Communities and Local Government

The New Deal for Communities Programme: Assessing impact and value for money

The New Deal for Communities National Evaluation: Final report – Volume 6

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The findings and recommendations in this report are those of the authors and do not necessarily represent the views of the Department for Communities and Local Government.

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Executive summary

Chapter 1. Introducing the Programme and the evaluation

The New Deal for Communities (NDC) Programme is one of the most significant Area Based Initiatives (ABIs) ever launched in England. Announced in 1998 with funding of over £1.71bn, the Programme's primary purpose is to 'reduce the gaps between some of the poorest neighbourhoods and the rest of the country'. In 39 areas, each accommodating about 9,900 people, NDC partnerships have been implementing approved 10-year delivery plans, each of which has attracted approximately £50m of Government investment. Partnerships have worked to close the gaps between these areas and the rest of the country in relation to:

- three **place-**related outcomes designed to improve NDC areas: crime, community and housing and the physical environment (HPE)
- and three **people-**related outcomes intended to improve the lives of residents in the 39 areas: health, education and worklessness.

This is one of the seven final reports of the national evaluation undertaken by a consortium of organisations led by the Centre for Regional Economic and Social Research (CRESR) at Sheffield Hallam University between 2001-2010.

Chapter 2. Impact and value for money (VFM): A framework for analysis

ABI evaluations: understanding the limitations

Conceptual problems impact on all ABI evaluations including:

- the counterfactual: what would have happened to the area in the absence of intervention
- the confounding problem: arises because outcomes in deprived neighbourhoods can be affected by many policies
- the contextual problem: deprived areas operate within different social and economic conditions
- the contiguity problem: benefits can spill over into adjacent neighbourhoods
- the combinatorial issue: assistance is delivered in different packages.

Although these problems impact on this evaluation, the wealth of data available to this evaluation means that their effects can be mitigated.

NDC Data sources: a brief overview

The evaluation team has had access to different types of data which help in identifying impact and assessing VFM. These include four NDC household surveys carried out in all 39 NDC areas in 2002, 2004, 2006 and 2008. Equivalent household surveys were carried out in comparator areas – similarly deprived areas within the same local authority districts as each of the 39 NDC areas. Therefore, change in NDC areas can be benchmarked against change occurring nationally, in parent local authority districts (LADs), and similarly deprived comparator areas. The evaluation has data on all 39 areas from a common base-line of 2002.

Methodological problems

Despite access to a rich evidence base, the evaluation still faces a number of methodological problems:

- this is not a 'policy off/on' evaluation: most of these 39 NDC areas will have received some regeneration funding prior to NDC designation and the same is true of comparator areas which are not scientific controls, as some of them may also have received regeneration funding – however they represent the best benchmark available
- change in the 39 NDC areas will reflect a range of forces
- there is no one definitive 'NDC model': partnerships have supported different suites of interventions to meet the particular problems faced by, and circumstances prevailing within, each of these neighbourhoods.

A conceptual framework

The framework used for this evaluation is based on recognised industry guidance including Treasury's Green Book, The 3Rs Guidance[1] and English Partnership's Additionality Guidance. The approach adopted is based on seven steps, which are outlined in the following text.

Step 1: Setting limits to the evaluation

Four *operational limits* set the context for the study:

- limit of possible alternatives: the evaluation considers the NDC Programme, as is, against the counterfactual position – what *would* have happened in the 39 areas in the absence of NDC
- benefits to be included: as this is an area-based initiative, costs and benefits are assessed using cross-sectional area-based data

[1] ODPM (2004) Assessing the impacts of spatial interventions: regeneration, renewal and regional development

- the temporal limit: the study is based on the impact of the NDC Programme during that six year period 2002 to 2008
- impacts are assessed according to 36 core indicators, six for each of the Programme's six outcomes.

Chapter 3. Programme expenditure, matched funding and net outputs

Step 2: Programme expenditure

During the period 1999-2000 to 2007-08 a total of £2.52bn (constant 2008-09 prices) was spent by the 39 NDC partnerships. NDC partnerships have worked with public agencies, the voluntary sector and, to a lesser degree, the private sector, to help achieve longer term objectives. In addition to CLG funding of the NDC Programme (£1.71bn),[2] matched funding from other public, private and voluntary sources amounted to a further £0.81bn. Local authorities proved to be the largest single source of other public sector spend. For every £1 of NDC funding a further 47p was secured: 34p from other public funds, 13p from the private sector and 1p from the voluntary sector. Each NDC partnership spent an average of £42.5m, ranging from £27.1m to £59.3m. Total expenditure per capita (including NDC funding from CLG and other public, private and voluntary expenditure) ranged from £2,348 to £13,067 with one outlier at £29,819. The average total expenditure per capita was £6,472 excluding the outlier.

In terms of NDC outcome spend, housing and the physical environment (HPE) accounted for the largest share of NDC funding at 32 per cent, followed by community with 18 per cent and education at 17 per cent. Worklessness, health, and crime accounted for 12, 11 and 10 per cent respectively. Around 44 per cent of NDC funding has been dedicated to capital expenditure. HPE had the highest proportion of its total expenditure dedicated to capital expenditure (78 per cent), followed by health (38 per cent), and education (34 per cent).

Step 3: Net outputs

NDC funded activity has produced a large number, and a diverse range, of outputs. After allowing for possible deadweight, displacement, substitution, leakage, and multiplier effects, the Programme generated a substantial array of **net additional outputs** including:

- community: 28 instances of support for community/voluntary groups per NDC area per annum (9,843 for all NDC areas over the period 1999-2000 to 2007-08)
- crime: over 480 homes and businesses per NDC area received improved security over the nine year period (18,822 for all NDC areas over the period 1999-2000 to 2007-08)

[2] Referred to as NDC funding elsewhere in the report.

- education: over 1,600 instances of pupils benefiting from projects designed to improve attainment per NDC area per annum (over 562,000 for all NDC areas over the period 1999-2000 to 2007-08)
- worklessness: three net additional jobs were created and a further 14 net additional jobs were safeguarded per NDC area per annum (over 1,000 and just under 5,000 net additional jobs were created and safeguarded respectively for all NDC areas over the period 1999-2000 to 2007-08)
- health: around six new or improved health facilities per NDC area over the nine year period (221 for all NDC areas over the period 1999-2000 to 2007-08)
- housing and physical environment: more than 330 net additional homes built or improved for every NDC area over the nine year period (13,012 for all NDC areas over the period 1999-2000 to 2007-08).

Relationships between spend, outputs and outcomes are complex. Spend in some outcomes is associated with, generally positive change, in others.

Chapter 4. Identifying the net additional outcomes of the NDC Programme

Step 4: Identifying net additional outcomes

Net additional outcomes are identified by comparing change in NDC areas with that occurring in comparator areas. Across four time periods (2002-08, 2002-04, 2004-06 and 2006-08), there are 30 instances where there is a statistically significant[3] difference between rates of change in these two sets of areas, of which all but six show a positive net additional NDC effect. More net additional positive change occurred in the 2002-04 period than in succeeding years.

Only outcomes showing a statistically significant difference, for at least one of the time periods, are used to identify monetisable net additional outcomes for the NDC Programme. More positive change occurred in relation to place-, rather than people-, related outcomes but the interrelationships between these categories of outcomes should be recognised.

There are variations in **rates of change across the six key outcome categories**:

- although partnerships have seen big changes in **education** outcomes this has rarely been over and above that seen in deprived areas overall
- there is no evidence for statistically significant positive net additional change in relation to **worklessness**

[3] Statistically significant changes occur when there is enough evidence that the difference in change between the NDC and comparator samples is large enough that the observed difference could be thought not to have occurred due to chance: for example due to the samples selected.

- more statistically positive net change emerges in relation to **health** than for education or worklessness, much of it relating to improvements in mental health
- net positive improvements in relation to **crime** encompass being a victim of crime and a 'lawlessness and dereliction' index
- net positive improvements in relation to **HPE** reflect attitudes to the area and the local environment
- net positive benefits in relation to the **community** dimension tend to reflect strongly positive attitudes towards the local NDC, and, in the early years of the Programme, a sense that neighbours were looking out for each other.

Percentage point net additional outcome change through time for each of the 36 core indicators has been translated into numbers of NDC residents based on an NDC 16+ population of 300,500.

Chapter 5. Programme costs and benefits

Step 5: Monetising outcomes

Two approaches have been used to monetise net outcomes: shadow pricing; and transferring benefits identified through a review of other studies.

Shadow pricing represents the main mechanism through which the evaluation team has estimated unit values for core indicators. It should be emphasised that this is pioneering work: the evaluation team is not aware of this approach being used in any other previous ABI evaluation. It is hoped that this study will help generate debate around more innovative approaches to valuing regeneration programmes and will act as a catalyst for building the limited existing evidence base. Where possible, unit benefits for core indicators have also been **drawn from other studies**.

Results from these two methods are applied to total numbers of people experiencing outcome change, where there is evidence that this change is *statistically significant*.

Two models/options have been specified relating outcomes to a measure of quality of life. These models have produced upper and lower bounds for the possible monetary value of the, statistically significant, net additional outcomes generated by the NDC Programme.

- **Option 1** uses all significant people-related (education, worklessness and health) benefits, but only 'satisfaction with the area' to monetise place-related net additional impact, the assumption being that this is a function of all place based indicators. Option 1 produced an estimate of monetised net additional outcomes of the NDC Programme, over the period 2002-08 of around £8,688m – about a third of this benefit relates to improvements in SF 36 mental health scores, while the other two thirds relates to satisfaction with the area.

- **Option 2** uses the same people-related benefits as Option 1, but substitutes other significant place-related indictors for 'satisfaction with the area'. Option 2 produced an estimate of monetised net additional outcomes of the NDC Programme, over the period 2002-08, of around £5,361m – about half of this benefit relates to improvements in SF 36 mental health scores.

The two options provide an estimated range of monetised net additional outcomes of the NDC Programme, over the period 2002-2008, of between £5.4 – £8.7bn.

Step 6: Cost benefit equations

Option 1 suggests the positive net financial benefits to society from the NDC Programme amounts to an estimated £6,976m and overall benefits arising from the Programme amount to more than five times NDC funding. Using the more conservative Option 2, the positive net financial benefits to society amount to an estimated £3,649m and more than three times NDC funding. The Department of Transport's, Transport Appraisal Guidance considers Benefit Cost Ratios of between 1.5 and 2 as medium value for money and BCRs above 2 as high value for money[4] – based on this Guidance the NDC Programme appears to have delivered good value for money.

Table 1: Cost-benefit assessments

	Option 1 (£,000)	Option 2 (£,000)
Monetised net additional outcomes (a)	8,687,598	5,360,759
Funding (b)	1,711,720	1,711,720
Difference (a) – (b)	**6,975,878**	**3,649,039**
Benefit Cost Ratio (a) to (b)	**5.08**	**3.13**

Source: Ipsos MORI NDC Household Survey; LSC (2007) Young people set for £2,000 GCSE bounty, publication number 461; SDRC; System K; ONS
Base: NDC population aged 16 and over;
2008/09 prices

[4] www.dft.gov.uk/about/howthedftworks/vfm/guidanceonvalueformoney?page=1

Chapter 6. Sensitivity Analyses

Step 7: Sensitivity analysis

Do these cost-benefit assessments capture the full impact of the NDC Programme?

The costs used in the analysis include total NDC funding over the period 1999-2008, however the assessment of benefits is only **partial**, because:

- change has been assessed using 36 core indicators
- it is not possible to monetise some of the net benefits arising from the Programme
- core indicators do not capture more intangible changes occurring to individuals
- change is assessed over a specific time period: 2002 to 2008; there may have been positive net change before 2002, and there probably will be more after 2008
- benefits and costs may fall outside the spatial configuration represented by these 39 areas because of factors such as leakage of benefits arising from people leaving the 39 areas, and a displacement of crime activity to surrounding areas; the evaluation cannot provide detailed assessments as to the effects of these processes; however, evidence suggests their impact is likely to be marginal
- it is not possible to capture change in relation to 'process outcomes' such as partnership working.

Monetised net additional outcomes: computing confidence intervals

Upper and lower confidence intervals from shadow pricing Options have been calculated to provide confidence intervals on the estimated monetised net additional outcomes for the Programme. Using both the upper and lower limits produces values in relation to the monetised net additional impact of the Programme which are all at least 2.4 times greater than the costs of the Programme.

What is it possible to achieve: assessing costs and benefits for the ten areas seeing greatest change?

Assessments have been carried out into the costs and benefits across those ten NDC areas seeing greatest change. Results have been grossed up to identify what would have been the impact of the Programme had change across all 39 areas matched that seen in these ten areas. In broad terms figures are similar to those arising from the Programme-wide assessment, therefore **the benefits of the Programme are not unduly skewed towards gains seen in areas seeing greatest change**.

NDC change: Benchmarking against parent local authority districts (LADs)
Administrative data sources were used to benchmark change in NDC areas against that occurring across parent LADs for nine indicators. However, it was found that this approach was unlikely to identify the full range of benefits from area regeneration schemes.

Chapter 7. Concluding observations

The value for money of the NDC Programme

Given the methodology adopted in this study and guidance from DfT[5] on assessing value for money it can be concluded that **the NDC programme generated good value for money**. However, the value of the programme is generated mainly through non-market net additional outcomes, including improvements in mental health and satisfaction with area. This isn't surprising given that the key objective of the NDC Programme was to improve the quality of life of NDC residents and this was reflected in the allocation of spend – 32 per cent of NDC expenditure was on housing and the physical environment and 18 per cent on community (both of which would tend to generate the non-market outcomes identified in the analysis) compared to 17 per cent on education and 12 per cent on worklessness (both of which would generate more market outcomes such as employment and improvements in skills). These non-market outcomes may have indirect effects on market outcomes. However, it has already been noted that this analysis is only partial – it has not been able to capture the full extent of the benefits generated by the NDC and has not been able to fully capture the interactions between the direct non-market outcomes achieved by the NDC Programme and potential wider indirect market outcomes.

Advantages of the adopted methodology

Shadow pricing is an especially useful approach to adopt in the economic appraisal of regeneration programmes such as the NDC Programme because by using this methodology it is possible to place a monetary figure on place- and quality of life-related benefits emerging from the Programme. This is an important consideration for area-based regeneration schemes where improved perception of the local area is likely to be one of the key outcomes to emerge. Such outcomes have traditionally been very hard to value.

[5] www.dft.gov.uk/about/howthedftworks/vfm/guidanceonvalueformoney?page=1

Issues raised by this methodology

Although the unit individual-level benefits identified through the shadow pricing approach might appear high, they are not out of step with other available evidence. Furthermore, it is not possible to place a monetary value on all of the benefits associated with the Programme. Other than for mental health, much of the monetisable benefit arising from the Programme occurs because of positive net change with regard to place-related outcomes.

Implications for evaluating other ABIs

Work outlined here establishes a potential methodology through which more of the benefits arising from ABIs might be captured. That will prove especially useful within a context which is likely to increasingly emphasise the importance of subjecting all policy innovations to robust value for money assessments. In time there may be opportunities to test and refine the approach developed in this report. Identifying such a positive cost-benefit equation has required analyses drawing on a consistent data base covering all of the 39 NDC areas, as well as the comparator, areas, from a common base-line. Creating this evidence base has required the investment of considerable resources, greater than those made available to any previous ABI evaluation. However, this has highlighted the advantages of adopting such an 'evaluation conscious' approach from the outset.

Chapter 1

Introducing the Programme and the evaluation

Introducing the NDC Programme

1.1 The New Deal for Communities (NDC) Programme is one of the most significant Area Based Initiatives (ABIs) ever launched in England. Announced in 1998 as part of the government's National Strategy for Neighbourhood Renewal[6], the Programme's primary purpose is to 'reduce the gaps between some of the poorest neighbourhoods and the rest of the country'.[7] Seventeen Round 1 partnerships were announced in 1998 and a further 22 Round 2 schemes a year later. In these 39 areas, which on average accommodate about 9,900 people, local NDC partnerships have been implementing approved 10 year delivery plans, each of which has attracted approximately £50m of Government investment.

1.2 The Programme is based on a **number of key underpinning principles**:

- NDC partnerships are carrying out 10 year strategic programmes designed to transform these deprived neighbourhoods and to improve the lives of those living within them
- decision making falls within the remit of 39 partnership boards, consisting of agency and community representatives
- communities are 'at the heart of the regeneration of their neighbourhoods'[8]
- in order to achieve their outcomes, the 39 partnerships have worked closely with other delivery agencies such as the police and Primary Care Trusts: the notion of working collaboratively with other delivery agencies is central to the Programme
- partnerships are intended to close the gaps between these areas and the rest of the country in relation to:
  - three **place-related** outcomes designed to improve NDC areas: incidence and fear of crime, housing and the physical environment (HPE), and community
  - three **people-related** outcomes intended to improve the lives of residents in the 39 areas: health, education and worklessness.

6 SEU (1998) Bringing Britain Together: A National Strategy for Neighbourhood Renewal.

7 DETR (2001) New Deal for Communities: Financial Guidance.

8 ODPM (2004) Transformation and sustainability: future support, management and monitoring of the New Deal for Communities programme, 11.

The 39 NDC areas: deprivation and diversity

1.3 NDC partnerships were faced with an **array of complex, often entrenched, problems** impacting on these 39 neighbourhoods. A few selected indicators provide a sense of how deprived these localities were in, and around, 2002. For instance:

- an IMD score for all NDCs together[9] would place combined NDC areas in the most deprived decile on the 2004 indices of multiple deprivation
- the mean NDC house price in 2002 (£86,802) was just over 60 per cent of the national average house price (£139,575)
- 60 per cent of NDC residents were satisfied with their area as a place to live in 2002 compared with 86 per cent nationally
- 35 per cent of NDC residents in 2002 felt part of their local community; for England as a whole this figure was 51 per cent
- in 2002, 55 per cent of NDC residents felt 'a bit' or 'very' unsafe walking alone in their area after dark; this is 22 percentage points higher than the figure nationally (33 per cent).

1.4 Although all partnerships were facing considerable problems around 2002, the nature of these difficulties varied across the 39 areas (Table 1.1):

- in Islington average house prices were over £300,000 in 2002, more than 16 times the equivalent for Manchester (£18,225)
- the proportion of residents satisfied with their area ranged from 42 per cent in Liverpool to 77 per cent in Fulham
- half of all Birmingham Aston NDC residents felt part of their local community in 2002, compared with only 24 per cent in Norwich
- in Islington 40 per cent of residents felt unsafe after dark, compared with 73 per cent in Nottingham
- satisfaction with accommodation ranged from 91 per cent in Derby to only 65 per cent in Southwark.

[9] A synthetic population weighted ranking on the basis of all NDC LSOAs.

Table 1.1: Variations across NDC areas

	2002 (per cent, unless otherwise indicated)			
	NDC min	NDC max	NDC	National
Mean house price (£)	18,225	306,809	86,802	139,575
Very/fairly satisfied with area	42	77	60	86
Feel part of the community a great deal/a fair amount	24	50	35	51
Feel a bit/very unsafe after dark	40	73	55	33
Very/fairly satisfied with accommodation	65	91	81	92

Source: Ipsos MORI NDC Household Survey; SDRC
Base: All

The NDC National Evaluation

1.5 In 2001 a consortium headed up by the Centre for Regional Economic and Social Research (CRESR) at Sheffield Hallam University was commissioned to undertake the 2001-2005 Phase 1 of a Programme wide evaluation. In 2006 CRESR secured the 2006-2010 Phase 2 of the national evaluation working with a similar, albeit smaller, consortium.[10]

1.6 The first phase of the evaluation produced some 90 reports which can be accessed via the national evaluation team's website.[11] In Phase 1, the evaluation team undertook work in all 39 NDC areas. However, in Phase 2 qualitative work was carried out in just six or seven case study NDC areas,[12] evidence from which has informed reports on each of the Programme's six outcomes, as well other themes such as population mobility.

1.7 Phase 2 also differs from Phase1 in relation to **overarching, or final, reporting**. The first phase of the evaluation culminated in a single 2005 Interim Evaluation.[13] A different approach has been adopted for final reflections on 2001-2010 evaluation evidence as a whole, of which this report is part. In order to concentrate on the Programme's key characteristics and achievements, the decision has been made to publish a suite of seven final reports.

[10] Consortium members are: Cambridge Economic Associates, European Institute for Urban Affairs at Liverpool John Moores University, Geoff Fordham Associates, Ipsos MORI, Local Government Centre at the University of Warwick, School of Health and Related Research at the University of Sheffield, Social Disadvantage Research Centre at the University of Oxford, Shared Intelligence, and SQW.

[11] http://extra.shu.ac.uk/ndc/

[12] The NDC areas from which most case study evidence has been drawn are Bradford, Knowsley, Lambeth, Newcastle, Newham, and Walsall. For an overview of regeneration activity in these six NDC areas see: CLG Challenges, Interventions and Change: An overview of Neighbourhood Renewal in Six New Deal for Communities areas.

[13] NRU/ODPM (2005) New Deal for Communities 2001-2005 An Interim Evaluation: Research Report 17 www.neighbourhood.gov.uk/publications.asp?did=1625

1.8 The rationale for these seven final reports is as follows:

- Volume 1, ***Achieving a neighbourhood focus for regeneration***, explores the institutional model underpinning the Programme based on the creation of semi-autonomous partnerships, designed to achieve ten year transformational strategies working in co-operation with existing delivery agencies such as the police and PCTs.
- Volume 2, ***Involving local people in regeneration***, examines the rationale, operation and consequences of the Programme's aim of placing the community 'at its heart'.
- Volume 3, ***Making deprived areas better places to live***, considers the nature, operation and successes of NDC interventions designed to improve these 39 places and explores the outcomes of crime, community and housing and the physical environment.
- Volume 4, ***Improving outcomes for people: the NDC experience***, considers the nature, operation and successes of NDC interventions designed to improve outcomes for local residents living in the 39 NDC areas looking in particular at education, health and employment and finance.
- Volume 5, ***Exploring and explaining change in regeneration schemes: the NDC experience***, identifies factors which help explain why some of these 39 areas, and some individuals living in these neighbourhoods, have seen better outcomes than have others.
- Volume 6, this report, ***The NDC Programme: assessing impact and VFM***, uses all of the evidence available to the evaluation in order to identify the impact of, and cost-benefits arising from, the NDC Programme.
- Volume 7, ***The NDC experience, a final assessment***, considers the degree to which the Programme has achieved its original objectives and the implications of this evidence for policy.

