this would equate to a gross leverage ratio of 1:6.8. However, this is undoubtedly an overestimate, as GTs also receive an element of core funding from local authorities and other public agencies. This is not usually separated out in the accounts, so it is impossible to say how much of the income from those sources came into this category.

Table 3 outlines expenditure by activity for this same three year period. This has remained relatively stable overall, fluctuating around the £95 million mark. In this context spending has been allocated to one of six main categories⁵. In absolute terms, well over half of total funding has been allocated to two of these, namely 'community' and 'land improvement' projects, reflecting Groundwork's specialist expertise in relation to resident engagement, community development and environmental improvement. However, the proportion of the spend devoted to 'land improvement' declined somewhat over the period, whilst 'community' and 'employment' schemes slightly increased their shares.

Working in partnership with other agencies

GTs work in partnership with many other organisations, ranging from the small community groups to multinational businesses. Groundwork receives core funding from CLG and the Welsh Assembly, as well as many local authorities across the country. This is supplemented by other sources of income, generally from a mixture of contracted services and project grants. Sources include the private sector, the Big Lottery Fund, European and other regeneration funds and a range of public sector agencies.

CLG in its various incarnations has funded Groundwork since 1982 when the first Groundwork Trust was set up. More recently, the Comprehensive Spending Review (CSR) 2007 allocated £42m to Groundwork over three years at £14m a year⁶. A proportion of this is used to support the federation management and shared support services provided by Groundwork UK (amounting to £3.45m in 2009/10) and the remainder (£10.5m for 2009/10) is allocated across the England regions. This allocation is based on a formula⁷ using Index of Multiple Deprivation (IMD) scores and rankings. This approach, which was developed jointly with CLG, ensures that support is directed to areas of greatest need. Groundwork's relationship with CLG provides an important endorsement of its approach to delivery, which in turn supports its ability to engage with a wide range of organisations, partnerships and businesses. This means that it is in a strong position to influence the design principles and delivery approach of many local strategies and projects.

According to a recent in-house assessment by CLG⁸, its close relationship with Groundwork has a number of advantages. Firstly, it provides funding for Groundwork UK and the GTs to invest in project development and delivery against headline outcomes and strategic objectives, but in communities where other public agencies often find it difficult to tread⁹. Secondly, it helps to unlock additional resource investment from other organisations to support an extensive set of regeneration projects and programmes. Thirdly, it facilitates engagement with other relevant partners to ensure

⁵ Broadly speaking, these categories cover 'community' projects involve community-led neighbourhood improvement; 'land improvement' projects involve creation and maintenance of open spaces and play areas; 'employment' covers training and preparation for formal paid work; 'education' involves securing the participation of schools and their pupils in environmental projects; 'business' concerns environmental advice and training in adapting to climate change; 'youth' projects are about increasing the confidence and self-esteem of young people. 'Other' expenditure involving grant programmes administered by Groundwork on behalf of others has been excluded as they do not contribute to Groundwork performance measures.

⁶ This sum is split almost evenly between near cash and capital.

⁷ Regional Investment Formula based 2/3 on need (of which 70% overall IMD and 30% environmental IMD, of the 20% most deprived areas); 1/6 on project performance of trusts and 1/6 on the business performance (50% gearing ratio of additional funds and 50% working capital days).

⁸ CLG (2009) *In-house review of CLG's relationship with Groundwork*, unpublished draft

⁹ See previous research reported in Fordham, G, Gore, T, Knight Fordham R and Lawless, P (2002) *The Groundwork Movement: Its role in neighbourhood renewal*, Joseph Rowntree Foundation, York

strategic coordination and effective management of local and regional activity. Lastly, it provides resources with which Groundwork can manage and improve quality and support learning, sharing and dissemination.

Table 2: Federation of Groundwork Trusts: Sources of Income, 2006-2009

| Income Source | 2006/7 | | 2007/8 | | 2008/9 | |
|-------------------------|----------------|--------------|----------------|--------------|----------------|--------------|
| | (£000s) | % | (£000s) | % | (£000s) | % |
| Central Government | 18,390 | 15.2 | 15,967 | 14.6 | 14,555 | 14.2 |
| Local Authorities | 31,011 | 25.6 | 34,467 | 31.5 | 33,091 | 32.2 |
| Other Public Agencies | 17,328 | 14.3 | 13,999 | 12.8 | 14,962 | 14.6 |
| European Union | 12,096 | 10.0 | 3,957 | 3.6 | 3,707 | 3.6 |
| National Lottery | 3,467 | 2.9 | 7,959 | 7.3 | 6,094 | 5.9 |
| Private Sector | 19,315 | 16.0 | 23,496 | 21.5 | 22,436 | 21.8 |
| Other ¹ | 19,421 | 16.0 | 9,443 | 8.6 | 7,879 | 7.7 |
| FEDERATION TOTAL | 121,028 | 100.0 | 109,288 | 100.0 | 102,724 | 100.0 |

NOTES: 1. Mainly covers funds for grant award programmes such as Community Spaces.
Source: Groundwork UK

Table 3: Federation of Groundwork Trusts: Expenditure by Activity, 2006-2009

| Activity Type ¹ | 2006/7 | | 2007/8 | | 2008/9 | |
|----------------------------|---------------|--------------|---------------|--------------|---------------|--------------|
| | (£000s) | % | (£000s) | % | (£000s) | % |
| Community | 19,105 | 20.2 | 25,108 | 26.2 | 22,641 | 24.0 |
| Land Improvement | 38,161 | 40.3 | 28,127 | 29.3 | 31,172 | 33.1 |
| Employment | 12,360 | 13.0 | 14,533 | 15.2 | 15,427 | 16.4 |
| Education | 4,619 | 4.9 | 3,899 | 4.1 | 3,588 | 3.8 |
| Business | 11,451 | 12.1 | 13,823 | 14.4 | 12,150 | 12.9 |
| Youth | 6,305 | 6.7 | 7,776 | 8.1 | 6,997 | 7.4 |
| PROJECT TOTAL | 92,000 | 97.2 | 93,267 | 97.3 | 91,975 | 97.5 |
| Admin & Governance | 2,673 | 2.8 | 2,599 | 2.7 | 2,323 | 2.5 |
| TOTAL | 94,673 | 100.0 | 95,866 | 100.0 | 94,298 | 100.0 |

NOTES: 1. Excludes 'other' expenditure such as grant award programmes administered.
Source: Groundwork UK

Conversely, CLG's relationship with Groundwork has several reciprocal benefits. Thus, it generates outputs and outcomes that contribute directly to the achievement of the Department's strategic objectives. It also provides a direct channel from national policymaking to local delivery in support of local partnership frameworks, and offers a vehicle for testing new approaches to delivery. In this sense, it provides a mechanism for understanding approaches and mechanisms that work, as well as those that do not, as a means of informing future policymaking. Finally, through active involvement at grassroots level Groundwork also helps to inform and adjust the practice of other organisations in the public, private and voluntary sectors.

3. Methodology and Data Sources

Introduction

The substantive analytical task for this study was the application of relevant techniques to translate Groundwork's measurable achievements (i.e., outputs and outcomes) into monetary values, and to set these against the financial expenditure incurred on the activities that produced those achievements. A range of different methods exists to enable such monetary estimates to be made, their appropriateness varying according to activity and context. Given the wide-ranging and holistic nature of Groundwork's remit, as a first step the study team sought to deploy the orthodox HM Treasury Green Book approach to calculating added value. As will become clear, there were strict limits to how far this could be taken, set primarily by the nature and availability of the data on project outputs and outcomes. There is a strong possibility that these do not capture the full range of direct and indirect benefits flowing from Groundwork activities, so the report also contains a discussion of means by which more indirect or intangible impacts might be addressed in future (see Chapter 6).

Over recent years assessing the value for money of public sector expenditure on a wide range of interventions has become a standard approach to testing the efficiency and effectiveness of different policies and initiatives. Indeed, in addition to the HMT Green Book principles already mentioned, similar advice on calculating net impact and added values has been issued by English Partnerships and the Department for Business Innovation and Skills (BIS), the latter most recently in the form of its revised Impact Evaluation Framework (IEF-Plus) for Regional Development Agencies. The current drive to reduce public expenditure and increase efficiency as a means of narrowing the government's budget deficit brings an even greater urgency to such valuation exercises. There are obvious objections to this approach in terms of its ability to capture non-tradable and intangible benefits fully (an issue addressed elsewhere in this report). Nevertheless, translating publicly funded activities into monetary values at least offers scope for a like-for-like comparison between different policy choices. The key to achieving this, however, is to adopt common assumptions, standard conventions and consistent methods.

Input-Output-Outcome-Value Logic Chains

A key stage in tracing the impact of Groundwork's project activities was to depict the stages linking financial inputs (expenditure) to the monetary value of eventual benefits (outcomes). The standard evaluation guidance recommends that these should take in the form of 'logic chains'. The purpose of these is to relate particular inputs and activities (the resources at Groundwork's disposal and how it uses them), firstly to specific outputs (numbers achieved), and then through to related outcomes (the full benefits resulting from projects).

In view of Groundwork's important role in promoting holistic regeneration, as a starting point the study set out to make use of recent research undertaken for CLG on valuing regeneration. This mapped out all the main logic chains for different categories of regeneration activity in the UK, including worklessness and skills, enterprise and business development, transport and communications, property and infrastructure, housing and communities, environmental improvement and neighbourhood renewal.

Clearly some of these were directly relevant to Groundwork's three key priorities of People, Places and Prosperity, whilst others did not apply.

One important facet of this 'logic chain' approach is that its usefulness is contingent upon the existence of appropriate and applicable data that allows each link in the chain to be 'populated'. If such data is not available across the board, only a more limited valuation exercise is possible. Before any pragmatic decisions could be made about what was feasible for the study reported here, it was necessary to identify the various sources of data on Groundwork's activities that could be made available to the study team, and to discuss their coverage and their limitations.

Data Sources and Limitations

Because this was a desk-based study, the evidence used was exclusively of a secondary nature, drawn from existing reports and summary statistical data. Information was drawn from the following sources:

- CLES Impact Evaluation Reports
- Evaluation Reports on specific projects and programmes
- summary figures on annual expenditure by individual GTs for three financial years (2006/7 to 2008/9), collated by Groundwork UK
- Annual Trustee Reports and Financial Statements for a selection of GTs
- monitoring returns provided in collated form by Groundwork UK and also by two individual GTs.