1.9 The next chapter considers limitations acting on all ABI evaluations, outlines the particularly strong data base available to this evaluation, and sets out a framework for analysis.

Chapter 2

Impact and value for money (VFM): A framework for analysis

ABI evaluations: understanding the limitations

2.1 Evaluations have been undertaken of previous English area-based initiatives (ABIs) such as City Challenge,[14] the Single Regeneration Budget (SRB),[15] Street Wardens,[16] and Neighbourhood Management Pathfinders.[17] However, a number of conceptual problems, first identified in the 1994 report *Assessing the impact of urban policy*,[18] impact on all ABI evaluations. These include:

- the counterfactual: what would have happened to the area in the absence of intervention – if it is not possible to identify a plausible counterfactual, it becomes difficult, if not impossible, to establish with any certainty that proportion of change occurring in any intervention area which can reasonably be attributed to the ABI in question
- the confounding problem: arising from the fact that outcomes in deprived neighbourhoods can be affected by many policies, some of which may arise from activity undertaken by the relevant ABI, others which reflect wider market and government forces and the impact of other ABIs
- the contextual problem: deprived areas operate within different social and economic conditions, relatively modest changes in outcomes achieved by an ABI in more disadvantaged regions of the country might actually be 'worth more' than larger changes in more prosperous localities
- the contiguity problem: the benefits arising from interventions in any ABI can spill over into adjacent neighbourhoods
- the combinatorial issue: assistance is often delivered in different packages.

[14] DETR. City Challenge: Final national evaluation.

[15] Rhodes, J., Tyler, P. and Brennan, A. (2009) The Single Regeneration Budget: Final Evaluation. University of Cambridge Department of Land Economy.

[16] ODPM/NRU (2006) Research Report 24: National Evaluation of the Street Wardens Programme.

[17] Neighbourhood Management at the Turning Point: NRU Research Report 23 2006. www.neighbourhood.gov.uk/publications.asp?did=1728

[18] Department of the Environment (1994) Assessing the impact of urban policy.

2.2 Although these problems impact on this evaluation, the wealth of data available to the evaluation, as is discussed immediately below, means that their effects can be mitigated.

NDC Data sources: a brief overview

2.3 The evaluation team has had access to different types of data which help in identifying impact and in assessing value for money (VFM). Key data sources are outlined below and fuller details can be accessed in the forthcoming Technical Report.[19] Key sources include:

- four New Deal for Communities (NDC) household surveys were carried out in all 39 NDC areas by Ipsos MORI in 2002, 2004, 2006 and 2008; overviews of main findings for the periods 2002-06[20] and 2002-08[21] have previously been published; sample sizes in each NDC area vary wave on wave but provide for robust analysis at the NDC area level; the design of the survey also allows for the creation of a longitudinal panel of respondents who were revisited wave on wave of the survey[22]
- equivalent household surveys were carried out in comparator areas – similarly deprived areas within the same local authority districts as each of the 39 NDC areas[23]
- administrative data has been provided by the Social Disadvantage Research Centre (SDRC) for all 39 NDC areas, and also 39 comparator areas[24] including evidence in relation to worklessness benefits, pupil level educational attainment rates, and house prices; administrative data can be benchmarked against change occurring both nationally and in parent local authority districts
- NDC expenditure and 'matched funding' by partnerships and associated information on quantifiable outputs generated by projects
- 193 project level reviews have been undertaken to inform questions such as the degree to which NDC projects have levered in funds from other sources, any displacement of existing projects, and the scale to which any benefits 'leak out' of NDC areas; these have been weighted to be representative of all six Programme outcomes

[19] CLG (forthcoming) New Deal for Communities Evaluation: Technical Report.

[20] CLG. New Deal for Communities National Evaluation: An Overview of Change Data: 2006. www.neighbourhood.gov.uk/publications.asp?did=1898

[21] CLG (2009) An Overview of Cross-sectional Change Data: 2002-2008: evidence from the New Deal for Communities Programme.

[22] For further details of this panel see CLG (2009) Four years of change? Understanding the experiences of the 2002-2006 New Deal for Communities Panel. www.communities.gov.uk/publications/communities/fouryearschangendcp and Volume 5 of this final suite of reports.

[23] See CLG (forthcoming) New Deal for Communities Evaluation: Technical Report for details of the methodology for selection of comparator areas.

[24] These comparator areas are not necessarily the same as those where data is collected for the household surveys. See CLG (2010) New Deal for Communities Evaluation: Technical Report (Chapter 3).

- in 2004 a survey was carried out of some 1,008 project beneficiaries in 23 NDC areas; this sought evidence on residents appreciation of the quality of life/ satisfaction in the NDC area, their involvement with the project and what they felt the local NDC partnership had been able to achieve; questions also probed how projects had changed status and quality of life, whether respondents believed this provision to be additional to the area, and where, if at all, they might have accessed similar provision either within, or outside, the local NDC area.

2.4 Because of the depth of and time span encompassed by change data, this evaluation is therefore well placed to counteract some of the conceptual problems impacting on ABI evaluations raised in 2.1 above.

2.5 First, the evaluation was commissioned in 2001. One of its first tasks was to establish a Programme wide **baseline**, informed by the 2002 household survey and then available administrative data.[25] This evaluation is thus in a position to assess change from a comprehensive Programme-wide baseline.

2.6 Second, this evaluation has had access to **change data for all 39 NDC areas**. Some previous ABI evaluations[26] have had to select a relatively small group of 'case studies' evidence from which has then been 'grossed up' to provide programme-wide estimates. One potential disadvantage inherent to this process is over-optimism: project managers and beneficiaries can be overly optimistic about 'outcomes' associated with their own initiative. Here outcome change data is based on evidence for all 39 areas. 'Grossing up' has had to be adopted in a few particular instances. For example outputs validated in five case study NDC areas have been used to assess Programme wide outputs (See Appendix 2). But in general this evaluation has had access to change data for all 39 NDC areas from a common baseline.

2.7 Third, **establishing a counterfactual** is probably the single most critical issue in assessing the VFM of any ABI: what would have happened in these 39 areas had the Programme not been launched? In this evaluation the counterfactual is estimated by benchmarking change across the 39 NDC areas with change occurring elsewhere. There are three possibilities. NDC change can be benchmarked against national indicators. However, NDC partnerships operate in contrasting contexts, making national benchmarks a 'blunt' instrument in this context. It is also possible to benchmark NDC area-level change against that occurring in parent local authority districts (LADs) for a limited number of indicators drawn from administrative data sources.[27] This evidence is used to establish a cost-benefit equation based on NDC Programme-wide net impact against LADs (6.18). However there are drawbacks to this approach:

[25] ODPM/NRU (2003) New Deal for Communities The National Evaluation Annual Report 2002/03 NRU Research Report 7.

[26] Rhodes, J., Tyler, P. and Brennan, A. (2009) The Single Regeneration Budget: Final Evaluation; University of Cambridge Department of Land Economy.

[27] CLG (2007) NDC: a synthesis of new Programme wide evidence (para 3.10).

- local authority districts can be seen as too large and heterogeneous entities against which to assess change in what are relatively small, deprived, NDC neighbourhoods
- administrative data is not available for 'LADs, less NDC areas': local authority benchmarks therefore include changes achieved by NDCs themselves
- household survey data is not available for local authority districts: this is important because this is the source of many of the indicators used to identify change across the Programme.

2.8 The national evaluation therefore primarily uses a counterfactual based on what is happening in **similarly deprived comparator areas in the same local authority districts**. For each NDC area, household survey data is collected at three different points located in similarly deprived areas within the same local authority district. The collection of data in three areas helps minimise the impact of any additional investment made into any one of the comparator areas. To avoid problems of possible 'contamination', comparator areas do not share common boundaries with NDCs.[28] There are still shortcomings in relation to using the comparator areas as the key benchmark. They are not for instance 'regeneration-free controls'. Nevertheless, they are the best benchmark against which to assess change in the 39 NDC areas: they are also deprived neighbourhoods, and are located within the same local authority context.

Methodological problems

2.9 When compared with many previous ABI evaluations, the national evaluation team has access to a strong evidence base. However, problems remain, some intrinsic to the nature of ABIs, others flowing from the architecture of the NDC Programme. For instance:

- this is not a 'policy off/on' evaluation: most of these 39 NDC areas will have received some regeneration funding prior to NDC designation and the same is true of comparator areas which are not scientific controls, as some of them may also have received regeneration funding – however they represent the best benchmark available
- the confounding problem identified in 2.1 above remains: change in the 39 NDC areas will reflect a range of forces including the impact of other ABIs, past regeneration programmes, modifications to the delivery of mainstream services, the changing composition of the local population, the impact of policies and market trends operating at wider spatial scales, and so on; Volume 5 (chapter 2) in this final suite of reports attempts to explain why some of the 39 NDC areas

[28] CLG (forthcoming) New Deal for Communities Evaluation: Technical Report.

have seen more change than have others; the key headline there is that it is not always possible to explain differential rates of change; and even when it is, some significant change factors, are not directly within the control of NDC partnerships, such as population composition, and where NDC areas are located within city-regions

- there is a combinatorial problem: NDC areas have developed different packages of interventions; there is no one definitive 'NDC model'; rather partnerships have supported different suites of interventions to meet the particular problems faced by, and circumstances prevailing within, each of these 39 NDC neighbourhoods
- finally it is important to stress that this report is based on identifiable outcome change; however, the Programme has impacted on areas and individuals in ways which cannot all be measured in terms of 'hard' indicators of change, an issue explored in more depth from 6.2 onwards.

A conceptual framework

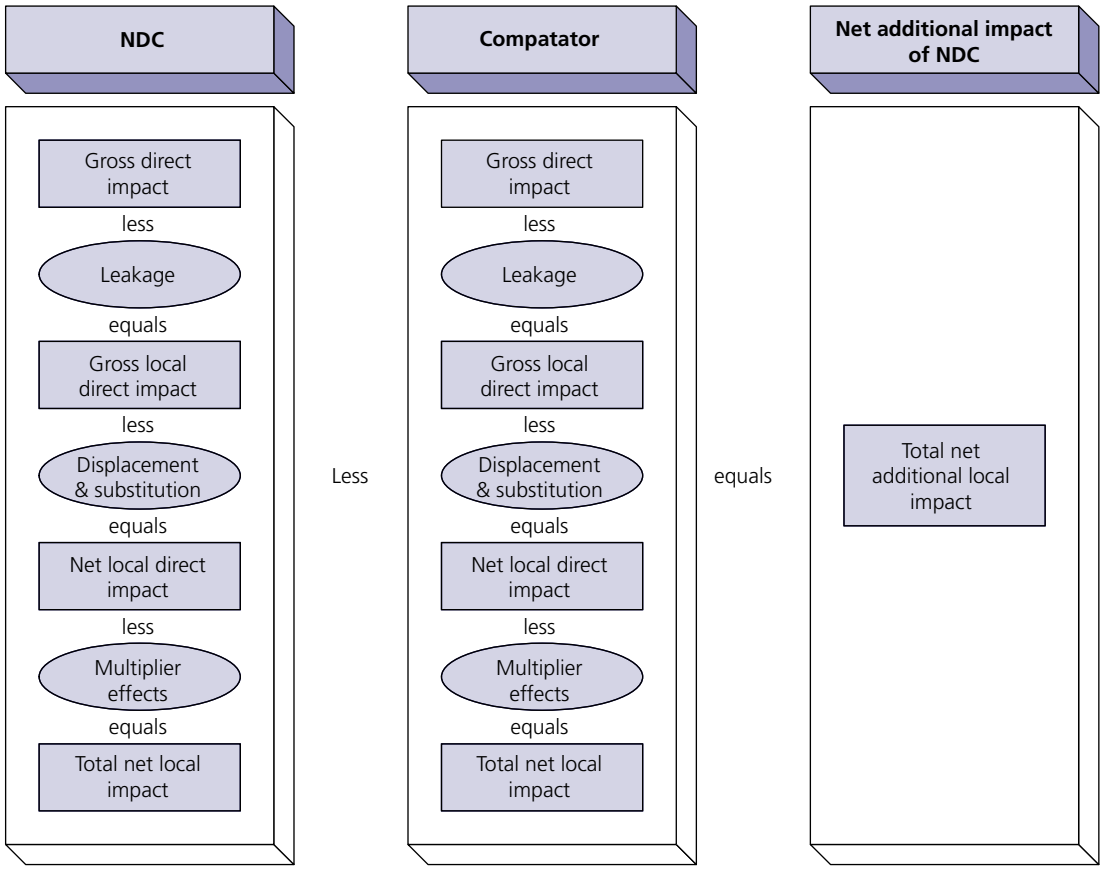
2.10 In 2003, HM Treasury set out the government's overall approach to appraisal and evaluation.[29] This overarching framework has in turn been supplemented in this evaluation by guidance specifically designed to assist those assessing the impacts of spatial interventions,[30] and also advice on how to assess the additional impact of regeneration projects.[31] In line with this guidance, assessments of net additional local impact, and hence benefits which can solely be ascribed to the Programme, are undertaken within a conceptual framework shown in Figure 2.1.

[29] HM Treasury (2003) The Green Book: appraisal and evaluation in central government.

[30] ODPM (2004) Assessing the impacts of spatial interventions: regeneration, renewal and regional development, 'The 3Rs guidance'.

[31] English Partnerships (2004) Additionality Guide – A Standard Approach to Assessing the Additional Impact of Projects: Second Edition.

Figure 2.1: Assessing net additional impact: a conceptual overview



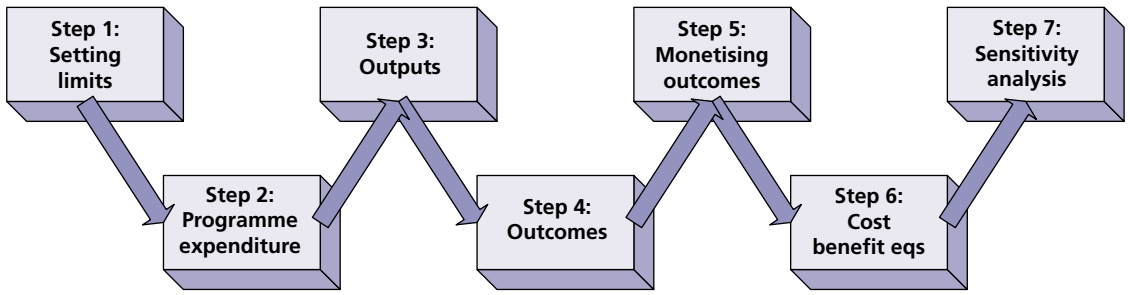
2.11 In essence the total net local impact within the 39 NDC areas, less that occurring within the comparator areas, is seen to equal the **total net additional local impact of the Programme**. In this context:

- gross direct impact: is an estimate of the total impact on outputs and outcomes for NDC Programme and comparator areas
- leakage: is the quantity of outputs, or outcomes, which benefit those outside of the defined target areas; this includes NDC residents receiving NDC funded training, who secure a job and then move out of the area; and also jobs created within NDC areas filled by non-NDC residents; these benefits are subtracted from gross direct impacts to give gross local direct impacts
- displacement: is the quantity of outputs or outcomes that can be accounted for by reduced outputs or outcomes elsewhere within a defined area; for example initiatives that reduce crime in one part of an NDC area may displace crimes to other parts; 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 or outcomes where an organisation has substituted from one to another similar activity because of NDC support; for example a housing developer may switch to undertaking an NDC funded development instead of an alternative development elsewhere within a NDC area; these benefits are subtracted from gross local direct impacts to give net local direct impacts, since such outputs or outcomes funded by partnerships would anyway have gone ahead in an equivalent form in the absence of the NDC Programme
- multiplier effects: reflect wider outputs or outcomes generated as a result of the direct net benefits delivered through the intervention; these benefits need to be added to net local direct impacts to give total net local impacts
- deadweight: reflects outputs and outcomes that would have been expected to occur anyway even in absence of NDC; over the timeframe of the evaluation change in relation to outputs and outcomes would have occurred in these 39 NDC areas; this change needs to be subtracted from total net local impacts to give the **total net additional local impact** of the Programme.

2.12 Informed by this overarching model of impact, the core methodology developed in remaining chapters of this report is based on the seven steps presented diagrammatically in Figure 2.2.

Figure 2.2: Methodology

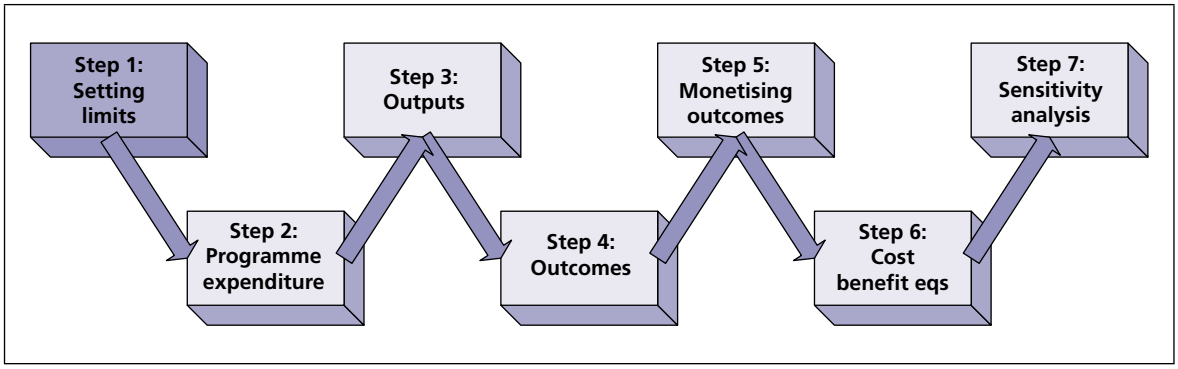


2.13 These steps are outlined within the report as follows:

- This chapter: Impact and value for money: A framework for analysis
  - step 1: Setting the limits to the evaluation
- Chapter 3: Programme expenditure, matched funding and net outputs
  - step 2: Programme expenditure and matched funding
  - step 3: An assessment of net additional outputs

- Chapter 4: Identifying the net additional outcomes of the NDC Programme
  - step 4: Identifying net additional local outcomes
- Chapter 5: Programme costs and benefits
  - step 5: Monetising net additional impact on outcomes: wherever possible net additional outcomes are translated into monetary values
  - step 6: Cost benefit equations
- Chapter 6: Sensitivity analyses
  - step 7: Sensitivity analysis: subjecting Programme-wide impact and benefits to various forms of sensitivity assessments: capturing the full impact of the Programme; estimating ranges of the monetised net additional impact; exploring impact for 10 NDC areas seeing greatest change; and examining monetisable net impacts against LADs.

Step 1: Setting limits to the evaluation



2.14 At the outset, four **operational limits** need to be identified which collectively set the context within which the study is undertaken. First, there is a limit set by **possible alternatives**. This evaluation considers the NDC Programme, as is, against the counterfactual position: what *would* have happened in the 39 areas the absence of NDC? As is flagged up in 2.7, there are three possible counterfactuals: benchmarking NDC change against that which occurred nationally, across parent LADs, or within similarly deprived comparator areas in the same local authority districts. For reasons rehearsed earlier, the last of these geographies has been chosen to represent the counterfactual. However, as part of the sensitivity analysis an assessment of change against LADs is laid out.

2.15 Second, a further limit surrounds of the question of **whose benefits are to be included**. As this is an area-based initiative there is a strong argument that computed costs and benefits should be based on cross-sectional area-based data and to include only residents 'currently' within NDC areas at one of the four points of data collection: 2002, 2004, 2006 or 2008. This is as opposed to assessing change for individuals staying in these 39 NDC areas who collectively

represent a '2002-08 longitudinal panel'. The primary reason for this is that this is an area-based initiative and therefore its impact is best explored via cross-sectional area-based data.

2.16 Longitudinal panel data would provide a slightly different perspective in that it captures change occurring to individuals who stayed in this area over time and will have been exposed to NDC activity for at least two, and up to six, years. This data is not therefore 'contaminated' by the complexities of people moving into, and out of, these areas. However, those who stayed in these areas for six years and who thus constitute the panel, represent a particular, and increasingly unrepresentative group. By definition they will be older than the cross-sectional sample and there is also an over-representation of women. In addition, there is a problem in estimating net additional impact using modelling techniques. Measuring net additional impact using modelled longitudinal data would require the creation of predictive models that are more advanced than household survey data allow.[32]

2.17 Third, the **temporal limit** represents the timeframe over which costs and benefits are to be assessed. Although the programme has run from 2000-10, this study is only based on the impact of the NDC Programme on outcomes over the six year period 2002 to 2008: virtually all change data covers this period. However, Programme wide change in the three separate periods 2002 to 2004, 2004 to 2006, and 2006 to 2008 is also assessed to determine the dynamics of change. This is important given that it is known greater change occurred in the earlier time periods.[33] The implications of limiting assessments of change to 2002 to 2008 are discussed later (6.6). Expenditure has been assessed over a longer period: from 1999-2000 to 2007-08. Limiting assessments of spend data to the period 2001-02 to 2007-08 would not include Programme expenditure which would have impacted on outcome change in the period 2002 to 2008.

2.18 Fourth, a final boundary to set is that of **impacts**. The intention is that all possible impacts should be identified. This is a multi-faceted Programme which aims to improve each of the 39 NDC areas in respect of six outcomes. The evaluation has consistently sought to measure change on the basis of 36 core indicators.[34] These 36, six for each of the six outcomes, reflect on issues where it is reasonable to assume partnerships might achieve change over a six year period. The biennial household survey is the primary source for 31 of

[32] Regression models run in Volume 5. Chapter 3 allow differences outcome variables between NDC and comparator residents to be controlled for a limited number of socio-demographic variables; these are not 'predictive models'.

[33] CLG (2009) An Overview of Cross-sectional Change Data 2002–2008: Evidence from the New Deal for Communities Programme. http://extra.shu.ac.uk/ndc/downloads/reports/An%20overview%20of%20Cross%20Sectional%20change%20data.pdf

[34] CLG (forthcoming) New Deal for Communities Evaluation: Technical Report.

these.[35] Five others are drawn from administrative data: unemployment, being on worklessness benefits (1999 to 2008), and the three Key Stage education attainment rates (2002 to 2007). Having a core list of 36 indicators provides a consistent framework within which to assess impact; it ensures due attention is given to all of the Programme's six outcomes; and it reduces the potential problem of double-counting arising from selecting too many, potentially overlapping, indicators.

A concluding comment

2.19 This chapter provides an overview of issues impacting on all ABI evaluations which include the particularly problematic question of identifying the counterfactual: what would have happened had the Programme not been introduced? However, because of the depth of change data, covering all 39 NDC areas from a common baseline of 2002, this evaluation is better placed to address these issues than many previous ABI evaluations. The methodology adopted is informed by advice from HM Treasury with regard to issues such as additionality and displacement. However, problems remain for the evaluation such as having to asses the impact of a Programme delivered through 39 different 'packages of interventions'. There are a series of limits placed on the evaluation including those relating to the time period under consideration and the spatial remit for the evaluation. The next chapter considers Programme expenditure and net additional outputs.

[35] CLG (forthcoming) New Deal for Communities Evaluation: Technical Report.

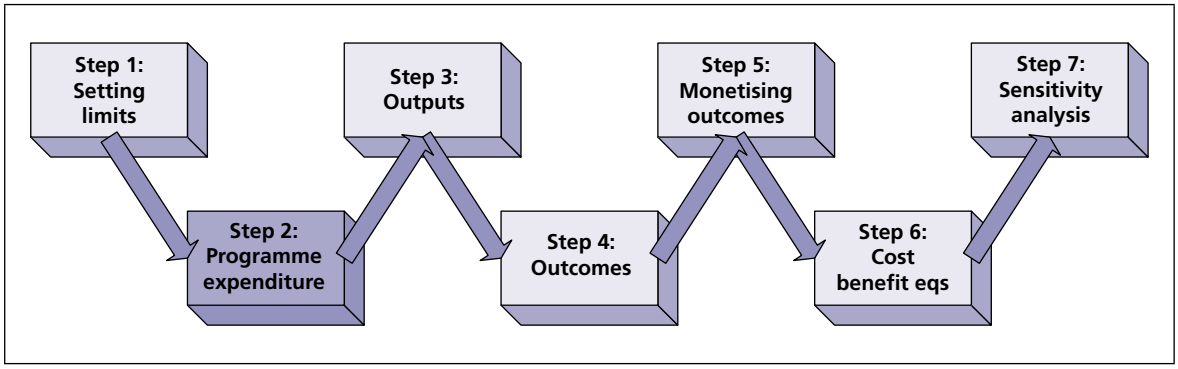
Chapter 3

Programme expenditure, matched funding and net outputs

Introduction

3.1 This chapter looks at spend over the period 1999-2000 to 2007-08. Analysis is then taken forward by identifying the gross outputs generated from activities funded through New Deal for Communities (NDC) expenditure. Evidence on additionality is used to estimate the net outputs accruing to the NDC areas and their residents. These net additional outputs represent our 'best' estimate of the outputs that would not have occurred in the absence of the NDC Programme and take account of leakage, displacement, substitution and multiplier effects as appropriate (see 2.11 for definitions). The detailed process of additionality adjustment, including explanations of these concepts, data sources used and methodology is presented in Appendix 2.

Step 2: Programme expenditure and matched funding



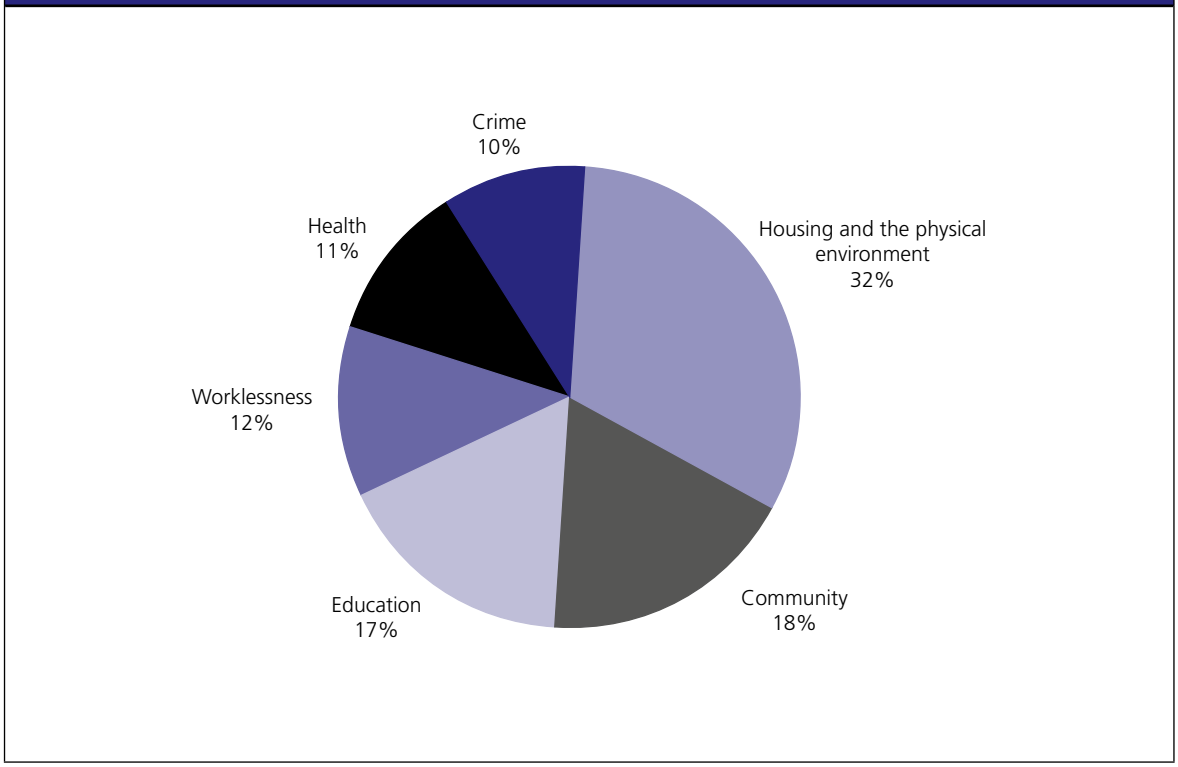
NDC Programme expenditure

3.2 NDC Programme funding (that is excluding any other public expenditure except that received from Communities and Local Government (CLG) for the NDC Programme itself) amounted to £1.71bn (constant 2008-09 prices) over the period 1999-2000 to 2007-08. Each NDC partnership spent an average of £42.5m, ranging from £27.1m to £59.3m. Per capita NDC funding averaged £4,743, but ranged from £1,859 per capita to £9,714. By theme, housing and the physical environment accounted for the largest share of NDC funding,

32 per cent, followed by community with 18 per cent and education at 17 per cent. Worklessness, health and crime themes received 12, 11 and 10 per cent respectively (Figure 3.1).

3.3 Around 44 per cent of NDC funding has been dedicated to capital expenditure. The housing and the physical environment theme had the highest proportion of its total expenditure dedicated to capital expenditure (78 per cent), followed by health (38 per cent), and education (34 per cent).

Figure 3.1: Distribution of NDC expenditure by theme 1999-2000 to 2007-08 (constant 2008-09 prices)



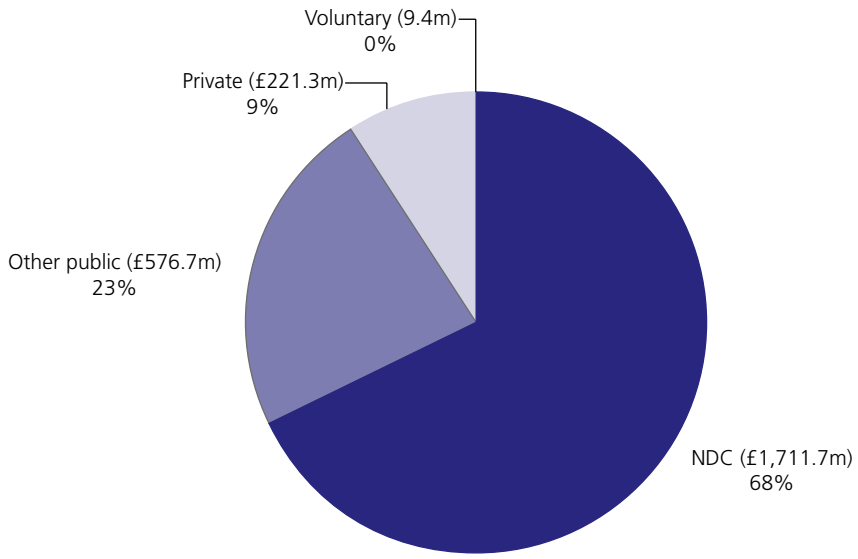
Source: CEA analysis of System K data.
Note: Management and administration spend is excluded.

Matched funding of NDC projects

3.4 During the period 1999-2000 to 2007-08 in addition to CLG funding on the Programme itself (£1.71bn), matched funding from other public, private and voluntary sources amounted to a further £807.4m comprising £576.7m other public spend, £221.3m private sector spend and £9.4m voluntary sector spend. This amounts to total expenditure of £2.52bn (2008-09 prices) which was spent by the 39 NDC partnerships. These partnerships have worked with public agencies, the voluntary sector and, to a lesser degree, the private sector, to help achieve longer term objectives (see Figure 3.2). For every £1 of NDC funding a further 47p was secured: 34p from other public funds, 13p from the private

sector and 1p from the voluntary sector.[36] Total expenditure per capita (NDC funding, other public, private and voluntary expenditure) ranged from £2,348 to £13,067 with one outlier at £29,819. The average total expenditure per head was £6,472 excluding this outlier. Detailed analysis of the data held on System K[37] shows that local authorities proved to be the largest single source of other public sector spend (Figure 3.3).

Figure 3.2: Total expenditure by source (1999-2000 to 2007-08) in 2008-09 prices

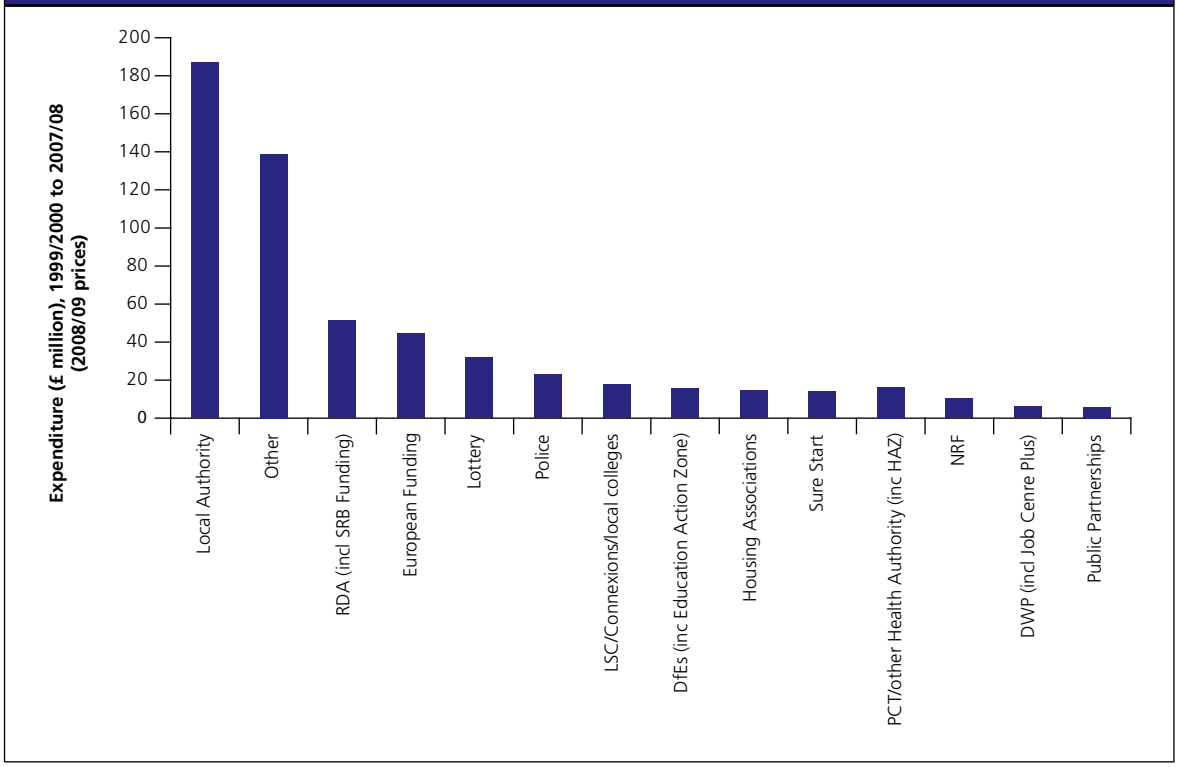


Source: CEA analysis of System K data.
Note: The NDC spend used here is the audited NDC spend figure provided by CLG which was slightly higher than the System K figure (this has increased the proportion of NDC spend in the chart by only 0.7 per cent). The matched funding spend figures are from the System K database. One NDC did not record reliable other public spend and has been excluded from our other public spend analysis.

[36] A partial analysis of the sources included in the 'other' category shows that this includes English Partnerships, SSCF, Environmental Agency, HMR, English Heritage, Countryside Commission, Sport England, Youth Justice Board and other government departments (including CLG and the Home Office) plus many others.

[37] The financial and output monitoring software used across the NDC Programme.

Figure 3.3: Sources of other public sector funding (2008-09 prices)



Source: CEA analysis of System K data.

Table 3.1 shows the main 'other public funding' contributors. Local authorities emerged as important funders with regard to all six outcomes. It is interesting too, to see the role of European Union funding and the involvement of 'outcome specific' funders such as PCTs in relation to health, and the police with regard to crime.

Table 3.1: Main sources of other public funding

Theme	Funding organisations	Per cent of spend
Housing and the physical environment	Local authority	54
	Regional Development Agencies	9
	Registered social landlords	6
Community	European Union	19
	Local authorities	16
	Regional Development Agencies	15
	The Lottery Fund	11
Education	Local authorities	32
	Learning & Skills Councils	12
	Dept for Education & Skills	9
	Sure Start	8
Worklessness	European Union	25
	Regional Development Agencies	18
	Local authorities	15
	The Lottery Fund	10
Health	Primary Care Trusts	19
	The Lottery Fund	17
	Local authorities	13
Crime	Police	36
	Local authorities	18

Source: CEA analysis of System K data.

3.5 Private sector matched funding was highest for worklessness activities which include incubator projects, business start-up support, business grant schemes (37p per £1 of NDC funding), and for housing and the physical environment (25p), but insignificant for other outcomes.

How has funding been used?

3.6 In examining outputs achieved from the NDC Programme the evaluation work was initially constrained by the broad range of project activities recorded on System K. The broad theme-level analysis made it difficult to get a good understanding of how NDC spend had been used. To overcome this problem,

a list of 70 'project type codes' was created which grouped similar types of regeneration activity under seven broader 'Activity Categories': community; crime; education; worklessness; health; housing and the physical environment; and a cross-cutting category (largely report/studies/fees and other project management activities). Analyses which follow provide a more detailed discussion as to the distribution of NDC funding, and total expenditure (including matched funding) across these seven Activity Categories and their constituent project types.

3.7 Table 3.2 considers funding for **community activities** which, taken together, account for 21.6 per cent of all NDC funding (19.4 per cent of total funding). Looking specifically at key areas of community expenditure, new or improved community facilities have accounted for almost 10 per cent of all NDC funding.

Table 3.2: NDC spend: Community Activity Category

	per cent of project funding on each activity	
Community project types	**NDC funding**	**Total funding (all sources)**
New/improved use/access to community facility	9.7	10.3
Capacity building general	2.9	2.1
Community Development Workers/Officers	2.1	1.5
Promotion/communications/raising public awareness	1.6	1.1
Community Chest – general/youth	1.5	1.0
Youth support/services provision	1.0	0.8
Capacity building youth	0.8	0.6
Capacity building NDC governance	0.7	0.5
Improved community services/equipment	0.6	0.7
Community events/activities	0.3	0.3
Community radio	0.2	0.1
Capacity building BME	0.2	0.1
Capacity building elderly	0.07	0.05
Capacity building women	0.04	0.03
All community activities	**21.6**	**19.4**
(Spend in £'000s constant 2008-9 prices)	**(320.6)**	**(435.6)**

Source: CEA analysis of System K data.
Note: Due to rounding some columns may not add up to 100 per cent.

Table 3.3: NDC spend: Crime Activity Category

	per cent of project funding on each activity	
Crime project types	**NDC funding**	**Total funding (all sources)**
Crime prevention/safety – physical	2.4	2.0
Neighbourhood Wardens	1.8	1.3
Other neighbourhood policing	1.6	1.7
Youth diversionary projects	1.4	1.2
CCTV	1.0	1.1
Other crime and safety posts	0.9	0.9
Victim Support – other	0.5	0.5
Other crime prevention – non physical	0.3	0.3
Community Chest – crime and safety	0.2	0.5
Targeted policing	0.2	0.2
Drugs/alcohol related	0.2	0.2
Victim Support Officers	0.1	0.1
Crime and safety events	0.02	0.01
All crime activities	**10.5**	**10.0**
(Spend in £'000s constant 2008-9 prices)	**(156.0)**	**(225.2)**

Source: CEA analysis of System K data.
Note: Due to rounding some columns may not add up to 100 per cent.

3.8 Table 3.3 presents evidence for **crime** activities which account for 10.5 per cent of all NDC funding (10 per cent of total funding). Dominant types of NDC activity in this Activity Category were physical forms of crime prevention (2.4 per cent of NDC funding), neighbourhood wardens (1.8 per cent of NDC funding) and neighbourhood policing (1.6 per cent of NDC funding). Other crime posts, youth diversionary projects and CCTV projects each accounted for around 1 per cent of NDC funding across the 39 NDC schemes.

3.9 Table 3.4 tabulates activities in relation to **education,** which collectively account for 14.5 per cent of NDC funding and 14.7 per cent of total funding. Within this category, the key activity types include extra curricular activities or other activity directed at the development of school pupils, including supporting their transition from primary to secondary school which amounted to 3.5 per cent of NDC funding and 3.2 per cent of total funding. New/ improved access/use of school facilities was a further 2.4 per cent of NDC

funding, while funding for educational and related support posts accounted for another 1.9 per cent of NDC funding. Within the adult skills arena, funding for self-improvement and other learning activities of a pre-vocational nature was 1.8 per cent of NDC funding across the 39 NDC Partnerships. Table 3.4 also shows that, taken together, improvements to pre-school facilities, and other forms of childcare support, accounted for almost 2 per cent of NDC funding.

Table 3.4: NDC spend: Education Activity Category

	per cent of project funding on each activity	
Education project types	**NDC funding**	**Total funding (all sources)**
Extra-curricular activities/pupil development/ transition	3.5	3.2
New/improved access/use educational facilities – schools	2.4	3.1
Educational/support posts	1.9	1.6
Self improvement/learning activities (pre-voc)	1.8	1.6
Access to internet/ICT training/www networks	1.4	1.3
Other childcare support	0.9	1.2
New/improved access/use educational facilities – adult learning	0.8	0.7
New/improved access/use educational facilities – pre-school	0.8	0.7
Arts/dance/creative/music	0.6	0.9
Community Chest – Education	0.2	0.2
Educational enhancement – equipment	0.1	0.1
Educational trips/activities/events	0.1	0.1
All education activities	**14.5**	**14.7**
(Spend in £'000s constant 2008-9 prices)	**(215.5)**	**(330.5)**

Source: CEA analysis of System K data.
Note: Due to rounding some columns may not add up to 100 per cent.

3.10 Table 3.5 details results for **worklessness** projects which amount to around 11 per cent of NDC funding (11.7 per cent of total funding). Support for training or apprenticeships leading to an accredited qualifications, amounted to 3.7 per cent of NDC funding over the period, with job search, careers guidance and employability skills a further 2.8 per cent. Enterprise activity was also notable, with workspace and business incubator provision some 1 per cent of NDC funding and 1.5 per cent of total funding.