The information available to the study team can be split into two types: on the one hand, a mixture of mainly qualitative and some quantitative data related to individual projects and programmes, and, on the other, primarily quantitative aggregate data covering income, expenditure and monitoring returns. The strengths and weaknesses of these are briefly discussed in the rest of this section.

Project and Programme Level Data

In terms of project level data, Groundwork UK and individual GTs provided an extensive set of project evaluations and reports. The study team supplemented this with additional items drawn from a comprehensive internet search. In total, 94 reports were examined, including 44 CLES Impact Evaluation reports, covering 39 trusts¹⁰. Of the 50 other evaluation and project reports, 36 were internal reports and nine were evaluations carried out by external organisations. A further five were classified as 'other': these comprised IDEA best practice project summaries and a magazine article.

These reports were examined with regard to the data that they reported. Unfortunately many did not contain much more than summary descriptions of project activity and anecdotal reporting of their achievements. However, 41 project reports did provide some information on spend and outputs or outcomes, and this data was extracted using a common data collection instrument (see Section 2 and Annex 1 in the accompanying Technical Report). While every effort was made to extract meaningful data from each report, there were limitations to the project level data made available. For instance, in terms of financial data for many of the 41 projects only included a breakdown of income across years and sources, but no details of project expenditure.

¹⁰ This figure refers to the Trusts as they were at the time of the evaluation, rather than current arrangements.

Moreover, project outputs were not provided in a common framework – even for projects that had been evaluated by the same organisations – and qualitative outcomes tended to be measured using small sample sizes, some as low as two or three respondents (where they were reported at all). Clearly such small numbers are insufficient to support even the impact being claimed for that project, let alone to afford a basis for any wider analysis. Even those evaluations that did outline project outputs and outcomes generally failed to subject them to any further analysis, and even fewer had taken this further to consider the added value of projects in any detail. In many cases the time periods for projects were not made clear, nor were the geographic scope or target populations. Few of these evaluations involved representative beneficiary surveys that collected direct evidence on the extent to which Groundwork activities were instrumental in the changes in status, behaviour or attitudes recorded. This meant that they were unable to make any assessment of net impact, making allowance for factors such as deadweight or displacement, and thus it was not possible for this study to derive any Groundwork-specific adjustments from these projects for use in subsequent analysis. Instead, as will be seen later in this chapter, calculation of net PPM outputs was undertaken using additionality factors based on the findings of other evaluations of regeneration activity.

Reports covering seven national or regional programmes were also examined. As with the project evaluations these tended to lack detail with respect to outputs and finances, and in the end only two generated sufficient information to warrant inclusion in the information template. However, both of these - Community Spaces and Target Well-being - in fact involved administration of either national or regional grants programmes on behalf of the Big Lottery Fund. As these grants were disbursed to a wide spectrum of different organisations, results of the activities supported could not be ascribed exclusively to Groundwork. Certainly any achievements from projects supported by these grants have not normally been included in the Groundwork PPMs. For these reasons the study team decided to exclude these two evaluations from its detailed analysis.

Aggregate Financial and Monitoring Data

Initially financial and monitoring data was assembled for three individual GTs from their annual Trustee Reports and Financial Statements for the three year period 2006/7 to 2008/9. At this stage it was envisaged that assessment and valuation of net impacts would have to be carried out at this level, and the results grossed up to derive figures for the Groundwork Federation as a whole. Data was captured on the following areas: income by source; expenditure by theme; and gross outputs in the form of the Project Performance Measures (PPMs) agreed with CLG as part of the core funding arrangement.

Subsequently more comprehensive coverage in terms of finance and monitoring was made possible by linking together collated data supplied by Groundwork UK. This took two forms: firstly, summaries of annual expenditure by individual GTs, Groundwork UK and the federation as a whole, broken down by theme; and secondly, collated monitoring totals for each PPM category by GT, region and the federation, grouped into three categories that align with the three Groundwork priorities Places, People and Prosperity (see Table 4).

Table 4: PPM Groupings and Groundwork Priorities

| Priority | PPM Grouping | Objective |
|-------------------|--|---|
| Places | Physical Environmental Improvements | Delivering environmental improvements that create cleaner, safer and greener neighbourhoods |
| People | Education and Community Involvement | Creating opportunities to learn new skills and become more active citizens |
| Prosperity | Integration of the Economy & Environment | Helping businesses and individuals to fulfil their potential |

Although the availability of these Groundwork-wide statistics was a major step forward, matching the two data sets posed a number of difficulties. In particular, having different breakdowns in terms of expenditure (by theme) and PPM outputs (by priority) meant that a direct calculation of disaggregated costs per output was not possible. Moreover, the PPMs themselves are constructed as a mixture of outputs (direct project achievements such as trees planted) and outcomes (more indirect results of project activity, such as reductions in CO₂ emissions stemming from advice and guidance to businesses)¹¹. This in itself was not an insurmountable issue, but it did add further complexity to the assessment of overall benefits.

A more fundamental issue was that a number of the PPMs are actually composite measures, such as 'adults and young people participating in projects' and 'routes of progression'¹². Some of the items under the same heading appear to be substantively different, and also likely to be quite disparate in terms of their notional monetary values. Thus, 'routes of progression' includes both entry into paid employment and starting on a further or higher education course, which are likely to be valued very differently in monetary terms. Unfortunately the proportions achieving each of the categories that comprise the 'routes of progression' PPM are not given. The default assumption here had to be that the numbers were evenly distributed between the five categories. Similarly, the PPM covering 'jobs created' treats all the posts included as the same, once adjusted to a full-time equivalent (FTE) basis, rather than giving any breakdowns by occupation, grade or salary.

All of these difficulties meant that the study team had to adopt various blanket assumptions and to cut out a number of the steps recommended in the guidance on how to conduct a robust net impact evaluation. In many ways some actions of this type were inevitable, given the ex-post, desk-based nature of the study. The nature and extent of the assumptions made and the valuation techniques deployed are outlined in the sections that follow, and set out in more detail in the accompanying Technical Report. First, however, it is important to provide these different strands with a greater degree of coherence by describing the overarching evaluation framework adopted for the study.

Valuation Approaches

The previous section has shown that the principal sources of information on the results of Groundwork activity were either related to specific projects and programmes, or collected as part of the Federation-wide monitoring and reporting system. In essence, these occupy opposite ends of the spectrum; specific individual interventions on the one hand, and aggregate national totals on the other. In order to make use of these two

¹¹ See Technical Report for a more detailed set of PPM definitions.

¹² Fuller definitions of the PPMs, and a discussion of how they might be valued in monetary terms, can be found in the accompanying Technical Report.

levels of data, the study team adopted two types of valuation approach: 'top-down' and 'bottom-up'.

Top-down approach

As already stated, the starting point for the 'top-down' approach in this study was the aggregate numbers assembled over the three years 2006/7 to 2008/9 by Groundwork UK from the annual PPM submissions made by individual GTs. These figures were aligned with financial expenditure data, also provided by Groundwork UK, over the same period. The key steps in this approach were as follows: first, to set operational limits on the calculations, including a judgement about which PPMs to include or exclude; second, to derive a monetary value for each PPM output or outcome measurement unit; third, to derive and apply appropriate additionality adjustment factors to provide an estimate of net outputs and outcomes; fourth, to apply the unit monetary values to these net figures to produce an overall monetary value for Groundwork's achievements over the three years 2006/7 to 2008/9; and then to compare this figure with the expenditure incurred in producing those outputs and outcomes, and in the process arriving at an estimated benefit-cost ratio. The assumptions and calculations employed in doing this are set out in the next section.

Bottom-up approach

This involved a similar set of calculations, but on the basis of information at the individual project level. The focus was on environmental improvement interventions for which sufficient information was available to support such assessment. In such cases there was always likely to be considerable variation between projects in estimated values, partly because of differences in scale, partly because of varying or possibly erroneous information, and partly because of the assumptions made. The environmental valuation method used was similar to that applied to the Federation-wide PPMs. The main differences between the two methods were that the bottom-up approach assumed that, first, all benefits were additional; second, it estimated the duration of project benefits over a longer timescale; and third, it related all project achievements to the likely size of the beneficiary population. A fuller explanation of the methods employed are presented in another section later in this chapter.

Valuing Net Outputs and Outcomes

Introduction

Unfortunately, given the time and resource constraints of the desk-based study reported here, allied to the data limitations already discussed, it was not possible to follow the HMT Green Book approach on public sector economic assessment to the letter. Nor did it prove feasible to undertake a more in-depth assessment of the 'social return' on Groundwork's investment in project activities. To do either of these would have required significant amounts of extra work involving questioning, amongst other people, project managers, beneficiaries, and non-stakeholders, as well as more extensive and disaggregated data sets. Identification of appropriate comparators was also prevented by the lack of organisations similar to Groundwork, and its involvement in a majority of the most severely deprived communities, were a geographically based comparator option to be used instead. Estimating levels of net additional local impact was further complicated by the fact that the study was required to produce a top-down assessment of all activities undertaken by Groundwork, rather than the normal focus of a single project or programme.

However, the study team took the core of the principles from the recommended approach to benefit-cost estimation to devise a framework of analysis that was best suited to the data at hand. This framework included:

- mapping the operational limits to the assessment: this included assessing which outputs/outcomes (PPMs) could be included and over what time horizon
- assessing net outputs and outcomes produced by Groundwork: using existing evidence from other evaluations of regeneration programmes to translate gross outputs/outcomes into net additional outputs/outcomes
- valuing net outputs and outcomes: where possible using existing evidence on unit values to calculate a monetary value on net outputs and outcomes
- producing benefit-cost equations: comparing the monetary value of net outputs and outcomes to overall project expenditure
- sensitivity analysis: subjecting the results to variations in assumptions about the monetary value of benefits (confidence limits) and the estimated scale of additionality.

Mapping the operational limits to the assessment

Four operational limits were set which bound this assessment of the impact of Groundwork: possible alternatives; whose benefits to include; temporal limit; and which impacts to include. As already stated, these operational limits were set pragmatically based on data availability.

The first limit was that of the possible alternatives. The impact of Groundwork was assessed against the counterfactual position: what would have happened in the absence of Groundwork? This was achieved by adjusting measured gross outputs/outcomes into net additional outputs/outcomes by reference to other evaluations of regeneration activity.