Table 3.5: NDC spend: Worklessness Activity Category

	per cent of project funding on each activity	
Worklessness project types	**NDC funding**	**Total funding (all sources)**
Training/apprenticeships/accredited qualifications	3.7	3.8
Job search/careers guidance/jobs skills	2.8	2.7
Workspace/incubator provision	1.0	1.5
Community Chest – training/employment/business	0.8	1.0
Business advice/support	0.6	0.7
Credit union/financial counseling/benefit advice	0.5	0.6
Business starts/self-employment – social enterprise	0.5	0.5
Worklessness posts	0.5	0.4
Business starts/self-employment – private enterprise	0.4	0.4
Worklessness events	0.05	0.03
All worklessness activities	**11.0**	**11.7**
(Spend in £'000s constant 2008-9 prices)	**(162.7)**	**(261.8)**

Source: CEA analysis of System K data.
Note: Due to rounding some columns may not add up to 100 per cent.

3.11 Table 3.6 examines expenditure on **health-related** activities. The Health Activity Category accounted for 8.4 per cent of NDC funding, and 7.6 per cent of total funding. Around 2.7 per cent of NDC funding was spent on providing new or improved health facilities, including access improvements. Other notable activities include funding for health posts, healthy living initiatives, family support initiatives, and other forms of new or improved health services, including targeted measures. Taken together these represent almost 6 per cent of all NDC expenditure across the 39 NDC Partnerships.

Table 3.6: NDC spend: Health Activity Category

	per cent of project funding on each activity	
Health project types	**NDC funding**	**Total funding (all sources)**
New/improved use/access to health facilities	2.7	2.1
Health posts	1.3	1.1
Healthy living initiatives	1.0	0.9
New/improved health services	0.8	0.8
Family support	0.8	0.9
Targeted health – other	0.7	0.8
Targeted health – drugs/alcohol-related	0.5	0.4
Targeted health – teenage/young people	0.4	0.3
Targeted health – elderly	0.2	0.2
Community Chest – health	0.1	0.1
Health events	0.006	0.004
All health activities	**8.4**	**7.6**
(Spend in £'000s constant 2008-9 prices)	**(124.9)**	**(169.8)**

Source: CEA analysis of System K data.
Note: Due to rounding some columns may not add up to 100 per cent

3.12 Table 3.7 considers spend within the **housing and the physical environment** Activity Category. This accounts for 25.8 per cent of NDC funding and 30.2 per cent of total funding. Significant NDC resources were incurred on the acquisition of land or other assets, demolitions or stock transfer activities (8.8 per cent). The construction or maintenance of homes represented a further 6.4 per cent of NDC funding. Funding for housing advice was around 1 per cent of NDC funding and a further 1 per cent of NDC funding was used to support housing or environmental posts. Significant NDC resources were also spent on physical improvements to the environment, infrastructure and key buildings (7.1 per cent of NDC funding).

Table 3.7: NDC spend: Housing and the Physical Environment Activity Category

	per cent of project funding on each activity	
Housing and physical environment project types	**NDC funding**	**Total funding (all sources)**
Land/asset acquisition/demolitions/stock transfer	8.8	10.4
Environmental improvements/infrastructure/ buildings/landscaping	7.1	7.4
Homes built/improved/maintenance	6.4	7.2
Housing/Environmental posts	1.1	1.1
Housing advice Tenant/RSLs supp/ management	1.1	3.0
Environmental enhancement e.g. litter etc.	0.6	0.6
Community Chest – housing/environment	0.3	0.3
Recycling/waste collection/management	0.2	0.2
Energy efficiency/envtl advice	0.1	0.1
Housing/Environmental events	0.04	0.04
All housing & physical env't activities	**25.8**	**30.2**
(Spend in £'000s constant 2008-9 prices)	**(382.4)**	**(678.0)**

Source: CEA analysis of System K data.
Note: Due to rounding some columns may not add up to 100 per cent.

3.13 Finally Table 3.8 shows funding on **cross-cutting** activities, which account for 8.1 per cent of NDC funding and 6.3 per cent of total funding.

Table 3.8: Cross-cutting activities

	per cent of project funding on each activity	
Cross-cutting project types	**NDC funding**	**Total funding (all sources)**
Reports/research/studies/ professional fees	6.2	5.0
Misc project management/ theme development	1.0	0.7
Other NDC posts	0.7	0.4
Community Chest – other	0.3	0.2
All cross-cutting activities	**8.1**	**6.3**
(Spend in £'000s constant 2008-9 prices)	**(120.7)**	**(141.9)**

Source: CEA analysis of System K data.
Note: Due to rounding some columns may not add up to 100 per cent.

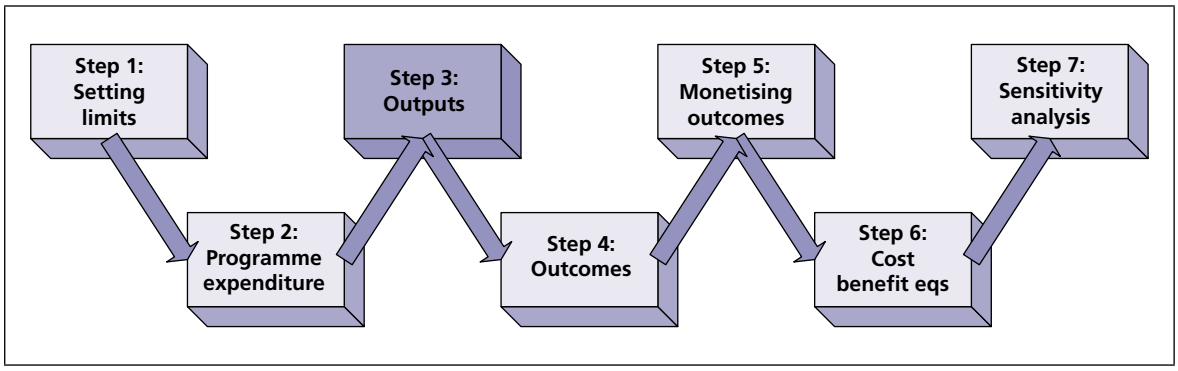
3.14 As is shown in Table 3.9, overall the housing and physical environment activity category attracted the highest proportion of NDC funding, at just over a quarter, followed by community activities at just over one fifth. This distribution is also reflected in total funding, with nearly a third going to housing and the physical environment and just under one fifth to community. The other categories have a more similar share of both NDC and total funding at around 10-15 per cent with the exception of health and cross cutting, each less than 10 per cent. The percentage breakdown shown in Table 3.9 is by Activity Category and this differs from the breakdown by outcome presented earlier in Figure 3.1.

Table 3.9: Summary of NDC spend by activity categories (£'000 in 2008-9 prices)

Activity Categories	NDC spend	Per cent	Total spend	Per cent
Housing and the Physical Environment	382.4	25.8	678.0	30.2
Community	320.6	21.6	435.6	19.4
Education	215.5	14.5	330.5	14.7
Worklessness	162.7	11.0	261.8	11.7
Crime	156.0	10.5	225.2	10.0
Health	124.9	8.4	169.8	7.6
Cross-cutting	120.7	8.1	141.9	6.3
Total NDC spend (excluding man/admin)	**1482.8**	**100.0**	**2242.8**	**100.0**

Source: CEA analysis of System K data.
Note: Due to rounding percentage columns may not add up to 100.

Step 3: An assessment of net additional outputs



3.15 The next stage of analysis is to estimate outputs generated by NDC-funded projects. NDC Partnerships were asked, where possible, to record estimates of outputs associated with the projects they funded. Appendix 2 explains how a combination of expenditure and output data from five case study NDCs has been used to estimate total 'gross' outputs for the Programme as a whole. However, it is unrealistic to suggest that all of the gross outputs recorded by NDC projects are wholly attributable to the Programme. Some would have occurred anyway, either because project activity would have happened anyway, at the same time or later, without NDC funding, or because beneficiaries were able to secure the same support elsewhere, for example obtaining employment advice from an existing agency located outside the NDC boundaries. NDC-funded activity may also have displaced activity from other regeneration projects. Moreover, some beneficiaries may have come from outside the NDC areas ('leakage').

3.16 Following the conventional evaluation approach recommended by Treasury's Green Book, and outlined in 2.11 above, adjustments have been made to gross outputs in order to identify net additional outputs. Such an assessment is vital in order to establish a plausible assessment of net outputs. As described in detail in Appendix 2, this adjustment has taken account of deadweight, leakage, displacement of activity from other projects, product market displacement and substitution effects (for business support and skills projects) and has applied a multiplier effect to employment outputs. Table 3.10 sets out an estimate of net outputs expressed per NDC area per annum.[38]

Table 3.10: Estimates of key net additional outputs per NDC area per annum

	Net additional outputs per NDC area per annum	
Output Type	**Total**	**BME**
Key community outputs		
No. community/voluntary groups supported	28.0	2.1
No. community chest type grants awarded	7.2	0.1
No. people employed in voluntary work	52.8	9.3
No. new or improved community facilities*	8.2	N/A
No. people using new or improved community facilities	239.5	16.9
Key crime outputs		
No. additional police	0.1	–
No. additional wardens	0.3	0.1
No. victims of crime supported	120.8	15.6
No. young people benefiting from youth inclusion/ diversionary projects	861.8	154.5
No. homes/businesses with improved security*	482.6	N/A
Key education outputs		
No. pupils benefiting from projects designed to improve attainment	1,603.1	327.5
No. schools physically improved*	2.7	N/A
No. adults obtaining accredited qualifications through NDC projects	58.2	9.7
Key worklessness outputs		
No. jobs created	3.1	0.4

[38] Outputs that predominantly comprise capital build or facilities are expressed as net outputs per NDC over the entire period, not per annum.

Table 3.10: Estimates of key net additional outputs per NDC area per annum *(continued)*

	Net additional outputs per NDC area per annum	
Output Type	**Total**	**BME**
No. jobs safeguarded	14.0	0.5
No. people receiving job training	93.5	26.2
No. people trained entering work	6.4	3.4
No. new childcare places provided	8.6	1.0
No. people accessing improved careers advice	498.5	50.1
No. new businesses receiving advice/supp	4.0	0.2
No. people becoming self employed	0.9	–
No. new business start ups surviving 52 weeks	3.1	0.2
No. of community enterprise start ups	0.2	–
Key health outputs		
No. new or improved health facilities*	5.7	N/A
No. people benefiting from new or improved health facilities	253.0	36.8
No. people benefiting from healthy lifestyle projects	501.3	104.6
Key housing and physical environment outputs		
No. homes built or improved*	333.7	N/A
No. buildings improved and brought back into use*	1.7	N/A
No. traffic calming schemes*	0.3	N/A

Source: Cambridge Economic Associates analysis of validated System K data for five case studies, grossed up to expenditure for the 39 NDCs and translated to net additional outputs using ratios set out in Appendix 2.
Note: With the exception of outputs marked with an asterisk, outputs are expressed per NDC per annum (i.e. divided by 39 then by 9). Note: * Outputs marked with an asterisk, which predominantly comprise capital build or facilities, are expressed as net outputs per NDC over the entire period, not per annum. N/A – not applicable.

3.17 Clearly the Programme generated a substantial array of **net additional outputs** per NDC area, per annum, between 1999-2000 and 2007-08 (net additional outputs over the period 1999-2000 to 2007-08 are given in Table A2.19 in Appendix 2). These included for:

- community: there were 28 instances of support for community/voluntary groups per NDC area per annum (9,843 for all NDC areas over the period 1999-2000 to 2007-08); instances of people using new/improved community facilities per NDC area per annum was around 240 overall (over 84,000 instances for all NDC areas over the period 1999-2000 to 2007-08)

- crime: there were over 850 instances of young people per NDC area per annum benefiting from youth diversionary projects (over 302,000 instances for all NDC areas over the period 1999-2000 to 2007-08); over 480 homes/business per NDC area had improved security over the nine year period (over 18,800 for all NDC areas over the period 1999-2000 to 2007-08)
- education: there were over 1,600 instances where pupils benefited from projects designed to improve attainment per NDC area per year (over 562,000 instances for all NDC areas over the period 1999-2000 to 2007-08); the number of instances of people obtaining accredited qualifications amounted to 58 per NDC area per year (over 20,000 instances for all NDC areas over the period 1999-2000 to 2007-08)
- worklessness: three net additional jobs were created and a further 14 net additional jobs were safeguarded per NDC area per annum (over 1,000 and just under 5,000 net additional jobs were created and safeguarded respectively for all NDC areas over the period 1999-2000 to 2007-08); the number of instances of people receiving job training per NDC area per annum amounted to around 93 overall (over 32,800 instances for all NDC areas over the period 1999-2000 to 2007-08); there were nearly 500 instances of people accessing improved careers advice (about 175,000 instances for all NDC areas over the period 1999-2000 to 2007-08)
- health: there were around six new or improved health facilities per NDC area over the period (221 for all NDC areas over the period 1999-2000 to 2007-08); overall there were instances of more than 250 people per NDC area per annum benefiting from these facility improvements (over 88,000 for all NDC areas over the period 1999-2000 to 2007-08)
- housing and physical environment: on average there were over 330 net additional homes built or improved in every NDC area (over 13,000 for all NDC areas over the period 1999-2000 to 2007-08) and almost two buildings were improved and brought back into use per NDC area (65 for all NDC areas over the period 1999-2000 to 2007-08).

Linking spend, outputs and outcomes

3.18 Largely using 'bottom-up', partnership-level, spend and output data, this chapter identifies net additional outputs arising from the Programme. However, the NDC initiative was always designed as an outcome driven ABI. The intention was to move away from too much of a concern with outputs, such as numbers houses or training places, towards an emphasis on outcomes, such as say fewer workless people or better educational attainment rates. Nevertheless, the view of the evaluation team is that it would be unwise overly to diminish the role of outputs in appreciating the scale of change occurring to these areas. Enhanced outputs such as new health, educational or community facilities in

the local neighbourhood represent one of the most important manifestations of change for many NDC residents. This scale of investment will in turn enhance the quality and depth of service delivery for residents of these 39 areas.

3.19 Reviewing the scale of net outputs (Table 3.10) also highlights the range and potential scale of 'intermediate' outcomes: positive experiences or benefits which may later lead to a measurable outcome. These include, for example, improvements to school buildings which may make schools more comfortable or attractive places to work, which might in turn help recruit or retain good teachers who eventually contribute to the attainment of NDC-resident children. Similarly, taking part in voluntary work may be a first step in improving self-esteem and gaining experience that can later lead to paid work.

3.20 Later chapters of this report use 'top-down' Programme-wide household survey data to identify the impacts and benefits flowing from the Programme. It is appropriate therefore here to explore linkages between NDC spend, outputs, and outcomes. This chapter provides an overview of Programme spend and associated outputs. But to what extent do these 'lead to' the outcomes identified in succeeding chapters? This is not an easy question to answer for three reasons.

3.21 First, as is developed in Volume 5[39] of this final suite of reports, there is no evidence to suggest that spend within any outcome is associated with change in that theme (2.23). However, spend in one outcome is associated with change in others, and in general these are positive associations. For example spending more on housing and the physical environment is associated with positive change in worklessness and crime (Volume 5, 2.24). Interestingly, there is also evidence for negative associations between spend in one outcome area, education, and change in others. So in brief it cannot be assumed that spend in one outcome area will necessarily lead to change in that theme, although it may be associated – usually positively-with change in other outcomes.

3.22 Second, there is a strong inter-connectedness across outcomes. Using individual-level panel data, analyses explored in Volume 5 (3.41) suggest that an individual who sees change in relation to, especially, place-related outcomes will, on average, also see change in other outcomes. It seems reasonable to assume therefore that outputs ostensibly falling within the remit of one outcome, might well help change in relation to others. One example of this process impacts directly on questions central to this report. As is developed in the next chapter, NDC areas showed a net positive impact in relation to improved mental health. But it seems improbable that the primary reason for this is because NDC partnerships have majored on mental health initiatives. It is more likely that this positive net impact is due to the effects of other health

[39] CLG (2010) Exploring and explaining change in regeneration schemes: Evidence from the NDC Programme.

and place-based interventions on individual-level mental health (see Volume 5 Figure 3.8). There is not a linear relationship between interventions associated with one outcome and change in that outcome. Outputs may well generate positive impacts across a range of outcomes.

3.23 Third, as is also explored in Volume 5 (Chapter 2), it is important to emphasise too, that evidence available to the evaluation only explains some of the variation in change across these 39 areas. And where factors do emerge as significant, some of these reflect dynamics and processes that are not within the sphere of influence of any ABI. Outcome change thus reflects a range of known and unknown processes and not all of the former fall within the remit of NDC partnerships.

3.24 Reflecting on these three factors, it would clearly be inappropriate to assume a simple relationship from spend to outputs to outcomes. Outcomes change for a range of reasons of which patterns of spend and associated outputs is but one. However, one final piece of evidence in relation to NDC interventions and associated outcomes should be flagged up here.

3.25 Assessments of change outlined in this report use cross-sectional area-based data. In essence change is identified by looking at all of the evidence across the 39 areas at four periods of time: 2002, 2004, 2006 and 2008. However, the evaluation is also able to assess change for individuals who stayed in one of these areas for at least two years and who collectively constitute the longitudinal panel (see 2.16). Analyses of that source of change data is developed in Chapter 3 of Volume 5. The longitudinal element of the household survey provided the opportunity to test whether NDC residents who had benefited from specific NDC interventions had better outcomes over time[40] (full details of the analytical methods and results can be found elsewhere).[41] This analysis found consistent evidence of significant differences emerging between change for those benefiting, as opposed to not benefiting from these projects in that two year period 2002-04.[42] These positive changes are not always identified through top-down surveys because people-related interventions in particular benefit relatively small numbers of people. Nevertheless, this evidence is especially significant because it establishes positive associations between, on the one hand, NDC interventions and, on the other, individual-level change.

[40] For the 2004 household survey, the evaluation team liaised with all 39 partnerships to draw up a shortlist of a maximum of four named, well known, local projects. All respondents to the 2004 household survey were asked whether or not they, or anyone in their household, had 'directly benefited from, used or attended' any of these specific projects. In total 145 projects were analysed more than 80 of which had received funding of at least £500,000 by 2006.

[41] CLG (2009) Four years of change? Understanding the experiences of the 2002-2006 New Deal for Communities Panel. http://extra.shu.ac.uk/ndc/downloads/reports/Four%20years%20of%20change%20main%20report.pdf

[42] To give one example. When compared with those that had not benefited, respondents benefiting from an employment project were statistically significantly more likely to make a transition from not being in employment at 2002, to being in employment at 2004.

A concluding comment

3.26 Summing up across this evidence, it is not possible to say that spend and outputs necessarily lead directly and predictably to outcome change which can be identified and measured within the framework of this evaluation. But it can reasonably be argued that the wide range of projects funded by NDC partnerships will have collectively impacted on outcome change in these 39 areas, even if this occurs in complex, and not entirely predictable, ways. The next chapter identifies the net additional outcomes associated with NDC spend and outputs.

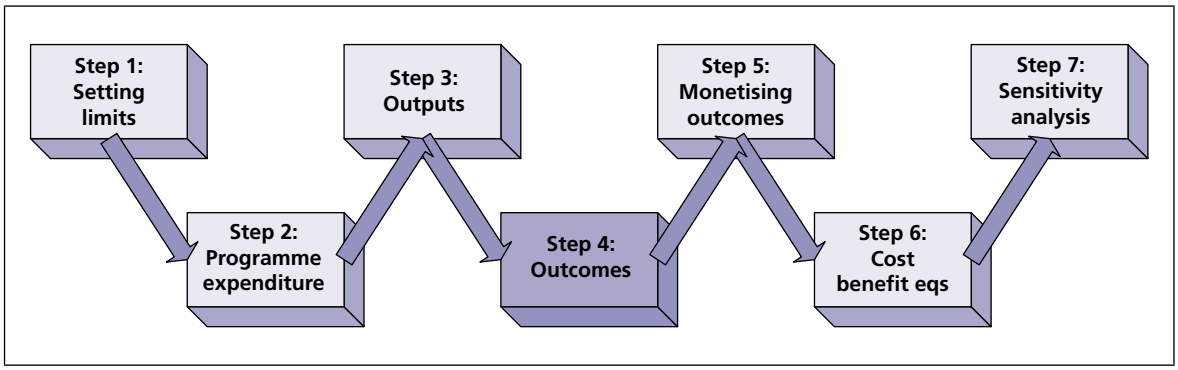
Chapter 4

Identifying the net additional outcomes of the NDC Programme

Introduction

4.1 Much of the evidence developed in the previous chapter is based on an analysis of essentially 'bottom up' data, including findings from almost 200 project reviews and validated outputs from five case study New Deal for Communities (NDC) areas. In some previous area-based initiatives (ABI) evaluations there has been no alternative other than to 'gross up' this evidence in order to provide programme-wide assessment of outcome change.[43] Here however, as is developed in Chapter Two (2.3), Programme-wide 'top-down' outcome change data is also available, mainly from four household surveys of residents in all 39 NDC areas. Using such evidence, this chapter identifies the total net additional local outcomes of the NDC Programme.[44]

Step 4: Identifying net additional outcomes



4.2 Figure 2.1 and associated commentary provide an overview of the conceptual framework through which impact is to be assessed. Net additional outcomes identified in this chapter have been computed from gross direct outcomes in a slightly different manner to that used in deriving net additional outputs, laid out in the previous chapter. This is in part due to the nature of the evidence used in this chapter: cross-sectional area-based data. But it is also because of the availability of data for the comparator areas which has been used to benchmark change across NDC areas in order to calculate net additional outcomes. Using parameters set out in Figure 2.1, the following protocols have been adopted in order to assess net additional outcomes:

[43] University of Cambridge, Department of Land Economy (2009) The Single Regeneration Budget: Final Evaluation.

[44] In subsequent text these are referred to as net additional outcomes.

- leakage; analysis does not include leaked benefits since the household surveys are based solely on responses from residents in NDC or comparator areas; in paragraph 6.9 consideration is given to the likely scale of leakage of benefits from NDC areas
- displacement: has been accounted for by using aggregate-level data to estimate outcomes; measured outcomes are the net product of all outcome change across respective areas; 6.10 considers work undertaken by the national evaluation on displacement effects of NDC crime interventions on surrounding localities[45]
- substitution: it is not possible to fully identify the extent of outcome change due to 'substituted' NDC interventions; however, the use of comparator data to benchmark NDC outcome change should account for substitution
- multiplier effects: evidence from a longitudinal sample of NDC residents, has found statistical evidence of associations across outcomes (Volume 5[46], 3.41); since NDC impacts are obtained from top-down survey data, multiplier effects are captured within any identifiable net benefits; in effect outcome change is a combination of change that might have occurred anyway, change as a result of targeted NDC projects on that outcome, and change as a result of NDC projects targeted on 'other' outcomes
- additionality (deadweight): is achieved by benchmarking change in NDC areas with that seen in similarly deprived comparator areas; the underpinning principle here is that had the Programme not been implemented, the 39 NDC areas would have changed at approximately the same rate as the comparator areas.

4.3 Table 4.1 identifies net additional outcome percentage point change for each of 36 core indicators across four periods of time: the entire six year period 2002 to 2008 and for each of its three constituent two-year periods: 2002-04, 2004-06, and 2006-08. A positive change represents an improvement, negative change a worsening, of the position of NDC areas when assessed against comparator areas. There are some 30 statistically significant changes[47] across all of these time periods, of which all but six show a positive net additional NDC effect. The key headline to stress is that in general these **39 areas have seen more positive change than that occurring in similarly deprived comparator areas.**

[45] CLG (2008) Displacement of crime or diffusion of benefit: evidence from the New Deal for Communities Programme.

[46] CLG (2010) Exploring and explaining change in regeneration schemes: Evidence from the NDC Programme.

[47] Significance testing has used a z-test for proportions to identify significant difference in change at a 0.05 level. See CLG (2010) New Deal for Communities Evaluation: Technical Reports: para 4.3.1 for a note on statistical significance. Significance testing is not possible in the case of administrative indicators: key stage 2, key stage 3, key stage 4, work-limiting illness rate and unemployment rate. However, a change of 2 percentage points has been taken to represent 'meaningful change' and hence included within lists of statistically significant variables and used in calculations of monetised net additional outcomes.

4.4 Statistically significant change is important because only outcomes showing this for at least one period in time, are used in deducing the monetisable net additional outcomes for the NDC Programme. It is only in these instances where it can be said there is sufficient evidence to indicate that the difference in change between NDC and comparator areas, has not occurred by chance: a NDC net additional impact can be identified. For example, between 2002 and 2008 the difference between NDC and comparator areas change in the percentage of working age residents in employment was an additional 2 per cent of NDC residents in employment. However, this difference is not statistically significant at the 0.05 level. This means that there is not enough evidence to establish whether this difference in change is due to the NDC Programme or has appeared due to chance arising from sampling. If another sample of NDC and comparator area working age residents had been used, then it is possible no net additional impact would have been identified.

4.5 Three aspects of change outlined in Table 4.1. merit particular comment. First, as has been alluded to throughout these final reports (see for example Volume 5[48], 2.58), there is consistent evidence showing **more net additional positive change with regard to place-, rather than people**-, related outcomes. 20 of the 30 statistically significant relationships reflect change with regard to the three place-related outcomes of crime, community and housing and the physical environment, and all but one of these shows a positive net NDC effect. This is true for only five of the ten statistically significant relationships with regard to people-related outcomes. Volume 5 (4.6) addresses in more detail the question of why more change has tended to occur in relation to place, rather than people. But in brief, place-related interventions impact on more people, whose positive change, say, with regard to their attitudes to the local area, will tend to be identified through household survey data. People-related interventions, on the other hand, impact on fewer people, and for a positive outcome to occur may require a substantial shift, for instance from being, to not being, workless.

4.6 Second, **more net additional positive change occurred in the 2002-04 period** than in succeeding years. There were eight net positive changes between 2002 and 2004, but only three, and then two, for the later two-year periods. It may simply be that, because of the deprived nature of individuals in the 39 NDC areas, there was considerable 'headroom' within which to make substantial early positive change. However, this rate of change could not be sustained through time.

[48] CLG (2010) Exploring and explaining changes in regeneration schemes: Evidence from the NDC Programme.

4.7 Third, there are **clear variations in net change across the six outcomes**. These are flagged up here in brief. More detail can be found in Volumes 3[49] and 4[50] of this final suite of reports. In broad terms:

- Partnerships have seen big changes in educational attainment but this has rarely been over and above that seen overall for deprived areas;[51] the complexities of intervening in this outcome are set out in Volume 5[52] (2.60) of this suite of final reports which identifies negative associations between levels of educational spend and change in other outcomes[53]
- there is no evidence for statistically significant positive net additional change in relation to **worklessness**;[54] case-study evidence[55] points to NDC partnerships implementing a rich array of local projects; however, such interventions are associated with only small numbers of people making a positive outcome change, such as moving into employment; in any event the positive effects of such individual-level transitions tend to be minor in relation to labour market trends occurring at local authority district, and national, levels
- more statistically positive net change emerges in relation to **health** than for education or worklessness; much of this relates to improvements in mental health; it is interesting to note here associations between mental health and place-related outcomes (See Volume 5, Figure 3.8): individuals who see positive change in mental health are also likely, on average, to see improvements with regard to place-related outcomes as well
- net positive improvements in relation to **crime** encompass being a victim of crime and a 'lawlessness and dereliction' index which measures perceptions of a number of lower-level crimes and environmental standards; interestingly, there are no net positive changes for fear of crime: perhaps the emphasis which many partnerships have placed on tackling crime has worked to alert residents to this very issue
- net positive improvements in relation to **housing and the physical environment** reflect attitudes to the area and the local environment; this may well be because relatively large numbers of people see and 'benefit' from say, environmental improvement schemes; however, there is little as yet to suggest changes in attitudes towards accommodation, and limited change in relation to wanting to move may reflect a number of processes:

[49] CLG (2010) Making deprived areas better places to live: Evidence from the NDC Programme.

[50] CLG (2010) Improving outcomes for people in deprived neighbourhoods: Evidence from the NDC Programme.

[51] Using alternative techniques, other analyses are not able to identify significant differences between pupils in NDC areas and in other deprived areas. CLG (2009) Raising educational attainment in deprived areas; the challenges of geography and residential mobility for area-based initiatives; evidence from the New Deal for Communities Programme.

[52] CLG (2010) Exploring and explaining change in regeneration schemes: Evidence from the NDC Programme.

[53] The outcome specific report on education explores problems experienced in implementing educational interventions at the local level: CLG 2010: EDUC REF

[54] While the differences in unemployment and work limiting illness rates do in fact represent 'real' impacts, the differences are small and have not met the 'meaningful' criteria set out in footnote 40 and are therefore not included in monetised net additional outcomes calculations.

[55] CLG (2009) Understanding and Tackling Worklessness Volume 2: Neighbourhood Level Problems, Interventions, and Outcomes: Evidence from the New Deal for Communities Programme. http://extra.shu.ac.uk/ndc/downloads/reports/Understanding%20and%20takling%20worklessness%20volume%202.pdf

  - these are still deprived areas, from which some residents may wish to move
  - the full benefits of improvements to these areas have not yet become apparent
  - people move for a number of reasons, including a desire to access alternative types of housing at different stages in the life-cycle.
- finally, net positive benefits in relation to the **community** dimension tend to reflect strongly positive attitudes towards the local NDC area[56], and at least in the early years of the Programme, a sense that neighbours were looking out for each other; but it is perhaps surprising to see little change with regard to indicators such as, people thinking they can influence local decisions or feeling part of the community; perhaps lack of change here reflects factors such as the originally limited scale of community infrastructure, intra-community strife fuelled by a sense that some 'areas' receive more than others, and frustration at the time it can take to implement major change in these localities; this issue is considered in more detail in Volume 2[57] of this final suite of reports (see Chapter 4).

Table 4.1: Net Outcomes of the NDC Programme: 36 core indicators: percentage point change (positive change indicates improvement; negative a worsening)

	NDC net additional outcomes			
	2002 to 2008	**2002 to 2004**	**2004 to 2006**	**2006 to 2008**
Education				
Key Stage 2 English, level 4	**–2**	1	1	**–4**
Key Stage 3 English, level 5	0	–1	**–2**	**3**
Key Stage 4 five or more GCSEs at A*-C	–2	0	–1	–1
No qualifications (a)	1	0	3	–1
Taken part in educ./training in the past year (b)	**4**	3	–1	3
Need to improve basic skills	–2	–1	–1	0
Worklessness				
Unemployment rate (a)	0	0	0	0
Work limiting illness rate (a)	0	0	0	0
In employment (a)	2	2	–1	2
Gross household income below £200 per week	1	1	1	–1
Receive benefits	0	–3	2	1
Workless household (c)	1	2	**–3**	2

[56] It is not possible to benchmark two of the community outcome indicators as they are NDC specific .

[57] CLG (2010) Involving local people in regeneration: Evidence from the NDC Programme.

Table 4.1: Net Outcomes of the NDC Programme: 36 core indicators: percentage point change (positive change indicates improvement; negative a worsening) *(continued)*

	NDC net additional outcomes			
	2002 to 2008	**2002 to 2004**	**2004 to 2006**	**2006 to 2008**
Health				
Do no exercise for 20 minutes or more	–1	2	–1	–1
Smoke cigarettes	2	1	0	1
Feel own health not good	1	0	1	0
SF36 mental health index, high score	**7**	**4**	1	2
Health somewhat/much worse than one year ago	**3**	0	2	1
Very/fairly satisfied with family doctor/GP (d)	–1	0	–1	0
Crime				
Feel a bit/very unsafe after dark	3	2	–1	2
Been a victim of burglary in last year	1	1	0	0
Been a victim of criminal damage in last year	**2**	1	0	1
Been a victim of any crime in last year	**4**	2	1	1
Lawlessness and dereliction index, high score	**9**	**6**	1	1
Fear of crime index, high score	–1	0	–1	0
Housing and the physical environment				
Trapped	1	1	1	–1
Very/fairly satisfied with area	**6**	**5**	2	–1
Want to move	–1	0	1	–3
Very/fairly satisfied with accommodation	0	–1	0	1

Table 4.1: Net Outcomes of the NDC Programme: 36 core indicators: percentage point change (positive change indicates improvement; negative a worsening) *(continued)*

	NDC net additional outcomes			
	2002 to 2008	**2002 to 2004**	**2004 to 2006**	**2006 to 2008**
Area got much/slightly better in past two years (e)	**7**	**5**	**4**	–2
Problems with environment index, high score	**3**	**3**	–1	1
Community				
Feel part of the community a great deal/a fair amount	–2	–1	0	0
Neighbours look out for each other	1	**5**	0	**–4**
NDC improved area a great deal/fair amount (f)	**27**	**18**	**6**	**3**
Quality of life very/fairly good	–1	–1	0	–1
Can influence decisions that affect local area	0	1	–1	0
Involved in NDC activity (f)	**6**	**3**	**3**	0

Source: Ipsos MORI NDC Household Survey; SDRC
Base: All; (a) All working age respondents; (b) All working age not currently in full time education; (c) All working age households; (d) All seen GP in last year; (e) All lived in area two or more years (f) All heard of local NDC; Bold indicates significant net outcomes at a 0.05 level (Z test); or greater than 2 percentage point difference in change for administrative indicators; Change in NDC improved area a great deal/fair amount (heard) and Involved in NDC activity (heard) are not benchmarked against comparators

4.8 As is discussed in 4.3, only those core indicators where there is evidence of a **statistically significant** difference between the rates of change in NDC, when assessed against comparator, areas for at least one period of time are included in the monetisation of net additional outcomes, a theme explored in the next chapter. Evidence from Table 4.1 shows that the following indicators meet this criteria:

- key stage 2 English, level 4
- key stage 3 English, level 5
- key stage 4 five GCSEs at A* to C
- taken part in education or training in the past year
- workless household

- SF 36 mental health index, high score
- health somewhat/much worse than a year ago
- been a victim of criminal damage in the last year
- been a victim of any crime in the last year
- lawlessness and dereliction index, high score
- very/fairly satisfied with area
- area got much/slightly better in the past two years
- problems with environment index, high score
- neighbours look out for each other
- NDC improved the area a great deal/a fair amount and
- involved in NDC activity.

4.9 Having identified net additional outcome change through time for each of the 36 core indicators, the next step is to translate the percentage changes outlined in Table 4.1 into numbers of NDC residents (Table 4.2). This equation is based on an **NDC 16+ population of 300,500**. It is intriguing here to see the absolute figures involved. More than 65,000 extra NDC residents think the NDC Programme has improved the area, for instance over the entire 2002 to 2008 period. Whereas most of the larger totals relate to place-, not people-, related outcomes, there are also substantial totals with regard to some health indicators, notably improvements in mental health (19,900), and also for those taking part in education and training in the previous year (9,800). These absolute totals have implications for financial benefits arising from the Programme: **NDC interventions have impacted on large numbers of residents**.

Table 4.2: Net Outcomes of the NDC Programme: 36 core indicators: estimated net number of persons reporting improvement

	NDC net additional outcomes: number			
	2002 to 2008	**2002 to 2004**	**2004 to 2006**	**2006 to 2008**
Education				
Key Stage 2 English, level 4	**–100**	–100	0	**–300**
Key Stage 3 English, level 5	–500	–200	**–100**	**200**
Key Stage 4 five or more GCSEs at A*-C	**–300**	–100	0	–100
No qualifications (a)	3,500	800	6,300	–3,600
Taken part in educ./training in the past year (b)	**9,800**	6,500	–3,200	6,400
Need to improve basic skills	–5,800	–1,900	–2,700	–1,200
Worklessness				
Unemployment rate (a)	0	500	–800	200
Work limiting illness rate (a)	600	300	–300	600
In employment (a)	5,500	4,100	–2,800	4,200
Gross household income below £200 per week	2,000	3,100	2,400	–3,500
Receive benefits	0	–7,700	4,500	3,100
Workless household (c)	1,300	2,500	**–3,700**	2,500
Health				
Do no exercise for 20 minutes or more	–3,500	4,800	–4,300	–3,900
Smoke cigarettes	6,100	2,500	–700	4,300
Feel own health not good	2,200	–300	2,900	–400
SF36 mental health index, high score	**19,900**	**11,100**	3,700	5,100
Health somewhat/much worse than one year ago	**8,300**	–400	5,100	3,600
Very/fairly satisfied with family doctor/GP (d)	–3,300	–100	–3,000	–200
Crime				
Feel a bit/very unsafe after dark	9,900	6,900	–2,800	5,800
Been a victim of burglary in last year	2,700	2,800	300	–500

Table 4.2: Net Outcomes of the NDC Programme: 36 core indicators: estimated net number of persons reporting improvement *(continued)*

	NDC net additional outcomes: number			
	2002 to 2008	**2002 to 2004**	**2004 to 2006**	**2006 to 2008**
Been a victim of criminal damage in last year	**6,400**	4,500	100	1,900
Been a victim of any crime in last year	**10,700**	6,600	2,100	2,000
Lawlessness and dereliction index, high score	**26,700**	**18,900**	4,500	3,300
Fear of crime index, high score	–2,500	800	–3,900	600
Housing and the physical environment				
Trapped	2,100	2,400	2,700	–3,000
Very/fairly satisfied with area	**16,800**	**15,600**	5,600	–4,300
Want to move	–3,900	100	3,500	–7,600
Very/fairly satisfied with accommodation	300	–2,200	700	1,800
Area got much/slightly better in past two years (e)	**16,300**	**11,800**	**9,600**	–5,100
Problems with environment index, high score	**8,600**	**8,600**	–1,700	1,800
Community				
Feel part of the community a great deal/a fair amount	–4,800	–4,200	600	–1,200
Neighbours look out for each other	1,500	**13,600**	400	**–12,500**
NDC improved area a great deal/a fair amount (f)	**65,300**	**42,600**	**15,300**	**7,400**
Quality of life very/fairly good	–4,500	–2,400	–200	–1,900
Can influence decisions that affect local area	–1,100	2,500	–2,800	–800
Involved in NDC activity(f)	**13,500**	**7,300**	**7,300**	–1,100

Source: Ipsos MORI NDC Household Survey; SDRC; ONS
NB: Total population of NDC is taken to be 300,500
Base: All; (a) All working age respondents; (b) All working age not currently in full time education; (c) All working age households; (d) All seen GP in last year; (e) All lived in area two or more years (f) All heard of local NDC; Bold indicates significant net outcomes at a 0.05 level (Z test); or greater than 2 percentage point difference in change for administrative indicators; Shading indicates significant change over at least one time period; Change in NDC improved area a great deal/fair amount (heard) and Involved in NDC activity (heard) are not benchmarked against comparators; Estimated numbers of residents reporting an improvement have been rounded to the nearest 100 residents

A concluding comment

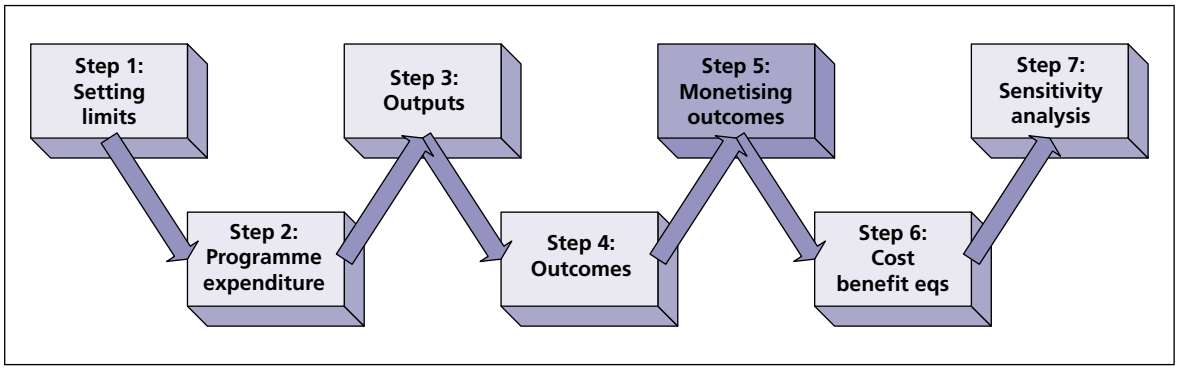
4.10 The main purpose of this chapter is to identify net outcome change across the Programme. This exercise involves assessing change across the 39 areas as a whole against that occurring in similarly deprived comparator areas over four periods of time. There are 30 instances of a statistically significant difference between what occurred in NDC areas when assessed against the comparator areas. In all but 6 of these instances, NDC areas saw more positive change. More of this change related to place-, rather than people-, related outcomes, and more positive change occurred in the earlier years of the Programme. These percentage differences have been translated into total numbers of NDC residents involved. The next chapter explores mechanisms through which to translate these net beneficiaries into monetary figures.

Chapter 5

Programme costs and benefits

5.1 This chapter develops the overall approach by monetising the net additional outcomes of the Programme identified in the previous chapter (Step 5), and then comparing these against the costs of the Programme (Step 6).

Step 5: Monetising net additional impact on outcomes



5.2 The national evaluation team has explored a number of possible approaches through which to obtain unit monetary values for each of the 36 core indicators, these include:

- shadow pricing: using statistical relationships between indicators, quality of life and income resources
- unit costs or benefits gleaned from a review of other studies; this includes benefit transfers
- and a methodology based hedonic pricing, results from which are outlined in Appendix 1.

5.3 It should be stressed at the outset, that even when the first two methods are taken in combination there remain 14 instances where it has not been possible to provide monetary estimates for core indicators. The implications of this are discussed in 6.2-6.11.

Shadow pricing

5.4 Shadow pricing represents the main mechanism through which the evaluation team has estimated unit values for core indicators. It should be emphasised that this is pioneering work. The evaluation team is not aware of this approach being used in any other previous area-based initiatives (ABI) evaluation. However, one conclusion to draw from findings outlined below, is that shadow pricing may prove to be an especially valuable methodology when evaluating regeneration initiatives. This is because it helps to monetise benefits relating to 'place', which if this ABI is any guide, are likely to represent some of the most important net benefits arising from many regeneration programmes.

5.5 Shadow pricing has been adopted in this evaluation for both pragmatic and technical reasons:

- this method is able to produce unit monetary value estimates for core indicator outcomes, which are based on revealed observations rather than stated preferences
- unit monetary values are computed using data from New Deal for Communities (NDC) residents; national estimates may not be appropriate for NDC residents because, for example, they are faced with a higher than average level of deprivation
- the wealth of data available to the evaluation team makes this approach technically feasible
- valuing outcomes through their impact on individual-level quality of life is consistent with a key objective of the Programme: to improve the lives of those living within the 39 NDC areas.

5.6 Shadow pricing method determines the compensating change in income that would produce an equivalent change in quality of life as would change in a given outcome. So for example, what extra income would increase an individual's quality of life by an equivalent amount to the improvement in quality of life from making a transition from, not being satisfied, to being satisfied, with their local area?

5.7 Using pooled data from the four NDC household surveys,[58] multiple regression models[59] have been constructed to estimate a respondent's quality of life, given a range of known socio-demographic characteristics; their reported real

[58] This gives a total sample size of 52,819 observations for the purposes of analysis.