The second limit was to define which benefits to include: clearly this related to those created by and attributable to Groundwork activity, covering a mixture of site and area improvements and individual beneficiaries. As will be seen, selected PPMs were used to represent these benefits.

The third limit was the temporal scale; this represented the timeframe over which costs and benefits were to be assessed. Given the data available this was set to the period March 2006 to March 2009 (the three financial years for which data was assembled).

The fourth and final boundary to set was that of the impacts (outputs and outcomes) to be included in the assessment. This was determined by the data collected by Groundwork as part of its monitoring: the Project Performance Measures (PPMs). A key advantage of these was that they had been collected across all Groundwork Trusts to a set of agreed definitions and a common measurement framework. At present these comprise 19 outputs/outcomes, as itemised in Table 5. This also includes a very brief outline of what each PPM covers, whether they have been included in or excluded from the net impact aspect of the study, and a summary of the reason for any exclusion. The result of the study team's assessment of the PPMs was a set of 9 outputs and outcomes for use in the top-down valuation exercise, with at least two from each Priority and a range which encapsulates the essential nature of Groundwork's activities. Full definitions and detailed reasoning on including/excluding them and attaching unit values can be found in Section 3 in the accompanying Technical Report.

Estimating additionality

The second requirement of the top-down approach was to estimate what proportion of the outputs and outcomes included in the Groundwork PPMs may be considered to be additional to what would have happened without the activity taking place. Ideally this should have been done in line with guidance provided by English Partnerships¹³. In essence, in its model the total net local impact on outputs and outcomes for Groundwork, less those occurring within comparator(s), is seen to equal the **total net additional local impact of Groundwork**. The first step in this procedure would normally be to apply a number of adjustment factors that enable an estimate of project achievements over and above what would have occurred anyway. Adjustment factors are as follows:

- **leakage** is the quantity of outputs and outcomes which benefit those outside the target area boundary. This includes individuals receiving Groundwork funded training, who secure a job and then move out of the area, and also jobs created within areas filled by non-target area individuals. These benefits are subtracted from gross direct impacts to give gross local direct impacts, since they are no longer benefiting the target population
- **displacement** is the quantity of outputs and outcomes that can be accounted for by reduced outcomes elsewhere amongst beneficiaries; for example, initiatives that reduce crime in one part of a area may displace crimes to other places. These benefits are subtracted from gross local direct impacts to give net local direct impacts, because they are counter-balanced by costs elsewhere
- **substitution** consists of outputs and outcomes where another organisation has substituted from one to another similar activity because of Groundwork support; for example, a housing developer may switch to undertaking a Groundwork funded development instead of an alternative development elsewhere within the area. These benefits are subtracted from gross local direct impacts to give net local direct impacts, since such outputs or outcomes would anyway have gone ahead in an equivalent form in the absence of Groundwork activity.

¹³ English Partnerships (2004), *Additionality Guide - A Standard Approach to Assessing the Additional Impact of Projects*, Second Edition.

Table 5: Outline of Project Performance Measures to be Included/Excluded

| PPMs | Measurement Units | Coverage | Include in Analysis? | Reason |
|---|------------------------------|--|----------------------|--|
| Physical Environmental Improvements | | | | |
| Trees planted | No of trees | Trees and hedgerows | No | High risk of double-counting |
| Area of land improved | Square metres | Open space, footpaths, cycleways | Yes | |
| Area of land maintained | Square metres | Work to retain utility of site | Yes | |
| Education and Community Involvement | | | | |
| Young people actively involved in projects | Person days | Involvement in educational activities, training and employment programmes | No | Interim output - effect likely to be counted elsewhere |
| Adults actively involved in projects | Person days | Involvement in educational activities, training and employment programmes | No | Interim output - effect likely to be counted elsewhere |
| Partners actively involved | Person days | Involvement of officers from other organisations | No | High levels of deadweight and displacement |
| Schools actively involved with Groundwork | No of schools | Involvement in project delivery or consultation exercise | No | Imprecise definition - level of involvement not specified (e.g., number of pupils) |
| Teachers trained in ESD | No of teachers | Specific training in Education for Sustainable Development | Yes | |
| Training weeks provided | No of weeks | Formal, informal and staff training | No | Interim output - likely to involve high degree of double-counting |
| Formal qualifications gained | No of quals | Award of accredited qualification | Yes | |
| Routes of Progression | No of progressions | Composite measure including job entry & training/educational course starts | Yes | |
| Participants satisfied with educational projects | Percentage of those involved | Scaled response - those rating 'satisfied' or 'very satisfied' | No | Inconsistent and incomplete surveying and recording |
| Integration of the Economy & Environment | | | | |
| Businesses supported [vi] | No of businesses | Advice and guidance on green issues | No | Effect likely to be counted elsewhere |
| Businesses actively supported | No of businesses | Advice and guidance on green issues | No | Effect likely to be counted elsewhere |
| Accredited EMS achieved | No of EMS | Implementation of schemes (6 types) | No | Effect likely to be counted elsewhere |
| Jobs created | No of jobs | New posts filled (FTE basis) | Yes | |
| Jobs safeguarded | No of jobs | Existing contracts extended (FTEs) | Yes | |
| CO2 emissions avoided/saved | Tonnes | Reductions from homes and businesses | Yes | |
| Diversion of waste from landfill | Tonnes | Recycling, composting and business waste schemes | Yes | |

- **multiplier effects** reflect wider outputs and outcomes generated as a result of the direct net benefits delivered through Groundwork interventions; for example, if an initiative places an individual into work, he or she might experience further benefits from this transition such as improved mental health. These benefits need to be added to net local direct impacts to give total net local impacts
- **additionality/deadweight** reflects outputs and outcomes that would have been expected to occur anyway even in absence of Groundwork's intervention (the counterfactual situation). Over the timeframe of a project some degree of change in relation to outputs and outcomes would have occurred in the area whether or not the project had happened, and this change needs to be subtracted from total net local impacts to give the total net additional local impact.

In the absence of specific evidence on these five different factors with respect to Groundwork's activities, the study team used gross to net additionality ratios as identified in assessments of the Neighbourhood Renewal Fund (NRF) and the Single Regeneration Budget (SRB). These ratios were taken from the English Partnerships (2004) additionality guide, and provide the best evidence available on the scale of the combined effect of leakage, displacement, substitution, multiplier effects and deadweight on different types of regeneration activity. Both NRF and SRB were similar to Groundwork in terms of activities, and therefore it could be assumed that they would have comparable gross to net additionality ratios.

Table 6 presents the range of gross to net additionality ratios used in this report by activity type. It should be noted that the lower ratios of number of FTE jobs created and safeguarded were applied because there was a great deal of ambiguity about whether jobs had been truly created or safeguarded. For example, the PPM numbers appeared to be particularly high at over 7,000 jobs created over the three years (see Table 8 in Chapter 4).

Table 6: Gross to net additionality ratios by activity type

| | Gross to net additional ratio | Source |
|--------------------------------|-------------------------------|--------|
| Education | 0.64 | NRF |
| Worklessness | 0.63 | NRF |
| Housing and the environment | 0.61 | NRF |
| Number of FTE jobs created | 0.32 | SRB |
| Number of FTE jobs safeguarded | 0.30 | SRB |

Source: English Partnerships (2004)

Environmental Valuation

In assessing the impact of Groundwork, the study team also sought to provide an illustration of the use of 'environmental valuation' at the project level. This is a term that is often used to describe a range of methods - highlighted in the HMT Green Book - that can be employed to value non-market impacts. Their application is analogous to market-based valuations in that they usually seek to estimate 'willingness to pay' (WTP) for environmental and other non-market benefits. WTP is simply a monetary measure of economic value, and measures what an individual would be willing to give up or forego in order to attain some benefit, such as an improvement in local environmental amenity.

This idea of a trade-off – i.e. giving something up to obtain a benefit – is a key aspect of the concept of economic value. It implies that the (economic) value of environmental

benefits is based on the preferences of individuals for those benefits. Consequently, environmental valuation seeks to measure the gain in an individual's wellbeing from the provision of environmental benefits, rather than valuing the environment *per se*. Summing WTP over all individuals who gain from an environmental benefit enables a total or 'aggregate' benefit estimate to be calculated. The resulting monetary value can then be included in evaluations, appraisal, Impact Assessments and/or cost-benefit analysis¹⁴, allowing for a consistent comparison of the traditional market (or financial) costs and benefits and environmental costs and benefits (see Section 5 in the accompanying Technical Report for further details).

The environmental valuation component of this project focused on local environmental amenity benefits. While it was recognised that the non-market impacts of Groundwork's initiatives extend beyond environmental benefits and include social, community and health objectives, the scope of work was more readily suited to the currently more established practice of environmental valuation.

For the purposes of this analysis, a set of local environmental amenity benefits were identified by a broad characterisation of Groundwork's initiatives at the project level, including:

- open space: projects such as creation or improvement of parks and natural spaces, including community woods/orchards
- community space: project such as the creation of community gardens, play areas for children, youth parks, multi-use games/sports areas, youth centres, etc
- public realm: improvement of public areas such as squares, pedestrian streets, memorials and fountains, etc
- derelict properties: reclamation of derelict buildings and land to improve the aesthetic appearance of an area
- carbon dioxide emissions: reducing carbon dioxide emissions from households and businesses by introducing energy saving measures

In practice a particular project could include a combination of the above benefits. The distinctions between open space, community space and public realm in part relate to management and use of land. For example, open space such as parks and other natural areas that may include woodland are generally managed for purposes of informal recreation (e.g. walking, dog walking, picnicking, etc.). In contrast, community space may be managed for more formal activities, although these can be very diverse; for example, facilities for formal sports or play areas or community gardens. Improvements to public realm largely improve local amenity and the aesthetic quality of areas and could also include elements of landscaping, sculptures and art installations. Restoration of derelict land and buildings may restore these to their former use or may result in an outcome such as the creation of woodland and a nature area. In addition, a number of Groundwork initiatives focus on 'greener living' with the objective of mitigating potential climate change impacts.

The nature of the PPMs - especially how they are structured and recorded - made them very difficult to utilise in conjunction with the environmental valuation techniques outlined in this section. In particular, it was difficult to discern what such an exercise would add to the standard additionality calculations involving the PPMs, as discussed earlier in this chapter. For this reason the assessment of environmental benefits restricted itself to a consideration of project-level evidence.

¹⁴ See for example Pearce *et al.* (2002) Economic Valuation with Stated Preference Techniques: Summary Guide, Report to Department for Transport, Local Government and Regions (DTLR).