[59] Three shadow pricing regression models have been run to determine the price of different combinations of outcome variables.

equivalised household income,[60] based on a single person reference case;[61] and a range of outcomes upon which the NDC Programme might have impacted. Formally this may be presented as:

$$Q = \alpha + \beta_Y Y + \beta_1 X_1 + \ldots + \beta_n X_n + \varepsilon \quad (1)$$

5.8 Where Q is a measure of quality of life, α is a constant, Y is a measure of individual income, X_n are dummy variables for a range of outcomes and socio-demographic characteristics[62] that are known to influence quality of life, and ε is an error term. The estimated coefficients from this equation can be used to estimate the increase, or decrease, in quality of life from a given change in each outcome, while holding all other things constant. For example, a transition between not feeling satisfied, to feeling satisfied, with the local area, will have an average estimated impact of increasing an individual's quality of life by just over half a point on the quality of life scale, holding all other thing constant. Using this equation, it is then possible to estimate the increment to individual income that would produce an equivalent expected increase in an individual's quality of life.

5.9 The following **assumptions and caveats** need to be acknowledged:

- quality of life has been measured on a 5 point scale using responses to the question 'if we were to define "quality of life" as how you feel overall about your life, including your standard of living, your surroundings, friendships and how you feel day-to-day, how would you rate your quality of life?'; possible responses are 'very good', 'fairly good', 'neither good nor bad', 'fairly bad', 'very bad' and 'don't know'
- household income is taken from a 9 band question; this has been transformed into a continuous variable by equivalising household income according to household composition, using the mid-point for each band
- as the highest household income band in the survey is open (£36,000 and higher), an expected pre-equivalised income of £39,000 has been used; the proportion of households in this band ranged from 4 per cent in 2002, to 6 per cent in 2008
- unit benefits represent per annum real equivalised household income, based on a single person reference case that would equate to the changing quality of life in relation to each indicator.

[60] Equivalised household income is household's income adjusted a for size and composition so that we can look at the incomes of all households on a comparable basis in terms the material living standards they can afford for each household member.

[61] For simplicity, real household equivalised income based on a single person reference case is referred to in the following text as individual income.

[62] Phi coefficients and tetrachoric correlations have been used to check for Multicollinearity (high levels of correlation) between outcomes.

5.10 Table 5.1 lists derived unit benefits arising from this methodology.[63] So, for instance, in the case of a transition from not satisfied, to satisfied, with the area the expected increase in quality of life produced by this transition is equivalent to an increase in individual income of £59,600 per annum. The magnitude of this value represents the large positive influence that feeling satisfied with the local area has on an individual's quality of life. Having such feelings are likely to reflect a wide range of place-related issues, such as safety, the quality and availability of local facilities, and having friendly neighbours, variables which themselves may have substantial monetary values although these are non-market goods. This finding is further reinforced by evidence from an exploration of hedonic pricing (Appendix 1) which found evidence that people are willing to pay a premium, in house prices, to live in areas with which people express greater satisfaction.

5.11 It should be stressed that this is an **experimental methodology**. To the best of our knowledge, little, if any, work of this nature has taken place to estimate the economic value of indicators relevant to area-based regeneration. This means that there are only limited comparative estimates with which to assess this evidence. However, although figures outlined in Table 5.1 may seem high, unit benefits are in line with findings from those other studies which are available. For instance, one study[64] using data for 2003, estimated the value of feeling 'very' or 'fairly' unsafe walking alone in the local area after dark to be approximately £9,400[65] in household income. The equivalent NDC estimate for this is lower, even before accounting for changes in money values. Another study[66] finds that an increase in the level of social involvements is worth up to an extra £85,000 per year in per capita household income. Although it is not possible to make direct comparisons between this figure and change in NDC areas, it is interesting to see the scale of apparent benefits arising from social interactions. Derived estimates of unit benefits outlined in Table 5.1 are not out of line with evidence from elsewhere.

[63] The regression models from which these have been estimate are contained in Appendix 4.

[64] Moore, S. (2006) The value of reducing fear: an analysis using the European Social Survey, *Applied Economics*, 38(1), 115-117.

[65] The study estimated the value at €13,538 which is approximately £9,400 at 2003 exchange rates.

[66] Powdthavee, N. (2008) Putting a price tag on friends, relatives and neighbours: Using surveys of life satisfaction to value social relationships, *The Journal of Socio-Economics*, 37, 1459-1480.

Table 5.1: Derived unit benefits: shadow pricing	
	Unit benefits pa (£)
Education	
No qualifications	2,300
Taken part in educ./training in the past year	2,300
Worklessness and finance	
In employment	4,900
Health	
Do no exercise for 20 minutes or more	–15,800
Smoke cigarettes	–5,900
Feel own health not good	–30,600
SF36 mental health index, high score	33,500
Very/fairly satisfied with family doctor/GP	5,400
Crime	
Feel a bit/very unsafe after dark	–6,100
Been a victim of any crime in last year	–9,400
Lawlessness and dereliction index, high score	–9,800
Housing and the physical environment	
Trapped	–12,500
Very/fairly satisfied with area	59,600
Want to move	–23,600
Very/fairly satisfied with accommodation	41,000
Problems with environment index, high score	–5,000
Community	
Feel part of the community a great deal/a fair amount	14,900
Neighbours look out for each other	11,600
Can influence decisions that affect local area	9,000

Source: Ipsos MORI NDC Household Survey

Review of other studies

5.12 Table 5.2 outlines unit benefits for core indicators drawn from other studies. These are employed as appropriate in analyses developed in this evaluation.

Table 5.2: Unit benefits: other studies	
	Unit benefit (£)
Education	
Key Stage 4 five or more GCSEs at A*-C (a)	3,200
Worklessness	
Unemployment (b)	–16,800
Work limiting illness (b)	–12,700
Crime	
Violent crime (c)	–5,800
Burglary (c)	–3,600
Theft (c)	–1,400
Criminal damage (c)	–1,000

Source: (a) LSC (2007) Young people set for £2,000 GCSE bounty, publication number 461 (b) Amos, D. Analysing the costs of labour market exclusion within deprived areas: background, methodology and results (c) Bland, S. and Price, R. (2005) The economic and social costs of crime against individuals and households 2003/04, Home Office Online Report 30/05; 2008/09 prices.

5.13 Table 5.3 tabulates **preferred unit benefits drawn from both methods** outlined above: shadow pricing, combined with evidence from other studies. These unit benefits are used to assess financial benefits flowing from the Programme.[67]

Table 5.3: Summary: preferred unit benefits	
	Unit benefits pa (£)
Education	
Key Stage 4 five or more GCSEs at A*-C (a)	3,200*
No qualifications	2,300
Taken part in educ./training in the past year	2,300
Worklessness and finance	
Unemployment (b)	–16,800*
Work limiting illness (b)	–12,700*
In employment	4,900
Health	
Do no exercise for 20 minutes or more	–15,800
Smoke cigarettes	–5,900
Feel own health not good	–30,600
SF36 mental health index, high score	33,500
Very/fairly satisfied with family doctor/GP	5,400
Crime	

[67] It should be noted that these unit benefits have been estimated using a variety of methods. In particular the two worklessness indicators combine exchequer saving with marginal increase in net income. Since these are not directly compatible with estimates from the shadow pricing, caution should be used when summing across these different forms of monetary values.

Table 5.3: Summary: preferred unit benefits *(continued)*	
	Unit benefits pa (£)
Feel a bit/very unsafe after dark	-6,100
Been a victim of any crime in last year	-9,400
Lawlessness and dereliction index, high score	-9,800
Housing and the physical environment	
Trapped	-12,500
Very/fairly satisfied with area	59,600
Want to move	-23,600
Very/fairly satisfied with accommodation	41,000
Problems with environment index, high score	-5,000
Community	
Feel part of the community a great deal/a fair amount	14,900
Neighbours look out for each other	11,600
Can influence decisions that affect local area	9,000

Source: Ipsos MORI NDC Household Survey; (a) LSC (2007) Young people set for £2,000 GCSE bounty, publication number 461 (b) Amos. D, Analysing the costs of labour market exclusion within deprived areas: background, methodology and results, CLG
2008/09 prices
*indicates unit benefits taken from other studies, all other unit benefits are taken from shadow pricing

Monetising net impact: Analytical options

5.14 The previous section provided unit benefits for a range of outcomes. This section uses resultant figures to calculate Programme-wide assessments of monetised net additional outcomes. In essence the unit benefits outlined in Table 5.3 are applied to the total numbers of people (Table 4.2) where there is evidence for statistically significant outcome change.

5.15 However, there is a debate as to which 'configuration' of outcomes should be used to establish Programme-wide benefits. Two options are presented below. Before outlining the nature of each, three issues should be flagged up common to both. First, with the exception of Key Stage 4, all outcomes have been monetised using shadow price values. Second, monetising benefits has been undertaken on an annual basis, since they have all been valued using annual income. Third, for a range of reasons, some outcomes are not monetised: Key stage 2, Key stage 3, workless households, health worse than a year ago, NDC improved the area, and involved in NDC activities. This issue of impacts not being monetised cuts across various components to this overall process and is considered as a separate theme in the next chapter.

5.16 These issues impact equally on both options outlined in Table 5.4. But these two options differ in one respect: **the potential double counting of place-based outcomes**. Clearly it is important to avoid any double-counting of

benefits. Sometimes this is a relatively straightforward exercise. For instance, 'been a victim of criminal damage in the past year', double counts for 'been a victim of any crime in last year' and is therefore not included in either option. But there is a larger issue surrounding two overarching place-related indicators: 'area improved over the past two years' and 'satisfaction' with the area'. Both double count other place-related indicators and also each other. Therefore, in Option 1 'satisfaction with the area' represents net additional outcomes for all other place-related indicators. For Option 2 'area improved over the past two years' and 'satisfaction with the area' are both excluded and other place-related indicators included. 'Satisfaction with the area' is a better indicator of change than is thinking 'the area improved over the last two years', because it measures levels and not change. Indicators which measure levels are better for assessing the degree to which outcomes have been met.

5.17 Option 1 (Table 5.4) uses all statistically significant people-related (education, worklessness and health) benefits, but only 'satisfaction with the area' to monetise place-related net additional impact, the assumption being that this is a function of all place based indicators. This assessment reveals both the impact NDC has had on 'place' and the importance of satisfaction with area on an individual's quality of life. An estimated net improvement for any one of the 16,800 extra individuals (Table 4.2) being satisfied with their area as a place to live, is worth an estimated £59,600 in additional individual income in the final year. This translates into a monetised net additional benefit for the Programme of around £5,882m for satisfaction with the area, out of an overall benefit of £8,688m. It is also worth commenting that most of the improvement for this indicator occurred between 2002 and 2004. This is important given that outcomes have been monetised in term of annual income: the longer a benefit is received the greater value it accrues.

5.18 Option 2 uses the same people-related (education, worklessness and health) benefits as option 1, but substitutes other significant place-related indictors for 'satisfaction with the area'. In effect, this option breaks down the monetised benefit seen in 'very/fairly satisfied with area' into its 'component parts'. The fact that place-related monetised net additional outcomes in options 1 and 2 are not equal suggests that there are unidentified place-related net additional outcomes missing from option 2. This might be because these factors fall outside place-related core indicators or because they are contained within indicators where net additional impact is not significant. Therefore option 2 should be used alongside option 1 to provide a **range** with regard to the value of the monetised net additional impact arising from the Programme's core indicators. Option 2 estimates the monetised net additional outcomes for the period 2002 to 2008 to be approximately £5,361m. Interestingly about half of this benefit is associated with improvements in SF 36 mental health scores. Given that NDC partnerships have not especially majored on initiatives

directly designed to address mental health, (see Table 3.6), and bearing in mind the scale of relationships between mental health and other outcomes (Volume 5[68] Figure 3.8), much of this is likely to be due to multiplier effects across the Programme: NDC interventions designed to improve other outcomes have in turn led to improvements in their mental health, which highlights the importance of an holistic approach to tackling these problems. NDC net additional impacts with regard to 'area improved in the past two years', or having 'been a victim of crime' are not included in either option for reasons discussed in 5.16.

Table 5.4: Monetised net impact of the NDC Programme: 2002-08

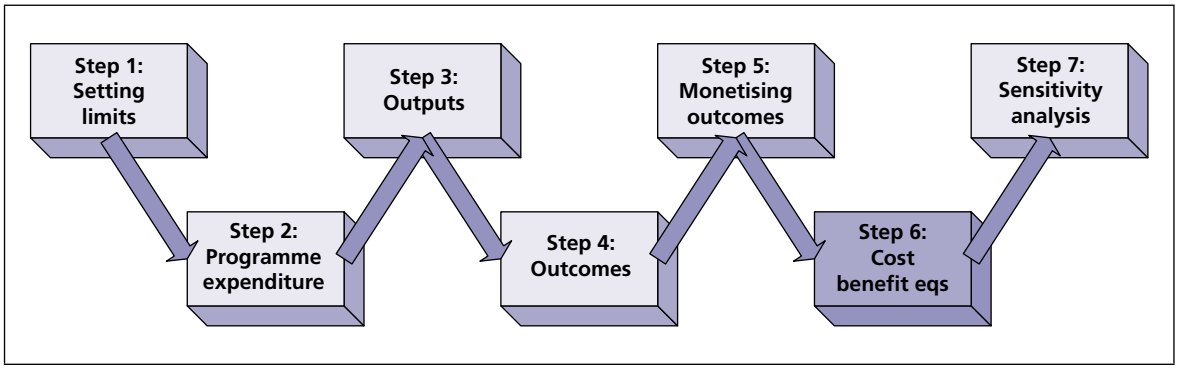
	Monetised net additional outcomes (£,000)	
	Option 1	**Option 2**
Education		
Key Stage 2 English, level 4	n/m	n/m
Key Stage 3 English, level 5	n/m	n/m
Key Stage 4, five or more GCSEs at A* to C	–2,846	–2,846
Taken part in educ./training in the past year (a)	78,649	78,649
Worklessness		
Workless household (b)	n/m	n/m
Health		
SF36 mental health index, high score	2,729,577	2,729,577
Health somewhat/much worse than one year ago	n/m	n/m
Place		
Very/fairly satisfied with area	5,882,218	
Crime		
Been a victim of any crime in last year		442,644
Lawlessness and dereliction index, high score		1,223,499
Housing and the physical environment		
Problems with environment index, high score		217,871
Community		
Neighbours look out for each other		671,365
NDC improved area a great deal/a fair amount (c)		n/m
Involved in NDC activity (c)		n/m
Total monetised net additional outcomes	**8,687,598**	**5,360,759**

Source: Ipsos MORI NDC Household Survey; LSC (2007) Young people set for £2,000 GCSE bounty, publication number 461; SDRC; ONS
Base: All; (a) All working age not currently in full time education; (c) All working age households; (c) All heard of local NDC;
Only indicators showing statistically significant change at one point of time are included. n/m: not monetised; 2008/09 prices

[68] CLG (2010) Exploring and explaining change in regeneration schemes: Evidence from the NDC Programme.

5.19 Appendix 5 provides a detailed example, for the SF36 mental health index, of how monetised outcomes have been calculated.

Step 6: Cost benefit equations



5.20 Table 5.6. sets these estimated monetised net additional (outcome) benefits against overall NDC funding. With regard to option 1, the positive net financial benefits to society from the NDC Programme amount to an estimated £6,976m. In this instance monetisable benefits arising from the Programme amount to more than five times funding. Even using the more conservative option 2, positive net financial benefits to society amount to an estimated £3,649m, more than three times the cost of the Programme.

Table 5.5: Cost-benefit assessments

	Option 1 (£,000)	Option 2 (£,000)
Monetised net additional (a) outcomes (a)	8,687,598	5,360,759
Funding (b)	1,711,720	1,711,720
Difference (a) – (b)	**6,975,878**	**3,649,039**
Ratio (a) to (b)	**5.08**	**3.13**

Source: Ipsos MORI NDC Household Survey; LSC (2007) Young people set for £2,000 GCSE bounty, publication number 461; SDRC; System K; ONS
Base: NDC population aged 16 and over;
2008/09 prices

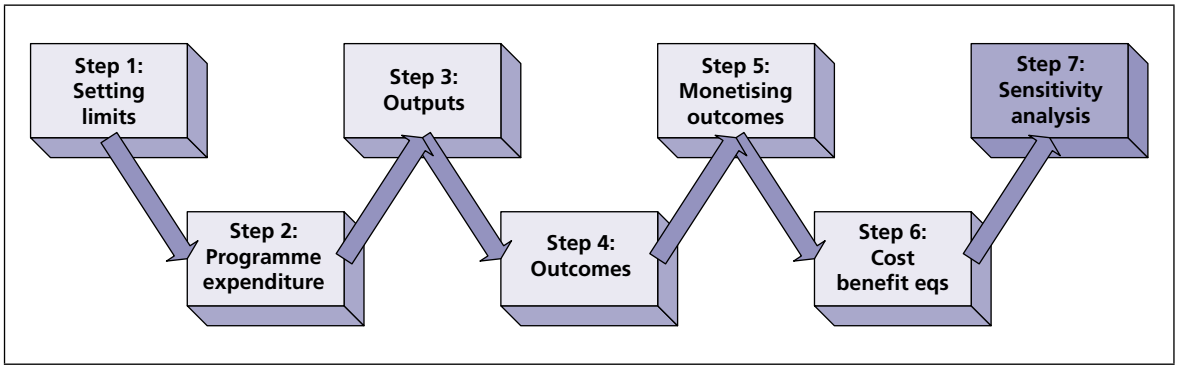
A concluding comment

5.21 This chapter has explored different approaches towards monetising benefits arising from the NDC Programme, with a particular emphasis placed on shadow pricing. This is an experimental methodology, but one which appears especially suitable for assessing the place-related benefits likely to be associated with area-based regeneration schemes. Based on unit benefits emerging from both shadow pricing, and also from other studies, two options have been developed which vary in the ways whereby place-related benefits are assessed. But whichever method is adopted, benefits substantially exceed costs. Net financial benefits to society range from just over five times, to just over three times the costs of the Programme. The Programme provides good value for money.

Chapter 6

Sensitivity analyses

Step 7: Sensitivity analysis



6.1 The previous chapter considered different ways of monetising net benefits flowing from the Programme and assessed these against Programme costs. This chapter takes forward the debate by subjecting these results to four forms of **sensitivity analysis:**

- a reflection of whether these results capture the full impact of the Programme
- computing ranges with regard to monetised net additional outcomes using the upper and lower boundaries of estimates from shadow pricing methods
- an assessment focussing on the ten New Deal for Communities (NDC) areas seeing greatest change
- an exploration of NDC change versus LAD benchmarks.

Do these cost-benefit assessments capture the full impact of the NDC Programme?

6.2 Although the overall approach laid out in earlier chapters uses all NDC funding over the period 1999-2000 to 2007-08 as costs, the assessment of benefits remains **partial**. The methodology adopted here is based on identifying net monetisable gains which can be ascribed to the Programme within the 39 areas between 2002 and 2008, and, which can be measured by cross-sectional change data. Other benefits may flow from the Programme which this approach does not identify.

6.3 First, assessments of impact outlined in this report may **not necessarily capture all of the change identified through the four household surveys**. Change has been assessed by reference to the 36 core indicators. There are strong arguments for adopting this approach. Core indicators provide a consistent mechanism through which to assess change across all of the Programme's six outcomes. Use of a relatively limited range of indicators also helps minimise problems of double counting. It could, however, be argued that focussing on a relatively small number of core indicators means that it is not possible to capture the full range of positive impacts identified through the surveys. Having said that, there is not a lot of evidence to suggest that concentrating on 36 core indicators plays down the overall impact of the Programme. Previous work by the national evaluation team[69] has identified differences in rates of change between NDC, and comparator, areas for some 89 indicators drawn from the household survey for the six year period 2002 to 2008. There are only three instances[70], where the broad thrust of positive net additional impact on outcome change is out of the scope of the 36 core indicators.

6.4 Second, for a range of reasons it is **not possible, or appropriate, to monetise some of the net benefits** arising from the Programme:

- there do not appear to be usable monetary unit benefits in relation to some indicators such as attainment at Key Stages 2 and 3
- some indicators are slightly ambiguous especially those based on change; for instance an individual's health may be worse than a year ago, but their general health still be good
- some indicators, such as the proportion of workless households, are closely related to individual income, and therefore for statistical reasons, are inappropriate for inclusion in the shadow pricing models
- there are issues for indicators showing involvement in, and attitudes towards, the local NDC; these cannot be benchmarked; they may also be seen as 'intermediate' outcomes, not as important as other indicators, such as, say, improving mental health or being a victim of crime, which more clearly reflect Programme objectives.

6.5 Third, evidence of change drawn from the household survey, and from administrative data, is **not able to capture all of the positive benefits associated with the Programme**. To give two examples:

[69] CLG (2009) An Overview of Cross-sectional Change Data 2002–2008 Evidence from the New Deal for Communities Programme (Table A5, p.55).

[70] The percentage of residents with a current account, the percentage of residents with a saving account; and the percentage of residents that feel people in their area are very or fairly friendly.

- Many people-related interventions may encourage individuals to move along a trajectory towards, say, a job, an improved life style, higher educational attainment, and so on.[71] There will be real gains for both the individual concerned, and for society as whole, if such trajectories culminate in improved outcomes. But it is not possible fully to capture, or to put a value on, these potential benefits in an evaluation of this kind.
- 'Intangible' changes may well arise from NDC supported interventions which work to enhance the life-chances of individuals, but which cannot be captured. For instance, the recently published overview of NDC activity in relation to education[72], identifies interventions such as, say, family learning projects, parental skills, higher education bursaries, and so on, which may well reap benefits for individuals and families concerned, but which cannot be measured through 'top-down' household surveys.

6.6 Fourth, benefits arising from the Programme are **assessed over a specific time period**: 2002 to 2008. There are thus two time periods where it is not possible to assess potential benefits. Other than for a small number of indicators drawn from administrative data sources, the evaluation does not have access to change data before the effective baseline of 2002. Some NDC Partnerships have argued that considerable change occurred in their area before that date. However, there must be some doubt as to whether that is the case, not least because many Partnerships took time to establish staff teams and install management and financial systems, a theme explored in more detail in Volume 1[73] (see section 3.4-3.6). The evaluation is not in a position either to consider changes occurring after 2008. It can confidently be predicted that there will be further 'NDC related' change through to the end of the Programme (2010-11), and indeed quite probably thereafter. Because of the intensity of the Programme, and because of its ten-year time horizon, these may prove to be considerable. It would be an interesting exercise to revisit change in these 39 areas five years after Programme funding has ceased.

6.7 Fifth, there is the issue of benefits which **fall outside the spatial configuration represented by these 39 areas.** Costs and benefits are assessed solely in relation to the 39 areas. There are therefore questions surrounding potential **spillover/displacement** effects on surrounding areas, and the possible **leakage** of gains due to NDC beneficiaries leaving the 39 areas.

6.8 The evaluation team is not in a position to provide definitive evidence in relation to these processes, but would be cautious about assuming either is likely to have a significant impact on overall cost-benefit equations. Appendix

[71] CLG (2009) Understanding and tackling worklessness Volume 2: neighbourhood level problems, interventions and outcomes: evidence from the New Deal for Communities Programme.

[72] CLG (2010) Improving attainment? Innovations in education by the NDC Programme.

[73] CLG (2010) The New Deal for Communities Programme: Achieving a neighbourhood focus for regeneration.

2 points to relatively limited project-level leakage and displacement rates. Similarly, police crime recorded data[74] suggest that, where measurable reductions in crime occur in NDC areas, to a large extent, these lead to neither a diffusion of benefit, nor displacement of crime, to surrounding buffer rings.

6.9 It is likely too, that leakage of gains due to beneficiaries leaving NDC areas is also limited in its effects. Although it is difficult to trace outmovers, some 300 interviews were held with people who left NDC areas between 2002 and 2004.[75] For these respondents movement out of NDC areas was largely driven by factors such as wishing to access different types of housing, and because of poor perceptions with regard to the quality of the environment in NDC areas. There was little to suggest people left because of gaining from NDC interventions. The assumption that beneficiaries leave NDC areas taking their benefits with them is often seen to apply especially to worklessness: local residents undertake training, gains skills, find new or better jobs, improve their income, and seek new accommodation elsewhere. However, this model is based on a series of heroic assumptions about the nature of worklessness projects in NDC areas. In practice not many NDC residents will gain from projects, not all of those gains will lead to any change in employment status, and some interventions are anyway targeted at those most distant from the labour market.[76] Summing up across available evidence, there is an argument that the losses, and the gains, from spillover/displacement and leakage, are not going to have a major impact on the Programme-wide cost-benefit equations outlined in the previous chapter.

6.10 Sixth, the methodology outlined in this report is based on assessing net outcome change. This approach reflects the original 'outcome orientated' approach adopted by the Programme. But NDC Partnerships have also helped achieve what are sometimes referred to as **'process outcomes'**. The Programme was designed not simply to see these 39 areas 'close the gaps', but also to achieve this demanding objective whilst at the same time adopting a particular delivery model. In particular, the Programme has been driven by a commitment both to partnership working with other delivery agencies, whilst at the same time placing the community 'at the heart' of the initiative. As is discussed in more detail in Volumes 1[77] and 2[78] of this final suite of reports, evidence points to substantial progress in relation to both of these objectives. Partnerships have been involved in a range of activities which will not culminate in outcome change as defined in this report.

[74] CLG (2008) Displacement of Crime or Diffusion of Benefit: Evidence from the New Deal for Communities Programme. http://extra.shu.ac.uk/ndc/downloads/general/NDC_Crime_Displacement.pdf

[75] CLG (2007) The Moving Escalator? Patterns of Residential Mobility in New Deal for Communities areas Research Report 32. http://extra.shu.ac.uk/ndc/downloads/reports/The%20NDC%20moving%20escalator[1].pdf

[76] CLG (2009) Understanding and tackling worklessness Volume 2: neighbourhood level problems, interventions and outcomes: evidence from the New Deal for Communities Programme.

[77] CLG (2010) The New Deal for Communities Programme: Achieving a neighbourhood focus for regeneration.

[78] CLG (2010) Involving local people in regeneration: Evidence from the NDC Programme.

6.11 Finally, it is worth emphasising that this report has majored on exploring costs and benefits in relation to outcome change. That is appropriate. But it should be remembered too that these 39 areas have changed in other ways. As is discussed in detail in relation to place in Volume 3[79], and people in Volume 4[80], NDC areas have seen ten years of intensive, local activity as developments on the ground have come to fruition, people-based interventions introduced, communities involved, partners engaged and plans put in place for a post NDC future. There are, of course, 39 separate narratives to all of this. Partnerships, communities and partner agencies have sought to drive forward regeneration programmes appropriate for their own neighbourhood. But whatever nuances have been given to each of these 39 strategies, these areas have undoubtedly been 'regeneration-busy' neighbourhoods. **Assessments of costs and benefits driven by outcome change reflect only the tip of local regeneration activity**.

Monetised net additional outcomes: computing confidence intervals

6.12 The second component to sensitivity analysis involves using the upper and lower confidence intervals from the two shadow pricing options to provide confidence intervals on the estimated monetised net additional outcomes for the Programme. Shadow prices have been derived from regression models which estimate the influence of a range of factors on quality of life. In reality it is likely that each factor will have a varying influence on an individual's quality of life. The values in Table 5.1 have used responses to the NDC household survey to derive a 'best guess' as to the influence of these factors on an individual's quality of life.

6.13 It is also possible from these regression models to estimate possible ranges with regard to these 'best guess' estimates. These are termed confidence intervals. These ranges are based on the 'best guess' estimate, levels of precision required (in this case the 0.05 level), variability in relationship across respondents, and numbers of respondents in the sample. For example, using the upper and lower confidence intervals of the impact of individual income on quality of life, gives a range of the estimated monetised value of net additional outcomes from £7,527m to £10,271m using option 1, or from £4,584m to £6,307m using option 2.[81] Using a number of such confidence levels, produces values of the monetised net additional impact that are, at least, 2.4 times greater than the cost of the Programme.

[79] CLG (2010) Making deprived areas better places to live: Evidence from the NDC Programme.

[80] CLG (2010) Improving outcomes for people in deprived neighbourhoods: Evidence from the NDC Programme.

[81] Using the upper and lower confidence intervals in relation to the impact of outcomes on quality of life, gives a range of the estimated monetised value of net additional outcomes from £8,293m to £9,082m using option 1, or from £4,584m to £6,138m using option 2.

What is it possible to achieve: assessing costs and benefits for the ten areas seeing greatest change?

6.14 A third component to sensitivity analysis is based on what would have been the monetised impact of the NDC Programme had change across all 39 areas matched that seen in the ten areas experiencing greatest change.

6.15 The NDC evaluation is in the fortunate position of having change data for all 39 NDC areas. In the previous chapter evidence from all these areas has been combined to assess costs and benefits: this is a Programme-wide evaluation. However, exactly because change data is available for all 39 areas, it is also possible to undertake a similar exercise for particular groupings of NDC areas. Those 10 areas[82] which have seen greatest change represent an especially interesting group. It could be argued that change in these areas reflects what it is possible to achieve at the local level. The approach here is to use the same methodology as for Programme-wide analyses, but to limit calculations to the ten areas seeing greatest change.[83] Details of this exercise are laid out in Appendix 6. In essence results have been calculated for these ten areas and then grossed up to provide a Programme-wide figure. What is interesting here is that in broad terms these figures are similar to those arising from a Programme-wide assessment. For example, for option 1 the monetised net additional impact for the ten areas grossed up is £9,428m, whereas the same figure from the Programme-wide assessment was only slightly lower at £8,688m.

6.16 It might have been assumed that grossing up from areas seeing greatest change would have created a larger figure than doing the same exercise for all 39 NDC areas. It is intriguing therefore to see that this is not the case. This is likely to be for a number of reasons. It is partly because the net additional outcome change for indicators with high monetary values, such as mental health, applies to all areas. There is also an issue in relation to when net outcome change was most evident. For example, in the case of mental health most net additional impact across the Programme occurred between 2002 and 2004. However, for these ten areas much of the impact came between 2006 and 2008. These patterns of change have implications for accrued monetised benefits, which will be less in the ten areas seeing greatest change than for all 39 NDC areas.

[82] Birmingham Aston, Hackney, Sheffield, Islington, Haringey, Plymouth, Walsall, Lambeth, Newcastle, and Nottingham.

[83] For full details of Composite Index of Relative Change see CLG (2010) New Deal for Communities Evaluation: Technical Report (Chapter 6).

NDC change: Benchmarking against parent local authority districts

6.17 The fourth and final component to sensitivity analysis involves benchmarking change in NDC areas against that occurring across their parent LADs. As is discussed in 2.7, there are problems in using LADs as benchmarks. However, for some indicators drawn from administrative data sources it is possible to benchmark change in NDC areas against that occurring in their parent LADs (Table 6.1). When absolute numbers of residents/crime are multiplied by unit benefits (Table 5.3), then there is an overall positive benefit of slightly more than £100m. Much of this arises from net improvements in worklessness and burglary. A key conclusion to draw from this exercise is that benchmarking change against LADs is unlikely to identify the full range of benefits from area regeneration schemes.

Table 6.1: Monetised net impact over and above LAD change

	Net impact: positive good (2002 to 2008 unless otherwise indicated)		
	Change in rate	**No. residents/ incidents of crime**	**Monetised impact (£,000)**
Worklessness			
Unemployment rate	0	3,000	50,092
Work limiting illness rate	1	2,800	35,574
Education			
Key Stage 2, Level 4 English	2	300	n/m
Key Stage 3, Level 5 English	3	200	n/m
Key Stage 4, five or more GCSEs A*-C	2	600	5,111
Crime (2000/01 to 2004/05)			
Violent crime rate per 1,000	–1	–4,100	–23,762
Burglary rate per 1,000	21	8,100	28,902
Theft rate per 1,000	–1	–1,500	–2,157
Criminal damage rate per 1,000	7	9,900	9,995
Total	**n/a**	**n/a**	**103,754**

Source: SDRC; LSC (2007) Young people set for £2,000 GCSE bounty, publication number 461; Amos, D. Analysing the costs of labour market exclusion within deprived areas: background, methodology and results; Bland, S. and Price, R. (2005) The economic and social costs of crime against individuals and households 2003/04, Home Office Online Report 30/05; SDRC; ONS
2008/09 prices; Crime figures uplifted to account for underreporting

A concluding comment

6.18 This section has subjected Programme-wide cost-benefit assessments outlined in the previous chapter to a range of sensitivity analyses. Conclusions to emerge from this task include:

- the Programme has generated a wide range of other benefits, for which it is not possible to provide monetary estimates
- using both the upper and lower limits, regression equations produce values of the monetised net additional impact of the Programme which are all at least 2.4 times greater than the cost of the Programme
- grossing up costs and benefits emerging from analyses looking solely at those 10 NDC areas seeing greatest change does not suggest that benefits have been especially skewed to these areas; this may be because the net additional outcome change for indicators with high monetary values, such as mental health, apply to all 39 areas; in addition areas seeing greatest change saw some of this occurring towards the end of this six year period, a pattern of change with implications for the scale of monetisable benefits
- a small number of indicators drawn from administrative data sources allow for benchmarking change in NDC areas against that occurring within parent LADs; using this approach, much of the monetary benefit arising from the Programme reflects net positive change in relation to worklessness and burglary.

Chapter 7

Concluding observations

The value for money of the NDC Programme

7.1 Given the methodology adopted in this study and guidance from Department for Transport (DfT)[84] on assessing value for money it can be concluded that the New Deal for Communities (NDC) programme generated good value for money. However, the value of the programme is generated mainly through non-market net additional outcomes, including improvements in mental health and satisfaction with area. In this regard, the monetised net additional outcomes presented in this report do not necessarily translate into gross value added to the economy or tangible benefits to the exchequer. The intention of the NDC programme from the outset was to improve these areas, and the quality of life, or wellbeing, of their residents, rather than say enhance business performance or boost Gross Value Added (GVA). As has been flagged up in Table 4.2, benefits have indeed accrued to large numbers of NDC residents.

7.2 These non-market outcomes may have indirect effects on market outcomes. However, it has already been noted that this analysis is only partial – it has not been able to capture the full extent of the benefits generated by the NDC and has not been able to fully capture the interactions between the direct non-market outcomes achieved by the NDC and potential wider market outcomes.

7.3 The focus of the programme on improving the quality of life of NDC residents is reflected in the allocation of spend – 32 per cent of NDC expenditure was on housing and the physical environment and 18 per cent on community (both of which would tend to generate the non-market outcomes identified in the analysis) compared to 17 per cent on education and 12 per cent on worklessness (both of which would generate more market outcomes such as employment and improvements in skills). Further scrutiny of the specific activities that were funded reveals that the greatest proportion of NDC spend was on activities that would not be expected to contribute directly to economic outcomes such as sustainable job creation, but rather more non-market outcomes such as 'satisfaction with area'. These activities include:

- New/improved use/access to community facilities
- Land/asset acquisition/demolitions/stock transfer

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- Environmental improvements
- Infrastructure/buildings/landscaping
- Homes built/improved/maintenance

Advantages of the adopted methodology

7.4 The adopted methodology is rooted in shadow pricing, which is a pioneering approach especially with regard to the monetisation of benefits arising from the Programme. The evaluation team is unaware of this approach being used in any other evaluation of a similar regeneration programme.

7.5 Shadow pricing is an especially useful approach to adopt in the economic appraisal of regeneration programmes such as the NDC initiative. The main reason being that by using this methodology it is possible to place a monetary value on place-, and quality of life-,related benefits emerging from the Programme, particularly perception-based indicators such as 'satisfaction with the area', which are traditionally very hard to value. This is an important consideration for area-based regeneration schemes. An improved perception of the local area is likely to be one of the key outcomes to emerge from area-based initiatives (ABIs).

7.6 Because assessments are able to include many perception outcomes, and given that the monetary values of perception outcomes are relatively large for each individual, the overall benefits arising from the Programme are substantial.

Issues raised by this methodology

7.7 Although the overall approach adopted in this report has culminated in positive Programme-wide cost-benefit assessments, the methodology also raises a number of wider issues, four of which merit particular emphasis.

- First, although the unit individual-level benefits identified through the shadow pricing approach might appear high, as discussed in 5.11, other studies[85] using a similar methodology emerge with similar kinds of conclusions. In addition, as is flagged up in Appendix 1, a methodology for assessing benefits through hedonic pricing, based on increases on house prices, emerges with monetised benefits roughly equivalent to Programme-wide costs.

[85] The 2009 HM Government report *The Total Benefit/Cost Ratio of New Regulations 2008-2009* finds across new regulation in the 2008-2009 period that the ratio of quantified benefits to costs is 1.85: quantified benefits amount to 1.85 times the costs of these regulations. For primary legislation this ratio figure was 2.82 and for secondary legislation 5.57. The Pensions Act 2008 had a ratio of one.

- Second, despite the evaluation being able to identify considerable monetisable benefits, **it is not possible to do this for all of the gains arising from the Programme**, as is explored from 6.2 onwards. This is true, for instance, in relation to assessing post-2008 benefits, with regard to 'process outcomes' such as partnership working, and for some outcomes where it is not possible to monetise net change. Although the approach adopted in this report is based on comprehensive change-data, it is still not possible to provide a monetary estimate of all of the benefits flowing from this, or indeed probably any other, ABI.
- Third, in reality what this methodology shows is that the monetised benefits arising from **improving people's lives is greater than Programme funding**. Much, if not all, of this monetised benefit is not 'real' money. For instance, no extra incomes will be earned or GVA produced. However, improving quality of life has always been a key objective of the Programme.
- Fourth, other than for mental health, much of the monetisable benefit arising from the Programme occurs because of positive net change with regard to **place-related outcomes**. The reasons why it has proved difficult to identify net outcome change in relation to people-related outcomes is discussed elsewhere (4.5). But in brief, although there are positive links between those participating in projects and individual-level outcomes, the scale of these changes is not sufficient to be picked up through household surveys.

Implications for evaluating other ABIs

7.8 Finally it is worth pointing out that the approach adopted here has implications for future evaluations of regeneration schemes. In some respects these are positive. Work outlined here establishes a potential methodology through which more of the benefits arising from ABIs might be captured. This will prove especially useful within a context which is likely to increasingly emphasise the importance of subjecting all policy innovations to robust value for money assessments. As such, the methodology outlined here should prove useful for other similar exercises. In time too, there may be opportunities to test and refine the approach developed in this report. Issues which merit further consideration include establishing whether monetary values estimated for the NDC residents are applicable to other populations; using a larger 'scaled' quality of life question; and creating finer-grained evidence with regard to household incomes, in order to give greater levels of accuracy in estimating benefits.

7.9 It is also important to emphasise that one of reasons why the evaluation has been able to make in-depth and positive assessments as to the benefits of the Programme is because of the strength of the evidence base. Creating this evidence base has required the investment of considerable resources, greater than those made available to any previous ABI evaluation. However, this has highlighted the advantages of adopting such an 'evaluation conscious' approach from the outset.

Appendix 1

Hedonic pricing

The evaluation team has explored the possibility of using hedonic pricing to 'value' intangible perception indicators such as satisfaction with the area. Hedonic pricing is a revealed preference method which attempts to link 'quality' to price, and is typically used to explore the effect of property and area characteristics on house prices.

New Deal for Communities (NDC) area level house prices have been used to deduce the value of several area level perception indicators, such as the percentage of residents satisfied with their area as a place to live. Using the only available source of evidence, average NDC area- level house prices, means that data is limited to just 39 data points in each of four years: 2002, 2004, 2006 and 2008. This has implications for the number of possible explanatory variables, the possibility of identifying significant variables, and the robustness of the estimated influence of explanatories. Multiple regression models have been created using a stepwise selection method to identify indicators significantly associated with NDC area-level mean house prices. Possible explanatory variables were:

- percentage satisfied with area
- percentage satisfied with their accommodation
- percentage with a high perceptions of lawlessness and dereliction score
- percentage with a high perceptions of environmental problems score
- percentage with a high fear of crime score
- the percentage that feel unsafe walking alone in the area after dark
- the overall level of deprivation as measured by the IMD
- geographic location; dummies for London and the South East, South West and Eastern regions
- the percentage of social renting in the NDC area
- parent local authority mean house price.

Analyses indicate that in:

- 2002 the prevailing parent local authority mean house price was the only significant predictor of mean NDC area level house prices
- 2004 the prevailing parent local authority mean house price and being a London NDC were found to be significant

- 2006 the parent local authority mean house prices, being a London NDC and the percentage of an NDC areas' residents with a good quality of life were found to be significant explanatory variables on average a 1 percentage point increase in the percentage of residents with a good quality of life is associated with a £2,100 increase in mean house prices 2008
- parent local authority mean house prices, being a London NDC and the percentage of an NDC areas residents that are satisfied with their area as a place to live were found to be significant explanatory variables
- on average a 1 percentage point increase in area level satisfaction in area is associated with a £2,000 increase in mean house prices.

These estimates are based on houses that have been sold. Assumptions can be made which allow estimates to be made with regard to all owner occupation and private rented accommodation. It is harder to apply these to social rented accommodation because social rented properties:

- have a lower expected market value than equivalent owner occupation and private rented properties
- there is also evidence that growth in prices of ex-social rented properties has been lower than that seen by non social rented properties.

Given this it has been decided not to apply the unit economic values flatly to social rented properties. Instead estimates have been adjusted according to the England-wide ratio of mean market value of social rented right to buy sale properties to the mean of the lower quartile house prices. Between 2002 and 2008 this average ratio was 0.72:1.

Table A1.1: Unit costs derived using hedonic pricing

	Estimated change in mean house prices from a 1 percentage point increase in indicator (£)		
	non social sector	social sector	all
Quality of life good	2,100	1,500	1,800
Satisfied with area	2,000	1,400	1,700

The results from this hedonic pricing method are shown in Table A1.1. Using the hedonic pricing estimate to monetise the net impact of the NDC Programme on improving the proportion of residents that are very or fairly satisfied with their area as a place the live (2002-08), gives an estimate monetary value of £1,600m. Although this is less than the monetised net additional benefit emerging using the shadow pricing estimate (£5,882m), the implication of the two sets of figures are the same; both are around or greater than the cost of the NDC Programme. And it must be remembered that the hedonic methods only employ changes in house prices, not other potential variables as is the case for shadow pricing. In practice, the National Evaluation Team has taken the view that the results in Table A1.1 are not robust enough to use on their own given the quality of available data and the enforced simplistic nature of the model. Because of this lack of robustness, the evaluation team has decided that these estimates should support those provided by other methods.

Appendix 2

Expenditure and output analysis methodology

Introduction

This Appendix describes the approaches used to: (a) analyse how New Deal for Communities (NDC) expenditure has been used; (b) estimate the outputs generated from that expenditure; and (c) estimate the additionality of NDC impacts, i.e. assessing the extent to which outputs would not have been generated in the absence of the programme.

Improving our understanding of how NDC funding has been used

System K

Within Phase 2 of the NDC Programme three measures were taken to improve the quality of the information held on the System K database. The first was to re-code the projects on the databank so that it was possible to understand more about what NDC areas had done. Hitherto the only disaggregation possible was by theme and this was too aggregative. Cambridge Economic Associates (CEA) developed a categorisation that produced 70 project types within 7 activity categories. The recoding was achieved successfully and implemented across all projects (numbering several thousand) within System K.