Further details of the environmental valuation analysis and its results are provided subsequently in Chapter 5.

Wider Benefits

While the two approaches outlined so far in this chapter appear to capture the key benefits flowing from Groundwork activity, it is likely that some of the more indirect impacts might not be fully incorporated, or even be left undetected. This does not mean that they should be ignored. For the purposes of this report these were divided into two types:

- indirect or 'downstream' benefits that emerge in the aftermath of project completion, for example through the increased use of open space or recreational facilities by local residents. These effects may extend beyond their willingness to pay to be able to enjoy such amenities, which is in large part contingent upon their awareness of the benefits they are likely to accrue. While an element of such impacts will have been covered by the valuation of environmental benefits, other evaluation evidence suggests that access to and active use of green space has a wider and longer-term impact on people's health, and that the full value of this may not be captured by environmental valuation techniques
- some benefits are also known to have 'spillover' effects on other indicators relating to the same recipient. Thus, people who have been helped into paid work or taken on to a training course are known to be less likely to commit crime; also, their claims for welfare benefits are likely to be reduced or even eliminated. Again, some of the value of such additional benefits will be incorporated in the unit values produced via economic analysis, but it is unlikely that these estimates are comprehensive. For example, reductions in crime and lower numbers claiming welfare benefits can both be seen as savings to the public purse, and as such could be counted towards the monetary value of net project outputs and outcomes.

The limited range of beneficiary data available to the study team meant that neither of these broader types of effect could be incorporated into the quantitative estimation of Groundwork's impact. It is important for this to be recognised, its dimensions outlined and possible methods of measuring and valuing it identified, if only to point to the 'hidden' value of Groundwork's achievements. Further consideration of how they are generated and what needs to be taken into account is the subject of Chapter 6.

4. Valuing Net Outputs and Outcomes

Scale of Groundwork Activity

GTs worked on a large number of projects over the three-year period covered by the study. Across the Federation, trusts were involved in 18,224 projects between 2006/7 and 2008/9, although there may be some double-counting where projects extended over more than one financial year. Despite their often holistic nature, these projects have been assigned in the PPM returns to each of the three main activity headings (Places, People and Prosperity), according to their principal focus. This distribution of project activity and the estimated expenditure disbursed is shown in Table 7. Environmental improvement projects made up almost half of all projects over the three year period, as well as accounting for around 60 per cent of expenditure. This underlines the more capital intensive nature of such physical interventions; indeed, purely land-related projects involved an estimated average expenditure in excess of £50,000. Employment and business-focused work under the 'Prosperity' banner accounted for just over a third of projects and just under a third of expenditure, whilst community-based tended to be fewer in number (15 per cent of the total) and smaller in monetary terms (10 per cent of all project expenditure).

Table 7: Project Activity by Groundwork Priorities

| Priority | No of projects | Estimated Total Expenditure (£m) | Average Expenditure |
|--|----------------|----------------------------------|---------------------|
| Places: Physical Environmental Improvements | 8,954 | £169.5 | £18,950 |
| People: Education and Community Involvement | 2,733 | £26.8 | £9,800 |
| Prosperity: Integration of the Economy & Environment | 6,536 | £80.9 | £12,400 |
| Total | 18,224 | £277.2 | £15,200 |

Source: Groundwork UK

Net Additional Outputs

Table 8 applies the ratios identified in Table 6 to the reported gross Groundwork-wide output and outcome (PPM) totals to give net additional outputs and outcomes between 2006/7 and 2008/9. It should be noted when reading this table that six of the PPMs were only reported for the second and third of the three years, as they were new indicators introduced in 2007/8. (These were as follows: Teachers trained in ESD; Formal qualifications gained; Routes of progression; Jobs safeguarded; CO₂ emissions avoided or saved; Diversion of waste from landfill). In order to produce complete data for the three-year period across all indicators, the averages for 2007/8 and 2008/9 for these six indicators was used to estimate 2006/7 totals, and these three figures were then added together to give three-year totals for each. This step was taken because the data did not allow direct association of particular areas of expenditure with individual PPMs, so it was not possible to isolate what proportion of annual expenditure had contributed to these new PPMs. To obtain a fully comprehensive and comparable

picture across the three years it was thus essential that the overall output/outcome figures all related to the same timescale.

Table 8: Calculation of Net Additional Outputs and Outcomes: 2006/7 to 2008/9

| PPMs | Units | Gross (thousands) | Gross to Net Ratio | Net additional (thousands) |
|---|-----------------------|-------------------|--------------------|----------------------------|
| Physical Environmental Improvements | | | | |
| Area of land improved | Square metres | 55,417.1 | 0.61 | 33,804.4 |
| Area of land maintained | Square metres | 135,978. | 0.61 | 82,947.0 |
| Education and Community | | | | |
| Teachers trained in ESD | No of teachers | 4.3 | 0.64 | 2.7 |
| Formal qualifications gained | No of qualifications | 24.4 | 0.64 | 15.6 |
| Routes of progression | Progressions achieved | 7.0 | 0.64 | 4.5 |
| Integration of the Economy & Environment | | | | |
| Jobs created | No of jobs | 7.4 | 0.32 | 2.4 |
| Jobs safeguarded | No of jobs | 6.3 | 0.30 | 1.9 |
| CO ₂ emissions avoided or saved | Tonnes | 1,111.3 | 0.63 | 700.1 |
| Diversion of waste from landfill | Tonnes | 343.7 | 0.61 | 209.6 |

Monetary Value of Net Additional Outputs/Outcomes

In order to compare the benefits of Groundwork's activity with costs it was necessary to calculate a monetary value for the net additional outputs and outcomes shown in Table 8. This was done using unit values for each of the selected PPMs. These unit values are presented in Table 9, and are mainly based on those produced as a result of the extensive evidence reviews undertaken for the recent CLG study on valuing regeneration benefits¹⁵. Others draw upon guidance from the Department of Energy and Climate Change on valuing carbon, and from HM Revenue and Customs in terms of Landfill Tax rates. Fuller details of how these unit values have been derived or estimated can be found in Section 3 of the Technical Report.

¹⁵ Cambridge Economic Associates with ettec, CRESR, Anne Green and Cambridge Econometrics (forthcoming), *Developmental Work to Value the Impact of Regeneration*, 2 Vols., London: CLG

Table 9: Unit Values of Outputs and Outcomes

| | Unit value (£) | |
|---|----------------|-------------------|
| Physical Environmental Improvements | | |
| Area of land improved | 1.80 | per square metre |
| Area of land maintained | 0.90 | per square metre |
| | | |
| Education and Community Involvement | | |
| Teachers trained in ESD | 560 | per teacher |
| Formal qualifications gained | 5,000 | per qualification |
| Routes of Progression | 2,500 | per progression |
| | | |
| Integration of the Economy & Environment | | |
| Jobs created | 35,000 | per job |
| Jobs safeguarded | 35,000 | per job |
| CO2 emissions avoided or saved | 50 | per tonne |
| Diversion of waste from landfill | 21/24/32 | per tonne |
| | | |

(2010 prices)

Applying the unit values from Table 9 to the net additional outputs and outcomes shown in Table 8 produced a set of values for the monetary value of Groundwork's impact. The results are shown in Table 10.

It is important to note here that it was assumed that 'area of land improved', 'teachers trained in ESD', 'formal qualifications gained,' and 'diversion of waste from landfill' produce benefits that have a time horizon greater than one year. As such they were valued accordingly. Since this assessment was only concerned with the period 2006/7 to 2008/9 the time horizon over which benefits could accrue was up to 2008/9. In each case the time horizon was assumed to be linear for at least two further years. So for example formal qualifications gained in 2006/7 would also have a monetary value in both 2007/8 and 2008/9; and formal qualifications gained in 2007/8 would also have a monetary value in 2008/9. These 'future benefits' were discounted at the Treasury's recommended discount rate of 3.5 per cent. The figures shown in Table 10 reflect this adjustment.

Table 10: Monetary Values of Outputs and Outcomes: Standard Estimate

| | Monetary values of outputs and outcomes (£ thousands) | | | |
|---|--|----------------|----------------|--------------------|
| | 2006/7 | 2007/8 | 2008/9 | 2006/7 - 2008/9 |
| Physical Environmental Improvements | | | | |
| Area of land improved | 23,745 | 43,893 | 58,561 | 126,199 |
| Area of land maintained | 37,345 | 19,684 | 17,623 | 74,652 |
| | | | | |
| Education and Community Involvement | | | | |
| Teachers trained in ESD | 510 | 888 | 1,482 | 2,880 |
| Formal qualifications gained | 26,013 | 50,749 | 75,443 | 152,205 |
| Routes of Progression | 3,736 | 3,627 | 3,845 | 11,208 |
| | | | | |
| Integration of the Economy & Environment | | | | |
| Jobs created | 26,953 | 27,970 | 17,291 | 72,214 |
| Jobs safeguarded | 22,130 | 22,428 | 21,833 | 66,391 |
| CO2 emissions avoided or saved | 11,669 | 19,597 | 3,740 | 35,006 |
| Diversion of waste from landfill | 1,467 | 2,458 | 5,460 | 9,385 |
| | | | | |
| | | | | |
| Total monetary value of benefits | 153,566 | 191,295 | 205,277 | 550,320 |
| | | | | |

(2010 prices)

Benefit-Cost Ratios

Table 11 sets out a standard estimate of the monetary value of net additional benefits against Groundwork's project-related expenditure. This is shown by financial year and across the three year period as a whole. In each instance the benefit-cost ratios (BCRs) are greater than one, indicating that benefits exceed costs. Over the entire period the BCR works out at 2.0; for individual financial years the BCRs range between 1.7 and 2.2. Recent guidance from DfT¹⁶ on assessing value for money enables these ratio estimates to be placed in wider perspective. This suggested that a project will generally be:

- poor value for money if it has a BCR of less than 1
- low value for money if its BCR is between 1 and 1.5
- medium value for money if it has a BCR of between 1.5 and 2; and
- high value for money if its BCR is over 2.

¹⁶ Department for Transport: Guidance on Value for Money.
<http://www.dft.gov.uk/about/howthedftworks/vfm/guidanceonvalueformoney?page=1#a1003>

Table 11: Benefit-Cost Ratios: Standard Estimate

| | 2006/7 | 2007/8 | 2008/9 | 2006/7 - 2008/9 |
|--|---------------|----------------|----------------|--------------------|
| Net additional benefits (£ thousands) | 153,566 | 191,295 | 205,277 | 550,320 |
| Groundwork expenditure (£ thousands) | 92,000 | 93,267 | 91,975 | 277,242 |
| Difference benefits - expenditure (£ thousands) | 65,505 | 102,111 | 115,827 | 280,881 |
| Benefit-Cost Ratio | 1.7 | 2.0 | 2.2 | 2.0 |

(2010 prices)

On this basis, it can be concluded that across all of its project activities between 2006 and 2009 **Groundwork generated medium to high value for money**. The DfT guidance also put forward the suggestion that funding decisions should generally be made on the following grounds:

- no projects with poor VfM to be approved
- very few projects with low VfM to be approved
- some, but by no means all, projects with medium VfM to be approved; and
- most, if not all, projects with high VfM to be approved.

This implies that, as a whole, Groundwork's project activities would appear to be generally worthy of financial support.

Sensitivity Analysis

The values in Tables 8 and 9 respectively provide a 'best guess' as to the ratio of gross to net additionality for outputs/outcomes and to the unit monetary values of a net output/outcome. However, it cannot be assumed that these are precise and accurate. By applying confidence limits or margins of variation to these figures it was possible to indicate the likely upper and lower extent of the range within which the initial 'standard' estimate is likely to fall. In this sensitivity analysis the benefit cost calculations were reworked using two types of adjustment factor:

- firstly, the upper and lower estimates for each of the unit monetary values (i.e., their confidence intervals); and
- secondly, upper and lower estimates of plus or minus 10 percentage points for each of the gross to net additionality rates (their assumed margins of variation).

Results from this exercise are summarised in Table 12, showing that:

- using the upper and lower confidence intervals quoted by the recent CLG study in relation to the unit monetary values gives a range of lower and upper BCRs of 1.3 and 2.7
- using the upper and lower assumed ranges on the gross to net additionality ratios of plus or minus ten percentage points gives an alternative BCR range of between 1.6 and 2.4.

A combination of upper and lower limits on both unit monetary values and assumed gross to net additionality ratios was also applied to the figures. These are not shown in the table, but the exercise produced monetary values of the net additional impact of Groundwork that were, at least, 1.3 times greater than expenditure. Thus, even using the most conservative assumptions the value of the benefits stemming from Groundwork activities is on the positive side, albeit providing what, in DfT terms, would be seen as low value for money. However, it should be remembered that all of these BCRs are based on a relatively limited set of nine output/outcome indicators, and that these are unlikely to cover all of the effects and impacts that result from Groundwork activities.

Table 12: Benefit-Cost Ratios Using Sensitivity Analysis

| | Unit Value Confidence Intervals | | Gross to Net Additionality Margins | |
|--------------------|---------------------------------|-----|------------------------------------|-----|
| | £000s | BCR | £000s | BCR |
| Upper end of range | 752,361 | 2.7 | 674,683 | 2.4 |
| Lower end of range | 369,857 | 1.3 | 446,688 | 1.6 |

5. Environmental Benefits

Introduction

Groundwork's activities in the 'Places' intervention area includes various initiatives aimed at improving open spaces. These projects and programmes enhance local environmental amenity in communities, helping to improve the quality of life of residents and visitors and providing benefits to habitats and wildlife.

From the perspective of economic analysis, the benefits of these initiatives are largely 'non-market' impacts. In practical terms this means that it can be difficult to establish the (economic) value of these kinds of benefits, since ordinarily economic analysis relies on market-based measures of value. For example, the benefit of brownfield land remediation may be estimated in terms of the resulting increase in land value, which would be inferred from changes in market prices.

However, it is widely recognised that non-market impacts of projects and programmes are equally as important as market impacts. In particular, the HMT Green Book states that wherever feasible valuation of non-market impacts should be attempted. To this end a range of methods and techniques have been developed which enable an estimate of the monetary value of non-market impacts to be included in the appraisal and evaluation of projects and programmes.

Valuing local environmental amenity benefits – project level

Information requirements

This study's approach to valuing the local environmental amenity benefits of Groundwork initiatives at the project level ideally required several pieces of information:

- a description of the project, including the location and details of the investment and outcomes (for example, in terms of hectares of open space improved), which provide physical/quantitative measures of the outcomes (e.g., number of hectares, tonnes of carbon dioxide emissions reduced)
- an estimate of the scale and socio-economic characteristics of the beneficiary population, for example in terms of the number of users of a community facility and/or the number of households in the local area of the project, and the likely spatial extent of beneficiaries (e.g., immediate neighbourhood, wider local population, regional population, etc.)
- information on the context for the project, including the rationale for intervention and assessments of the availability of 'substitutes', such as existing facilities that are comparable to the project and their quality
- an assessment of the timescale over which the benefits of the project will be sustained.

In addition, where the costs of investments are available it should be possible to compare these to the estimated benefits, to provide an indication of the net benefit of the initiative, for example in terms of a benefit–cost ratio (BCR). Note, however, that

comparing local environmental amenity benefits to costs typically provides a partial assessment of net benefits, since other market (e.g., skills and training) and non-market (e.g., social, community, health, etc.) outcomes may also be delivered but are not explicitly included in the analysis.

Table 13: Selection of projects

| Project name | Location | Benefit | Brief details |
|-------------------------------------|----------------------------------|---|--|
| Albion Community Garden | Salford NW England | Community space | Creation of a community garden and informal play space |
| Barclays Spaces for Sport, | Gainsborough East Midlands | Community space | Construction of a skate park |
| ENWORKS | Bury & Bolton North West | Reduce carbon dioxide emissions | Promoting energy efficiency in businesses |
| Green Doctor | Leeds Yorks. & Humber | Reduce carbon dioxide emissions | Promoting energy efficiency in households |
| Green Doctor | Leicester East Midlands | Reduce carbon dioxide emissions | Promoting energy efficiency in households |
| Hagg Lane Pond | Hemingborough Yorks. & Humber | Open space | Regeneration of pond site |
| Hemlington Lake improvements | South Tees NE England | Open space | Improvement to man-made lake for angling |
| Multi-use games area, Weston Shore | Southampton SE England | Community space | Construction of a games/recreation area |
| Murton Village Green | East Durham NE England | Public realm | Improvement to village green and area around war memorials |
| New uses for vacant industrial land | Merseyside NW England | Open space | Planting trees on vacant industrial land |
| Parc Tondu | Bridgend & Neath, Wales | Community space, open space and public realm, restore derelict properties | Construction of a community youth centre, landscaping, and restoration of derelict building for commercial use |
| Redwood House | Solihull West Midlands | Community space | Improvement to community garden |
| On the Ground - Rhymney | Caerphilly Wales | Community space | Regenerate a community allotment |
| Selby Town Pond | Selby Yorks. & Humber | Public realm | Creation of a pond |
| The Denes, Darlington | West Durham NE England | Open space | Regeneration of a series of parks |

Groundwork projects

A review of the 41 project reports that provided some information on spend and outputs or outcomes revealed that there were 15 projects for which sufficient information was available to demonstrate the application of environmental valuation. However, it should be noted that these too were subject to data limitations. The projects examined are summarised in Table 13. In some cases projects in the list feature only one distinct aspect of a much wider programme; for example, Rhymney community allotments is part of the ‘On the Ground’ initiative, but details of other projects within this programme were not available.

Value transfer

The valuation of local environmental amenity benefits of the projects listed in Table 13 made use of an approach to environmental valuation known as ‘value transfer’. This is a process that uses readily available economic value evidence from existing studies and ‘transfers’ it to a new context for which valuation is required. It is an expedient approach to environmental valuation, requiring less time and resource than the alternative option

of commissioning a specifically designed study¹⁷. However, while value transfer is well suited to application in the face of practical constraints it is subject to limitations. These mostly relate to the task of identifying suitable value evidence to transfer and ‘errors’ that can arise as a result¹⁸ (see also Section 5 in the accompanying Technical Report). Issues in this regard for valuing the benefits of Groundwork initiatives are considered subsequently.

Available evidence – benefits of local environmental amenity improvements

The main source of evidence for valuing the local environmental amenity benefits of Groundwork initiatives was the recent study for Communities and Local Government (CLG), *Developmental Work to Value the Impact of Regeneration*. This included two pilot studies which focused on valuing non-market impacts of regeneration activities; one aimed at valuing improvements in a range of aspects of local environmental amenity, the other aimed at valuing the benefits arising from a specific brownfield reclamation project¹⁹. In part both pilot studies were commissioned to address a deficit of available valuation evidence on this topic, and the results of the former study fit particularly well with the context of demonstrating Groundwork’s value.

The CLG pilot valuation study focused on the following local environmental amenity benefits, which can result from a broad range of regeneration activities:

- open space: provision of new or improvements to existing areas of public open space (e.g. urban parks, country parks)
- community space: provision of new or improvements to community spaces and facilities (e.g. allotments and gardens)
- public realm: improvements to areas of public space (e.g. squares, pedestrian areas, promenades, landscaping, public art installations)
- green routes: provisions of new or improvements to pedestrian paths and cycle paths
- street cleanliness: improved street and environmental cleanliness (e.g. levels of litter, detritus, graffiti, fly-posting and fly-tipping)
- derelict properties: improved aesthetic appearance of derelict properties and land (e.g. reclamation of buildings and land).

In addition, a value was derived with respect to reductions in carbon emissions, based on guidance from the department for Energy and Climate Change (DECC).

Table 14 provides a summary of the estimated unit monetary values of different types of environmental benefits from the CLG study. Generally these benefit types match well with the some of the outcomes of Groundwork initiatives identified above.

¹⁷ For further detail on different environmental valuation methods see: Defra (2007) *An introductory guide to valuing ecosystem services*, Department for Environment, Food and Rural Affairs, December 2007; and eftec (2006) *Valuing our natural environment*, Report to Department for Environment, Food and Rural Affairs.

¹⁸ See Defra’s value transfer guidelines: eftec (2010) *Valuing Environmental Impacts: Practical Guidelines for the Use of Value Transfer in Policy and Project Appraisal*, submitted to Department for Environment, Food and Rural Affairs, February 2010.

¹⁹ See Cambridge Economic Associates in association with eftec and Cambridge Econometrics (forthcoming) *Developmental work to value the impact of regeneration - technical report: environmental quality and amenity*, Report to Communities and Local Government.

Table 14: Unit value of local environmental amenity improvements

| Local environmental amenity benefit | Brief description | Unit Value per household per year | |
|-------------------------------------|--|-----------------------------------|-------------------------|
| | | Monetary (£) | Measure |
| Open space | Management of land for informal recreation | 1.80 | per hectare |
| Community space | Management of land/ facilities for formal activities | 17.13 | per additional facility |
| Public realm | Aesthetic and amenity improvements | 24.15 | per improvement |
| Green routes | Pedestrian paths and cycle paths | 4.11 | per kilometre |
| Street cleanliness | Improved street and (local) environment | 18.80 | per grade improvement |
| Derelict properties | Restoration that maintains previous land use | 3.39 | per property restored |
| Carbon emissions | Reductions in carbon use resulting from change | 21.32 | per tonne |

See also Annex 2 in the Technical Report for a fuller description.

Benefits in terms of reduction in carbon dioxide emissions from households and business are valued in accordance with current UK Government guidance²⁰. A further project detailed in Table 13 (Hemlington Lake) was reported to have improved angling opportunities at the site. This was valued in terms of the reported number of anglers using the lake. A more detailed examination of this project is presented in the penultimate section of this chapter.

Results – estimated value of local environmental amenity benefits

Results from the value transfer exercise for the projects listed in Table 13 are presented in Table 15. Estimated aggregate benefits are reported along with an indicative benefit-cost ratio (BCR) where project cost details were also available. A more detailed summary of results, sensitivity analysis and information collated on projects is provided in Annex 3 in the Technical Report.

Results reported in Table 15 are based on various supporting assumptions, related to the following:

- the value transfer process
- the limited data and information available in the evaluations of Groundwork projects; and
- subsequent interpretation of this information.

Key factors determining benefit estimates included the outcome measure sourced from the available evaluation reports, the assumed beneficiary population, the unit benefit value (i.e. benefit estimate in terms of WTP per beneficiary household per year), and the assumed timescale over which the benefits of the project would be sustained. With respect to the timescale for benefits, this was assumed to be five years for all results reported in Table 15.

The reported BCR provides an indication of the ‘value for money’ of each project, although it should be noted that this is only a partial indication in a number of respects. First, benefits were narrowly defined in terms of environmental benefits; projects would

²⁰ DECC (2010) *Valuation of energy use and greenhouse gas emissions for appraisal and evaluation*, Department of Energy and Climate Change, January 2010.

have been likely to provide other market and non-market benefits that were not accounted for. Good examples of this are the two *Green Doctor* projects (in Leeds and Leicester) aiming to improve domestic energy efficiency, which have been assessed purely in terms of reduced carbon emissions. As Chapter 6 later makes clear, the impacts of this activity are likely to be much more extensive than this narrow measure, with particular benefits in terms of improved health, but also with respect to cost savings for individuals and households. Second, information on project costs was limited. This meant that it was not possible to calculate BCRs for four of the projects. Third, all of the projects reviewed here involved fairly high levels of expenditure compared with the £15,000 average reported in Table 7; it may well be that only larger projects have been subjected to such more in-depth evaluation. Finally, 'value for money' in an evaluation context can be more widely interpreted than consideration of costs and benefits, for example accounting for aspects such as effectiveness (i.e., the extent to which objectives are met).

Table 15 shows that on this narrow comparison of costs and benefits, a number of projects represent 'good value for money', generating two, three and sometimes even more times environmental benefit than the costs incurred. The indicative BCRs range from 2.1 to 6.9 for positive values; for example, for the Gainsborough skate park (Barclays Spaces for Sport), the BCR suggests that for every £1 of expenditure, £2.30 worth of environmental benefit was generated. In other instances, based on the assumptions underlying the results in Table 15 the environmental benefits were not found to outweigh costs. In these cases the indicative BCRs fell in the range 0.1 to 0.7. This may not mean that these projects were poor value for money. As in the case of the *Green Doctor* initiatives mentioned above, these scores may mask the omission of other potential impacts from the analysis. Overall, then, the indicative environmental BCRs should be interpreted with caution, particularly given the limited number of projects that could be subjected to the environmental valuation technique.

Table 15: Estimated environmental benefits of selected Groundwork projects

| Project name | Location | Brief details | Estimated benefit (£m) ^a | Project cost (£m) ^b | BCR |
|-------------------------------------|----------------------------------|--|-------------------------------------|--------------------------------|-----|
| Albion Community Garden | Salford NW England | Creation of a community garden and informal play space | £0.01m (£0.00 – 0.02m) | n/a | - |
| Barclays Spaces for Sport | Gainsborough East Midlands | Construction of a skate park | £0.23m (£0.05 – 0.40m) | £0.10m | 2.3 |
| ENWORKS | Bury & Bolton North West | Promoting energy efficiency in businesses | £0.01m (£0.00 – 0.01m) | n/a | - |
| Green Doctor | Leeds Yorks. & Humber | Promoting energy efficiency in households | ~£0.00m | £0.10m | 0.1 |
| Green Doctor | Leicester East Midlands | Promoting energy efficiency in households | £0.01m (£0.00 – 0.01m) | £0.03m | 0.2 |
| Hagg Lane Pond | Hemingborough Yorks. & Humber | Regeneration of pond site | £0.04m (£0.01 – 0.07m) | £0.07m | 0.7 |
| Hemlington Lake improvements | South Tees NE England | Improvement to man-made lake for angling | £0.59m (£0.23 – 0.94m) | £0.26m | 2.3 |
| Multi-use games area, Weston Shore | Southampton SE England | Construction of a games/recreation area | £0.55m (£0.14 – 0.96m) | £0.14m | 3.9 |
| Murton Village Green | East Durham NE England | Improvement to village green and area around war memorials | £0.40m (£0.16 – 0.66m) | £0.20m | 2.1 |
| New uses for vacant industrial land | Merseyside NW England | Planting trees on vacant industrial land | £9.0m (£0.20 – 16.15m) | n/a | - |

Table 15 (continued): Estimated environmental benefits of selected Groundwork projects

| Project name | Location | Brief details | Estimated benefit (£m) ^a | Project cost (£m) ^b | BCR |
|-------------------------|-------------------------|--|-------------------------------------|--------------------------------|-----|
| Parc Tondu | Bridgend & Neath, Wales | Construction of a community youth centre, landscaping, and restoration of derelict building for commercial use | £0.5m (£0.17 – 0.87m) | £2.60m | 0.2 |
| Redwood House | Solihull West Midlands | Improvement to community garden | £0.01m (£0.00 – 0.01m) | £0.00m | 2.7 |
| On the Ground - Rhymney | Caerphilly Wales | Regenerate a community allotment | £0.28m | n/a | - |
| Selby Town Pond | Selby Yorks. & Humber | Creation of a pond | £0.69m (£0.24 – 1.12m) | £0.1m | 6.9 |
| The Denes, Darlington | West Durham NE England | Regeneration of a series of parks | £0.41m (£0.07 – 0.72m) | £1.18m | 0.3 |

Notes:

^a Estimated benefits are calculated assuming a 5-year time horizon; i.e. the present value of annual benefits over a 5-year time period. Present values are calculated in accordance with HM Treasury Green Book guidance for discount rates. Values in parenthesis are upper and lower bounds from sensitivity analysis.

^b Project/programme costs as reported in available documents; these are assumed to be total project costs, including expenditure by partner organisations. All costs are inflated to 2010 values for consistent comparison with benefit estimates. Costs are undiscounted assuming that they are incurred upfront.

n/a – details of project cost not available

BCR – calculate as benefits / costs, based on central benefit value. This can be interpreted as providing an indication of the 'value for money' of the project in the narrow terms of the environmental valuation exercise; e.g. the benefit in monetary terms per £1 of cost. A BCR greater than 1 indicates that benefits outweigh costs, a BCR less than one indicates that costs outweigh benefits.

Sensitivity analysis

Given the uncertainty of these benefit estimates, indicative BCRs, and supporting assumptions, further sensitivity analysis was undertaken. This involved the following calculations (further details can be found in Annex 3 in Technical Report):

- estimation of lower and upper aggregate benefit estimates, using 95 per cent confidence intervals from the CLG pilot valuation study and lower and upper bound values from the DECC guidance
- switching analysis to establish the scale of the beneficiary population (or reduction in carbon dioxide emissions), holding all else constant, required to generate a BCR equal to one (i.e. costs equal to benefits). This is also undertaken using the lower and upper benefit estimates
- switching analysis to establish the minimum unit benefit value, holding all else constant, required to generate a BCR equal to one (i.e. costs equal to benefits)
- switching analysis to establish the minimum number of years for benefits to be sustained, holding all else constant, required to generate a BCR equal to one (i.e. costs equal to benefits). This is also undertaken using the lower and upper benefit estimates.

Switching analysis is particularly useful since it permits a ‘sense-check’ on the assumptions made in the light of limited information (although this is only possible for projects that have cost information). The purpose of this part of the analysis was to identify the value of a component part of the benefit estimate that would ‘switch’ the indicative BCR from negative to positive; i.e. to find the value that results in benefits outweighing costs, whilst holding other components of the benefit estimate constant.

Table 16: Switching analysis for selected Groundwork projects^a

| Project name | Minimum number of years for BCR = 1 (keeping unit value and beneficiaries the same) | Minimum unit value for BCR = 1^b (keeping number of years and beneficiaries the same) | Minimum beneficiary population for BCR = 1 (keeping number of years and unit value the same) |
|---------------------------------------|--|--|---|
| Barclays Spaces for Sport, Gainsboro' | 2.5 years | £7.60/facility /household/year | 1,090 households |
| Green Doctor Leeds | over 100 years | £1,145/tonne CO ₂ | 919 (tonnes of carbon avoided) |
| Green Doctor Leicester | 22.3 years | £26.30/tonne CO ₂ | 568 (tonnes of carbon avoided) |
| Hagg Lane Pond | 9.7 years | £2.75/hectare/ Household/year | 2144 households |
| Hemlington Lake improvements | 2.5 years | n/a ^e | 3,148 households ^b |
| | | | 4,224 anglers ^c |
| Multi-use games area, Weston Shore | 1.4 years | £4.46/facility /household/year | 1,515 households |
| Murton Village Green | 2.7 years | £11.65/improvement /household/year | 1,485 households |
| Parc Tondu | 85.7 years | n/a ^e | 10,746 households |

| | | | |
|-----------------------|------------|-----------------------------------|-------------------|
| Redwood House | 2.1 years | £6.37 facility /household/year | 24 households |
| Selby Town Pond | 0.8 years | £3.49/improvement /household/year | 752 households |
| The Denes, Darlington | 22.6 years | £5.22/hectare/ household/year | 13,191 households |

Notes:

^a Switching analysis is only possible for those projects listed in Table 13 that have cost estimates.

^b See Annex 1 and Annex 2 for details of unit values for benefit estimates.

^c Assumes no benefits to anglers.

^d Assumes no benefits to local households.

^e Project involves multiple benefit estimates – not possible to estimate switching value from basic analysis.

Table 16 provides a summary of the results of the switching analysis. For example, for Hagg Lane pond if the assumed time horizon was extended to ten years - and keeping the unit benefit value and assumed beneficiary population the same - then benefits would be found to outweigh costs (as indicated by the switching value of 9.7 years for 'minimum number of years'). Similarly, if the assumed beneficiary population of the Darlington Denes Park regeneration project was assumed to be approximately 13,200 households (which is roughly 30 per cent of the population of Darlington) then benefits would be found to outweigh costs over five years.

Overall the results in Table 16 allow a judgment of how reasonable the benefit estimate assumptions were; for instance it could be seen as optimistic to assume a certain beneficiary population or timescale for benefits. In these cases the bounds to these assumptions - in relation to indicating a positive indicative BCR - can be identified.

In addition to highlighting the influence of the key assumptions on results, further caveats associated with the results in Table 15 include:

- the issue of additionality was not explicitly addressed in the analysis. Given the limitations of available data it was assumed that the project outcomes were 100 per cent additional (i.e. no leakage, displacement, substitution, multiplier or deadweight)
- the unit benefit estimates were based on results for a pilot study. The work for the CLG project was designed to test if different environmental valuation methodologies were viable and to provide some indicative valuations. While the use of the results can be demonstrated in an indicative study such as this, more extensive work would be needed to produce results that could be applied to more formal analysis, such as a full Impact Assessment
- transferring the results of the CLG pilot study to value the local environmental amenity benefits of the sample of projects in Table 13 involved assuming a close match between the original valuation context (Seaham, East Durham) and those of each of the projects, for instance in terms of environmental, demographic and socio-economic conditions. Details of the pilot study location are set out in Annex 2 in the Technical Report, while Annex 3 presents the contextual details for each of the 15 Groundwork projects examined in this chapter
- estimation of aggregate benefits assumed that unit values were constant over the scale of the outcome (e.g. no diminishing marginal benefit). In addition some benefit estimates were extrapolated beyond the scope of improvements that were originally examined in the pilot study.

Illustration of Environmental Valuation Methodology - Hemlington Lake Improvement Project

The following describes the value transfer process applied for valuing environmental benefits to demonstrate the range of assumptions entailed:

- the size of the park land on which Hemlington Lake is situated was estimated using an overhead view of the location from the satellite view on Google Maps. The land is determined to be 'Open space' for which the benefits estimate was sourced from the CLG pilot valuation study (see Table 14)
- the local beneficiary population was estimated to be the population of Hemlington and Stainton and Thornton, the two wards that surround the park land. Population estimates were taken from the mid-year population estimates held in the Neighbourhood Statistics database provided by the Office for National Statistics
- Hemlington Lake and Recreation Centre²¹ was contacted to provide an estimate of the number of anglers using the lake. As the lake has only recently been open to anglers, it was not possible to obtain an annual average estimate of angler numbers; an estimate was available for five months' use (1140 individuals for the period April - August 2010). Rather than extrapolate this to an annual estimate the 5-month total was applied as a conservative estimate. The benefit to anglers was estimated from available studies²²
- Table 17 details the baseline information for the value transfer analysis. Table 18 reports results for benefit values and benefit cost ratio. Switching analysis (Table 19) was applied to examine the sensitivity of results to unit values, the time horizon and beneficiary population estimates.

²¹ Pers.comm, J. Ferry, Hemlington Lake and Recreation Centre manager (August 2010).

²² A number of studies investigate the non-market benefits of angling and provide a range of potentially applicable values. See for example: Johnstone, C. and Markandya, A. (2006) 'Valuing river characteristics using combined site choice and participation travel cost models', *Journal of Environmental Management*, 80: 237-247; and Peirson, G.; Tingley, D.; Spurgeon, J. and Radford, A. (2001) 'Economic evaluation of inland fisheries in England and Wales', *Fisheries Management and Ecology*, 8: 415-424. The analysis applies a range of values (£6 – 50 per angler).

Table 17: Hemlington Lake Improvements – baseline information

| Location | Benefit | Activity | Quantity | Quality | Substitutes | User population | Estimate | Average income | Socio-economics |
|------------|--------------------------|--|------------------------------|------------------------|---|---|--|----------------|-----------------|
| South Tees | Open space (see Annex 1) | Improvement to man-made lake that had fallen into disuse | 9 acre lake, 12 hectare land | Fallen into disrepair. | There are a few nearby rivers, but no lakes for angling and few large recreational green spaces | Local households (Hemlington and Stainton & Thornton) Anglers | 3,827 households 1410 individuals | £19,150p.a. | 63% C2DE |

Table 18: Hemlington Lake Improvements – estimated benefits

| Outcome | Benefit estimate (range) | Annual benefit (range) | Present value benefit (range) | Project cost | Net present value (| Benefit cost ratio (range) |
|---|--|--|---|----------------------------|---------------------|----------------------------|
| Improvement to lake and surrounding land - increased use of area by residents and lake by anglers | £1.80/hectare/household/year (£0.4 – £3.2) £20/angler/year (£6 - £50) | £82k (£18k - £147k) £29k (£9k - £72k) | £618k (£150k - £1,210k) (5-year time horizon) | £259k (inflated to 2010 £) | £359k | 2.39 (0.58 – 4.68) |

Table 19: Hemlington Lake Improvements - switching analysis for benefit estimates

| Unit benefit value | Benefit Cost Ratio | Minimum unit value for BCR = 1 | | Minimum number of years for BCR = 1 | Minimum population for BCR =1 | |
|--------------------|--------------------|--------------------------------------|------------------------|-------------------------------------|-------------------------------|---------|
| | | Open space: £/hectare/household/year | Angling: £/angler/year | | Local households | Anglers |
| Mid | 2.39 | 0.38 | -58.62 ^a | 2.4 | 3,148 | 3,269 |
| Low | 0.58 | | | 11.2 | 14,168 | 10,794 |
| High | 4.68 | | | 1.2 | 1,765 | 1,333 |

Notes:

^a The negative value implies that there is sufficient benefit accruing from the local beneficiary population that even if the angler benefits were zero (or negative) total benefits would exceed costs so long as the negative value to angler welfare was less than £58.62.

Conclusion

This chapter has demonstrated that it is possible to value project level benefits using value transfer techniques. This evidence should be well suited to demonstrating the significance of non-market outcomes brought about through Groundwork activities. However, results should not be interpreted as definitive, but indications of the likely order of magnitude of benefits.

6. Wider Benefits

Introduction

The 'top-down' and 'bottom-up' approaches to valuing the benefits of Groundwork's activities explored in Chapters 4 and 5 have painted a generally positive picture. Overall it may be claimed that together they appear to capture most of the key impacts that might be expected to flow from its portfolio of projects and programmes. However, the two are by no means exclusive, and in view of the overlap between them, both obvious and hidden, their results should not be added together. At the same time, it is highly probable that several more indirect impacts might not have been fully captured, or even have been left undetected. This does not mean that they should be ignored. As outlined in Chapter 4, these wider benefits were divided into two types, namely health impacts and savings to the public purse. These are examined in turn in the remainder of this chapter.

Health Impacts

Groundwork's interventions around the three key areas of People, Place and Prosperity undoubtedly concern some of the determinants of health and well-being. Indeed, health and place are inextricably linked, the former being determined by a range of social, environmental and economic factors²³. At present there is a growing economic rationale for projects which have positive health outcomes, on the grounds that better health is likely to result in wider societal benefits like reduced costs to the NHS, improved productivity and enhanced social engagement. Many of Groundwork's Programmes and projects are likely to have already contributed to improvements in the health of beneficiaries and to other wider benefits, both directly and indirectly.

An element of these benefits will undoubtedly have been picked up in the unit values applied in the 'top-down' assessment in Chapter 4 – through job creation or land improvement, for example. However, it is not clear whether the full value of health-related benefits are actually subsumed in these estimated values, especially as many of these impacts are indirect or 'downstream'. Nor is it clear whether all health benefits stemming from Groundwork projects are actually captured through its monitoring system.

There are many ways in which such hidden benefits could arise. For example, environmental projects like Groundwork's *Green Gyms* (GGs), *Greenstart* and *Healing Gardens* are specifically designed to improve both physical and mental health through increased physical activity and contact with nature and green space. There is a large body of evidence which shows that such contact is of considerable value in terms of people's health, for example in the treatment of mild to moderate depression²⁴. There is also growing support for 'ecotherapy', a green approach to promoting mental health which is seen as an accessible, cost effective and natural addition to existing treatment

²³ Marmot M and Wilkinson R.,(eds., 1999) *Social Determinants of Health*. Oxford: Oxford University Press

²⁴ Halliwell E. (2005) *Up and Running? Exercise therapy and the treatment of mild to moderate depression in primary care*, London: Mental Health Foundation; Maller C et al. (2006) Getting strategic about the environment and health. *Public Health*, 120, pp. 889-907

options²⁵. Those with mental health problems are also at greater risk of major physical health problems including obesity, heart disease, high blood pressure, diabetes and respiratory disease so green approaches to promoting health which incorporate exposure to nature and exercise are particularly effective.

The involvement of volunteers in Groundwork's environmental projects also delivers benefits. Volunteering has been linked with mental health improvements usually through a widening of social networks, reduced isolation and enhanced self esteem and confidence. Evidence suggests that older people who enjoy such benefits maintain significantly higher levels of well-being, a strong sense of their own worth and better functional health than those who do not volunteer²⁶. Volunteering also contributes to learning and skills development of young people particularly, and can help them to re-engage with formal learning or training, putting them in a position where they can develop skills and potentially gain qualifications and improve their employment opportunities. Indeed, the CLG *Valuing Regeneration* study identified this as an important element in the regeneration mix, and included a separate unit value for estimating the benefit produced by someone acting as a volunteer (£1,000 per annum, assuming a minimum of 3 hours activity per week for 48 weeks). Unfortunately, none of the Groundwork PPMs nor the individual project reports and evaluations record this type of information.

Groundwork's approach to environmental projects also appears to help bring a greater sense of ownership and encourage community cohesion by getting local groups to take charge of open spaces. Other research has demonstrated that people seeking personal recovery through stewardship of green spaces may achieve unanticipated social capital and natural capital outcomes²⁷. This added social value has not been previously considered as an important dimension in people's well-being and recovery from ill-health or social exclusion, and hence tends not to be captured in terms of project outputs or outcomes. Indeed, its intangible nature likewise meant that the CLG study was unable to devise a separate monetary value for such benefits, assuming instead that they were included in associated measures such as the willingness to pay for community open space.

Evidence from the national health impact assessment of Warm Front, a major home energy improvement scheme, demonstrate that it resulted in benefits in terms of use of living space, comfort and quality of life, and physical and mental well-being²⁸. It estimated that the prevalence of common mental disorder (anxiety and depression) fell by around 150 per 1000 occupants after energy efficiency measures were installed. Similar projects undertaken by Groundwork, such as the *Green Doctor* energy efficiency initiatives, are likely to produce similar impacts, but again these are not included in the PPMs and thus go unrecorded, either as standard project achievements or in terms of net value secured as a function of the expenditure incurred. As illustrated by the analysis in Chapter 5, the limited output data reported for these projects means that its wider health benefits are very hard to assess, and as a consequence they may appear to provide poor value for money.

Although the restricted nature of PPM and project-related data precluded any estimation of such wider health effects by the study, clearly there is a strong case for trying to incorporate them into future assessments of Groundwork's impact. However, there are a number of constraints and limitations inevitably associated with the measurement of

²⁵ Mind (2007) *Ecotherapy: The Green Agenda for Mental Health*, London: Mind Publications

²⁶ Onyx J and Warburton J (2003) Volunteering and health among older people: a review, *Australasian Journal of Ageing*, Vol. 22, no. 2, pp. 65-69

²⁷ Buris A (2007) People and green spaces: Promoting public health and mental well being through ecotherapy, *Journal of Public Mental Health*, Vol. 6, Issue 3, pp24-39

²⁸ Green G and Gilbertson J (2008) *Warm Front, Better Health*, Sheffield: CRESR, Sheffield Hallam University

such indirect benefits, and indeed of measuring health more generally. These are as follows:

- the working of many interventions, particularly those targeted on individuals, will be mediated by broad structural factors such as poverty or unemployment. Socio-economic context needs to be taken into account in evaluation studies, but this is rarely straightforward
- capturing the indirect benefits in evaluation studies raises problems of coverage, measurement and attribution, particularly where interventions involve close working with other partners
- benefits such as improved physical and mental health are not only multi-dimensional but usually accrue over many years. This can give rise to serious difficulties of length as well as breadth of analysis in research and evaluation work.

Savings to the Public Purse

It is clear that the range of activities delivered by Groundwork UK and its network of local Trusts is likely to result in considerable savings to the public purse (i.e., reduction in Exchequer costs). For example, an unemployed person who is supported into employment through Groundwork's activities will no longer require a variety of benefit payments and will begin contributing to the Exchequer through tax and national insurance. For example, the recent CLG study estimated that the fiscal savings to the Exchequer in terms of welfare benefits was around £7,000 for every person who moved into paid work from a state of economic inactivity. Further savings were identified in terms of associated improvements in health (i.e., reduced costs associated with health interventions) and reductions in crime (i.e., reduced costs associated with the criminal justice system). The two of these together added an average of a further £1,000 of savings to the public purse where someone had moved into work. While these represent the most obvious areas where expenditure could be reduced, they are not the only ones.

One way of assessing these savings would be to apply methods similar to those used for some 'Invest to Save Budget' (ISB) projects. While most of these have merely explored the reduced cost of two public agencies sharing premises or facilities, a few have attempted to trace through the wider savings accruing from project results. For example, Northumberland County Council's bid for a Citizens' Fire, Safety and Health Academy included estimated savings not only from service delivery benefits but also from reductions in fire-related deaths and injuries. Clearly this approach is generally applied on an ex-ante basis (i.e., in terms of the expected savings resulting from predicted benefits of a particular stream of public expenditure), with only limited evaluation evidence on the accuracy of the projections. More extensive application of the technique is also contingent on the availability of regularly updated unit savings, expressed in monetary terms, that can be applied to beneficiary statistics. The latter need to be not only timely and accurate, but also disaggregated into those moving into work from different benefits. Assuming that both of these are in place for the relevant items of interest, it should be possible to adapt ISB methods to fit appropriately measured outputs and outcomes actually achieved.

The restricted nature of the monitoring data available to this study has already been discussed, and this has meant that it has not been possible to make such an assessment of public sector cost savings. In particular, not enough is known about the background and progress of individuals benefitting from specific Groundwork interventions to enable this next step to be taken. To undertake this type of analysis more detailed tracking of a sample of these individuals post-intervention would be required. For example, this could be accomplished through regular monitoring surveys

or interviews. If such data was collected on a systematic and consistent basis at individual Trust level it could be aggregated across the Federation as a whole in a similar way to the PPM measures.

7. Conclusions and Recommendations

The Value of Groundwork's Activity

This study has followed a two-pronged approach to assessing the monetary value of the benefits that result from Groundwork's regeneration activities: 'top-down' and 'bottom-up' methods. The 'top-down' assessment used standard Groundwork-wide financial and monitoring data in order to calculate the overall value of its achievements over the three-year period 2006/7 to 2008/9. After controlling for additionality it was estimated that Groundwork's impact could be assigned a monetary value of just over £550.3 million. This is double Groundwork's expenditure on project activity, or a benefit-cost ratio (BCR) of 2.0. Given the methodology adopted in this study, and in line with guidance from DfT on assessing value for money, it can be concluded that Groundwork's activities over these three years generated **medium to high value for money**.

The 'bottom-up' assessment was based on information at an individual project level. In particular the focus was on environmental improvement interventions for which sufficient information was available to support an economic assessment. Given the limited range of projects assessed and the variability of the information available for each, it is no surprise that the estimated benefit to cost ratios were spread over a very wide range. At the extremes, project benefit to cost ratios were as low as 0.1, indicating that costs exceeded environmental benefits by a multiple of 10, to 6.9, indicating that benefits are estimated at 6.9 times costs. Of the 11 projects for which a benefit cost ratio could be calculated, six had an estimated ratio greater than two, indicating high value for money. At the other end of the spectrum four of the 11 projects had benefit cost ratios of less than one. However, it should be stated that these values only reflect particular types of environmental benefit, and do not take into other impacts such as training, moves into employment, health improvement and crime reduction. Although not a robust or recommended measure, it is possible to calculate an average BCR across the 11 projects as a whole; this works out at 1.7, which equates to medium value for money. This is roughly in line with the findings of the 'top-down' approach.

There are two important points to note in relation to these results:

- First, the 'top-down' and 'bottom-up' BCRs should definitely not be regarded as 'additive'; in other words, under no circumstances should they be combined to give an overall BCR for Groundwork. This is because in many ways the two approaches have adopted different perspectives on measuring very similar things, with most of the benefits covered by the 'bottom-up' environmental valuation also being picked up by the 'top-down' additionality analysis
- Second, having said that both methods of assessment were forced to use an incomplete set of project outputs, outcomes and possible downstream effects. Although it was not possible to rectify this, given the current limited availability of data, it does suggest that Groundwork's overall impact may be somewhat greater than this study has shown. How much greater is, however, a matter of speculation.

Recommendations

Improving output and outcome data collection

The difficulties encountered during the study in terms of obtaining consistent and meaningful financial and monitoring data, either for Groundwork as a whole or for individual projects and programmes, suggest that improvements in information collection and collation should be put in place. While the systems for gathering PPM monitoring data appear to be robust, it is also the case that several of the measures either do not constitute proper outputs, or are defined in ways which are not the most helpful. A number of improvements could be implemented to address these shortcomings, including the following:

- wherever possible beneficiary and resident surveys should be undertaken to gauge the extent to which Groundwork's interventions have made a difference, to assess the extent of increased usage of environmental amenities, and to track other changes in behaviour and attitudes
- composite PPMs such as 'Routes of Progression' should be provided in both disaggregated and aggregated formats, particularly in terms of entry into paid employment
- PPMs relating to jobs should provide more information on matters such as occupation, grade and/or salary band.

Valuing environmental benefits of Groundwork activities

Given that the project level results are dependent on key assumptions, future analysis could be enhanced by:

- improved estimate of beneficiary populations – ideally this should be identified by scheme appraisals / evaluations
- improved documentation of benefits and their longevity. This would allow for a more informed estimate of aggregate benefits over time
- better reporting of the costs incurred and expenditure involved in mounting project-related activity is required, so that a larger number of 'value for money' type assessments of environmental benefits could be undertaken. The higher the number of such exercises are conducted, the greater confidence can be placed in the overall results
- 'bottom-up' estimates (i.e., aggregating over all projects undertaken by a Trust) may prove to be more robust for assessing environmental benefits (particularly given better identification of beneficiary populations). However, this may not be practical given the large number of projects undertaken, so it may be more fruitful to focus on a smaller number of selected projects across the full range of environmental interventions pursued.

Assessing the wider impacts of Groundwork projects

Many of the recommendations already made about improvements in monitoring data and the associated project-related evidence base should incorporate elements that relate to more indirect impacts in areas such as health, crime, biodiversity and savings to the public purse. At the same time, more appropriate evaluation techniques could be used for particular types of project: for example, the *Green Doctor* initiative could be subject to an examination similar to that for the 'Warm Front' programme mentioned in Chapter 6.

At the same time, there is growing interest in the overall economic value of the natural world, and the biodiversity within it, and how this might be assessed. Given Groundwork's central role in promoting, developing and maintaining natural spaces, this would seem to be an avenue worthy of further exploration. For example, the multi-national Economics of Ecosystems and Biodiversity (TEEB) study has developed tools by which 'ecosystem services' can be valued and appraised, and is keen for this to be applied to projects and organisations operating at the local and regional scales.²⁹

²⁹ TEEB (2010) *The Economics of Ecosystems and Biodiversity for Local and Regional Policy Makers*. Available at:
<http://www.teebweb.org/LinkClick.aspx?fileticket=vMQdtKttJVg%3d&tabid=1020&mid=1932>

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