The second was a validation exercise designed to test the quality of the output data on System K in order to increase the accuracy of programme-wide output estimates. Analysis of the output data recorded on System K had revealed that when some of the output fields were summarised for the NDC Programme as a whole they produced implausible results. With Phase 2 of the evaluation focusing on five case study NDC areas, there was both a need and an opportunity to look more closely at the quality of output and expenditure data available from System K for these areas: Clapham, Knowsley, Newcastle, Walsall and West Ham. The case study work required a detailed examination at the project level of the data held on System K and discussions with the NDC partnerships. This revealed a number of measurement problems. One significant issue was that some projects had not recorded NDC core outputs. In some cases these were new projects that had not yet produced outputs. In other cases the projects had clearly been incurring spend over a number of years

and there should thus be outputs. In a number of cases NDC areas had relied on their own non core outputs to record progress but in others no outputs of any kind have been recorded.

A further problem was the sheer diversity of output indicators being used by NDC areas. There were some 700 non-core outputs across the five case study partnerships alone. To capture some of this additional information, CEA carried out a matching exercise of some of the more 'standard' non core outputs that have been used and where it was possible CEA have matched non-core outputs to:

- the NDC Programme 34 core outputs
- four general CEA additional outputs that were used in the early 'Value for Money' reports
- 12 SRB outputs where these have been used by NDC areas.

Following the matching exercise extensive work was undertaken to examine aggregate spend and output data at the project level for all five case studies (around 900 projects in total) and a series of project related queries were raised. These were explored with the individual NDC areas.

In order to keep the queries with NDC areas down to a minimum, information was only sought on actual spend and outputs (not forecasts). Detail on actual outputs was sought for both total outputs and those ethnic minority outputs. The 'To date' spend and output figures were verified, rather than 'Year on Year' figures. Additional output and spend data was generated to supplement the System K data. The data validation exercise was completed by the mid part of 2006. Since then further additions to the System K database for the five case study NDC areas has been examined on a regular basis in order to ensure that the data remains valid.

The third exercise was to examine the extent to which expenditure data recorded on System K for all 39 NDC areas could be considered robust. This involved checking the NDC expenditure information available from System K with that provided through the standard NRU quarterly monitoring returns held by CLG and sorting out problems with NDC areas as they arose.

Estimating the Programme-wide outputs generated by NDC project expenditure

When the work described above had been completed the evaluation had at its disposal a detailed analysis of how expenditure had been used across the NDC Programme according to the new activity classification and validated information from five case study NDC areas on the expenditure and total outputs generated by their expenditure within the same classification.

Data from the case study NDC areas on outputs per £1 of NDC funding within each Activity Category was then applied to NDC funding at the Activity Category level for the 39 NDC areas as a whole. This "grossing up" enabled an estimate to be made of the output contribution for the whole NDC Programme.

Grossing up at the Activity Category level was just one of seven different grossing-up methods tested in order to assess the sensitivity of the approach. The seven approaches examined included grossing up:

- by NDC expenditure at the level of the 70 project type codes, with empty codes or zero spend adopting the activity category average
- by NDC expenditure at the level of the 70 project type codes, with empty codes or zero spend given zero outputs
- by total expenditure (i.e. NDC and other sources of expenditure) at the level of the 70 project type codes, with empty codes or zero spend based on the activity category average
- by total expenditure (i.e. NDC and other sources of expenditure) at the level of the 70 project type codes, with empty codes or zero spend given zero outputs
- by NDC expenditure at the level of the seven Activity Categories
- by total expenditure (i.e. NDC and other sources of expenditure) at the level of the seven Activity Categories
- by population, based on outputs per capita overall.

Having considered the different approaches available, **grossing up by NDC expenditure at the Activity Category level was adopted as the preferred method**. Methods based on NDC expenditure were regarded as preferable because of the lack of validation possible regarding non-NDC sources of funding. The choice was then whether to adopt a very fine grained approach at the level of the 70 project types or an approach that used data at the broader Activity Category level. In principle, estimation based on the finer grained classification would be more desirable, provided that there were sufficient data observations to ensure its reliability. However, at this very fine grained level there were blank expenditure and/or output cells for some project types, i.e. the five case study NDC areas had not incurred expenditure against all project types or, in some cases, had incurred expenditure but recorded no outputs. At the level of the 39 NDC areas as a whole there was expenditure for all project types. Thus, where there were empty cells for the five NDC areas, grossing up at this level required the assumption of either zero outputs or average outputs based on the activity category average. While both approaches provided results close to the method adopted, they tended to produce some extreme outliers for some types of output. These outliers were not present in the preferred method adopted.

Estimating the additionality associated with the NDC programme

The Green Book (HM Treasury, 2003) defines additionality in the following way: *"An impact arising from an intervention is additional if it would not have occurred in the absence of the intervention."*

The Green Book goes on to note that additionality adjustments must *"be calculated with consideration of 'leakage', 'deadweight', 'displacement' and 'substitution' effects."* The bullet points below summarise how we have applied these adjustments in the context of the NDC Programme:

- deadweight is the proportion of total outputs that would have been secured anyway without the NDC-funded activity
- leakage is the proportion of outputs that benefit those outside of the NDC area
- two displacement adjustments have been made: (a) the extent to which NDC funded projects have displaced activity from other regeneration projects; and (b) the proportion of employment outputs from worklessness projects which are reduced elsewhere in the NDC area through "product market" displacement
- substitution arises where a firm substitutes a jobless person to replace an existing worker to take advantage of public sector assistance. In the NDC analysis this concept has been applied only to employment outputs from worklessness projects.

A **combined supply and income multiplier** effect has also been applied to all jobs created and safeguarded by projects, whatever their activity category. This multiplier effect takes account of the supply chain effect of purchases of goods and services by projects and firms employing staff; and the effect of spending of wages and salaries in supporting wider employment.

The remainder of this annex provides a detailed explanation of how these concepts have been applied to the NDC analysis the sources of data used and how uncertainty in the estimates has been taken into account.

Deadweight

Concept and approach

The analysis of deadweight has been undertaken in two stages:

- an assessment of **funding deadweight**, i.e. the extent to which projects would have gone ahead anyway, or later, or on a lower scale, or to a lower quality, in the absence of NDC funding

- an assessment of **beneficiary deadweight**, i.e. the extent to which beneficiaries could have accessed similar or less suitable services in the NDC area in the absence of the NDC-funded project.

Thus, if we take a hypothetical example, if it was established that 50 per cent of all projects could have happened anyway, in exactly the same form and at the same time, then funding deadweight would be 50 per cent. If we then established that 50 per cent of beneficiaries of all projects could have accessed the same services anyway in the absence of the NDC-funded projects then beneficiary deadweight would be 50 per cent. Overall, then, only 25 per cent of the total (gross) outputs claimed could be judged additional to the intervention (0.5 x 0.5) and thus, for this hypothetical example, the overall level of deadweight would be 75 per cent. The inverse, 25 per cent, is known as the gross additionality of the intervention.

Data sources

Two sources of data have been used for this analysis. As part of the national evaluation a sample of 193 NDC-funded projects was subject to local evaluation. These responses, which incorporate the views of project managers and other stakeholders associated with the design and delivery of the projects, cover issues to do with funding deadweight, beneficiary deadweight, leakage and displacement of activity from other projects. The second source of data, which has been used to augment the assessment of beneficiary deadweight, is a survey undertaken in 2005 by Ipsos MORI of 1,008 beneficiaries of 23 NDC-funded projects.

Application of method

Funding deadweight

The local project evaluations asked *"what do you think would have happened to the project in the absence of NDC funding"*. The gross funding additionality estimates shown in Table A2.1 below were applied according to the response achieved for each project:

Table A2.1: Gross funding additionality applied to responses on what would have happened to projects in the absence of NDC funding

Possible response	Gross funding additionality applied (per cent)
Project would not have gone ahead at all	100
Project would have been of a lower scale	50
Project would have been of a lower quality	33
Project would have gone ahead at a later date	25
Project would have gone ahead entirely unchanged	0
Project would have gone ahead elsewhere outside the NDC area	0

Source: CEA

Table A2.2 shows the number of evaluation responses achieved for this question by Activity Category. Having applied the gross additionality rates above to each project, the results were then used to calculate a mean, standard deviation and, based on the number of responses, a 95 per cent Confidence Interval. This figure, which is indicated in the table below as plus or minus a given percentage, gives an indication of the spread of the observations and can be interpreted as follows: 95 per cent of results are expected to fall within + or – x per cent of the stated mean. We have used the Confidence Interval to express the results as a range.

Table A2.2: Gross additionality of NDC funding

Activity Category	N	Mean per cent	95 per cent Confidence Interval +/– per cent	Range (based on 95 per cent CI) per cent	
				Low	High
1. Community	29	94.8	5.6	89.2	100*
2. Crime	51	88.4	7.2	81.2	95.6
3. Education	25	74.0	11.1	62.8	85.1
4. Worklessness	44	91.3	6.6	84.7	97.9
5. Health	24	74.3	14.0	60.3	88.3
6. Housing and the Physical Environment	13	79.8	16.2	63.6	96.0
7. Cross-cutting	6	94.3	7.0	87.3	100.0*

Source: CEA analysis of NDC evaluation workbooks
Note: * upper end of range capped at 100 per cent, irrespective of the upper bound of the Confidence Interval when added to the mean

Beneficiary deadweight

Two sources of data were used for this adjustment. The first is the local project evaluations. These invited project managers and other interviewed stakeholders to estimate the proportion of beneficiaries falling into each of the categories shown in Table A2.3 below.

Table A2.3: Gross beneficiary additionality applied to local evaluation responses on what beneficiaries could have done in the absence of NDC-funded projects

Possible response	Gross beneficiary additionality applied to proportion of beneficiaries falling into each response category (per cent)
Accessed no services/other projects at all	100
Accessed similar services/projects, but outside the NDC area	75
Accessed less suitable services/projects in the NDC area or outside it	67
Accessed similar services/projects elsewhere within the NDC area	0

Source: CEA

Without substantial information on the alternative choices available to beneficiaries in each area there is inevitably a large degree of subjectivity around what weights should be attached to different beneficiary additionality responses. However, the weights above were felt by the evaluators to strike the right balance given that many NDC projects have focussed on targeting, whether geographically through making their services easy to access in physical terms, or in customising them to the needs of residents. The weights above reflect our view that similar services outside the area or less suitable services within the NDC area or outside were still unlikely to rival the NDC project in terms of take-up, and thus that relatively high levels of gross beneficiary additionality should be applied for these categories.

The second source for beneficiary additionality was the Ipsos MORI beneficiary survey. This asked beneficiaries about the extent to which they could have accessed similar services or less suitable services in or outside the NDC area. Table A2.4 below shows the responses that beneficiaries could have provided and the weights applied to the proportion of beneficiaries responding to each. The weights for quality and delay are consistent with those applied to funding additionality as set out at Table A2.1.

Table A2.4: Gross beneficiary additionality applied to beneficiary survey responses on what beneficiaries could have done in the absence of NDC-funded projects

Possible response	Gross beneficiary additionality applied to proportion of beneficiaries falling into each response category (per cent)
Would not have accessed any services/projects at all	100
The help would have been of a lower quality	33
It would have taken longer to access services/projects	25

Source: CEA

Having applied these weights, the results for gross beneficiary additionality are shown in Table A2.5 below by Activity Category.

The local evaluation data provided arrays of results within each Activity Category that could be used to calculate Confidence Intervals at the 95 per cent level, which have then been applied to the means to generate ranges. The level of analysis provided by the beneficiary survey allowed a single result to be generated for each Activity Category, which is shown in the final column.

Table A2.5: Beneficiary additionality – estimates from local project evaluations and the beneficiaries survey

	RESULTS FROM LOCAL EVALUATIONS					
				Range based on 95 per cent Confidence Interval		
Activity Category	N	Mean	95 per cent Confidence Interval	Low	High	BENEFICIARY SURVEY RESULTS
1. Community	24	76.2	10.3	65.9	86.5	88
2. Crime	43	68.0	10.3	57.7	78.3	75
3. Education	24	82.3	10.4	71.9	92.7	98
4. Worklessness	35	56.6	10.7	45.9	67.3	75
5. Health	19	69.6	14.8	54.8	84.4	97
6. Housing and the Physical Environment	8	53.4	20.6	32.9	74.0	No data
7. Cross-cutting	5	100.0	–	–	–	No data

Source: CEA analysis of local project evaluations and Ipsos MORI beneficiary survey results

The beneficiary survey results are typically higher than the upper end of the range established from the local evaluation survey results. The upper end of the range has therefore been calculated as the arithmetic mid point between the high end of the range from the project evaluations and the beneficiary survey results. The low end of the range is taken from the local evaluation results.

Table A2.6 sets out the final ranges derived for beneficiary additionality by Activity Category.

Table A2.6: Beneficiary additionality – final estimates applied (per cent)

	Range	
Activity Category	**Low**	**High**
1. Community	65.9	87.2
2. Crime	57.7	76.6
3. Education	71.9	95.4
4. Worklessness	45.9	71.1
5. Health	54.8	90.7
6. Housing and the Physical Environment	32.9	74.0
7. Cross-cutting	–	–

Source: CEA

Towards a final estimate of deadweight

As noted earlier, we now need to bring the estimates of funding and beneficiary additionality together. This has been done by multiplying the funding additionality by the beneficiary additionality (low x low, and high x high). Table A2.7 shows the overall "gross additionality" results.

Table A2.7: Overall gross additionality of NDC (per cent)

	Range on gross additionality	
Activity Category	**Low**	**High**
1. Community	58.8	87.2
2. Crime	46.8	73.2
3. Education	45.2	81.2
4. Worklessness	38.9	69.6
5. Health	33.1	80.1
6. Housing and the Physical Environment	20.9	71.0
7. Cross-cutting	87.3	100.0

Source: CEA

In order to arrive at the final estimates of deadweight, we have deducted the figures above from 100. The only exception we have made to this approach is for the Cross-cutting Activity Category. Because the high end of the range on gross additionality is 100 per cent, the low end of the range on deadweight would therefore be zero. This is felt to be unreasonably low, and so the mean result has been used to set the low end of this range.

Table A2.8 below shows the **final estimates of deadweight** derived. These represent the evaluation's estimate of the proportion of outputs which would have resulted anyway in NDC areas in the absence of the NDC Programme.

Table A2.8: Deadweight of NDC (per cent)

	Range on deadweight	
Activity Category	**Low**	**High**
1. Community	12.8	41.2
2. Crime	26.8	53.2
3. Education	18.8	54.8
4. Worklessness	30.4	61.1
5. Health	19.9	66.9
6. Housing and the Physical Environment	29.0	79.1
7. Cross-cutting	5.7	12.7

Source: CEA analysis of 193 local evaluation workbooks and of Ipsos MORI survey of 1008 beneficiaries

Leakage

Concept and approach

Leakage is the proportion of outputs that benefit those outside the NDC area. For area based initiatives such as the NDC Programme, leakage is a key concern and is intimately linked to how well projects are designed to target key beneficiary groups.

In our analysis of the additionality of the NDC programme, leakage estimates have been applied in the following ways:

- leakage of employment opportunity outside of the NDC area, for those employed in delivering NDC-funded projects
- leakage of employment opportunity outside of the NDC area, for those in jobs created or safeguarded by NDC worklessness interventions, whether these are interventions to improve business start-up or growth or those designed to get people back into work
- leakage of other outputs to those living outside of the NDC area.

Leakage is applied as the proportion of outputs taken by those living outside of the NDC area. The residual are those outputs that benefit residents of the NDC area.

Data sources

Two data sources have been used.

The 193 local project evaluations provide data that can inform the first and third of the leakage assumptions set out above, i.e. on leakage of employment opportunity for project delivery posts, and wider leakage of outputs.

Recent research on additionality for the Department for Business, Innovation and Skills (BIS), led by a steering group involving BIS, Communities and Local Government (CLG), HM Treasury, the Homes and Communities Agency (HCA) and the Regional Development Agencies (RDAs), has captured data on leakage at the sub-regional level for interventions related to supporting individual enterprises and matching people to jobs. These have been applied to the second adjustment above, namely those in jobs created or safeguarded by interventions in the Worklessness Activity Category.

Application of method

Leakage of employment – project delivery posts

The local project evaluations asked project managers and other stakeholders to estimate the proportion of delivery staff living outside of the NDC area. Given the nature of these roles, and the relatively narrow geography of many NDC areas, it is not surprising to find that leakage is high as shown in Table A2.9.

Table A2.9: Leakage of employment from NDC areas – project delivery posts only

Activity Category	Per cent of project delivery posts taken by those living outside the NDC area
1. Community	55
2. Crime	83
3. Education	62
4. Worklessness	76
5. Health	73
6. Housing and the Physical Environment	76
7. Cross-cutting	71

Source: CEA analysis of local project evaluations

Leakage of employment – jobs created or safeguarded by worklessness projects

Other employment created or safeguarded in the Worklessness Activity Category is recorded in System K as jobs created or jobs safeguarded. The definition of this output means that it cannot be assumed that all job opportunities are taken by beneficiaries living within the NDC area. Once again, there is leakage of opportunity to those living outside the NDC area.

We have applied leakage benchmark data recently published by BIS, which provides evidence at both the regional and sub-regional level. The sub-regional data covers interventions from neighbourhood up to county or genuine sub-regions, and in applying it we are aware of the level of uncertainty involved. Leakage decreases the larger the area and will be at its highest for small areas like neighbourhoods. For that reason we have taken the mean sub-regional leakage from the benchmark data as the low end of the range, and added the published 95 per cent Confidence Interval to provide an upper end of the range on this form of leakage.

Benchmark data exists for "individual enterprise support" and for "matching people to jobs". The employment outputs from worklessness interventions were analysed at the project type level so that these could be apportioned between the two broad categories. Approximately 85 per cent of recorded System K jobs created or safeguarded in the Worklessness Activity Category are linked to business interventions and 14 per cent to worklessness interventions targeted at individuals (the final 1 per cent are project delivery posts, discussed above). Table A2.10 shows the leakage rates applied to these job outputs in the analysis.

Table A2.10: Leakage of jobs created/safeguarded by NDC Worklessness Activity Category (per cent)

	Range on deadweight	
Activity Category	**Low**	**High**
4a. Worklessness – business (Individual enterprise support benchmark)	16.1	35.2
4b. Worklessness – individuals (Matching people to jobs benchmark)	18.1	39.2

Source: CEA assumptions based on
BIS Research to improve the assessment of additionality, October 2008

Leakage of non-employment outputs

In order to generate an estimate of leakage for other outputs, we have drawn on data from the local project evaluations regarding opinions on the extent to which the project has been successful in engaging with its main target group and then applied a series of leakage rates depending on the response.

In doing so we have taken as our starting assumption that leakage should be low, because NDC interventions will, by dint of funding conditions applied by many NDC areas, be directly if not solely targeted on residents living within the NDC area. A maximum leakage rate for projects judged to have been poor in terms of their engagement with the target group has been set at 25 per cent, falling on a sliding scale to 10 per cent where the project was judged successful in these terms.

Table A2.11 shows the response categories and the leakage rates applied. As the results are only available at Theme level, the cross-cutting activity category has been taken as a simple average of the results for all themes.

Table A2.11: Derivation of leakage assumptions for non-employment outputs

	Per cent of project evaluations reporting engagement with target group as:					
	Very good	Good	Average	Poor		
	Leakage rate applied (per cent):					
Theme	**10**	**15**	**20**	**25**	**Total responses**	**Derived leakage of outputs to residents outside NDC area (per cent)**
1. Community	13	16	1	2	32	14
2. Crime	25	20	7	1	53	13
3. Education	12	8	0	0	20	12
4. Worklessness	23	11	3	2	39	13
5. Health	8	12	1	0	21	13
6. Housing	11	3	3	0	17	13
Overall average/ 7. Cross-cutting	**92**	**70**	**15**	**5**	**182**	**13**

Source: CEA analysis of local project evaluations

Leakage summary

The table below summarises the leakage rates applied as part of the additionality adjustment.

Table A2.12: Summary of leakage rates applied to the additionality adjustment (per cent)

Different forms of leakage	By Activity Category						
	Com-munity	Crime	Educa-tion	Workless-ness	Health	HPE	Cross-cutting
Leakage of employment – project delivery posts	55	83	62	76	73	76	71
Leakage of jobs created/ safeguarded by business interventions	N/A	N/A	N/A	16-35	N/A	N/A	N/A
Leakage of jobs created/ safeguarded by individual worklessness interventions	N/A	N/A	N/A	18-39	N/A	N/A	N/A
Leakage of all other outputs	14	13	12	13	13	13	13

Source: CEA

Displacement

Concept and approach

As noted earlier, two displacement adjustments have been made:

- the extent to which NDC funded projects have displaced activity from other regeneration projects
- the proportion of employment outputs from worklessness projects which are reduced elsewhere in the NDC area through "product market" displacement.

The extent of such displacement reduces the overall level of additional activity created by the programme.

Data sources

The local project evaluations provided information to inform the displacement of activity from other regeneration projects in or outside the NDC area. Benchmark data on product market displacement has been drawn from the BIS additionality research referred to above.

Application of method

Displacement of other project activity

The local project evaluations were asked whether *"this project had the effect of causing other similar projects in the target area to be cancelled or close down or other less serious effects"* as shown in Table A2.13 below. The table shows the displacement rates applied to each category of response.

Table A2.13: Displacement rates applied to local evaluation responses on the effect of NDC-funded projects on other similar projects

Possible effect on other projects, causing them:	Displacement rates applied (per cent)
To be cancelled or closed down	100
To reduce the scale or quality of the services offered	50
To become less viable	50
To lose more than 50 per cent of their participants to the project	40
To lose less than 50 per cent of their participants to the project	30
No displacement effects	0

Source: CEA

Having applied these displacement rates to each project, depending on the response provided, the results were then used to calculate a mean, standard deviation and, based on the number of responses, a 95 per cent Confidence Interval as shown in Table A2.14 below. From this we have derived a range with low and high estimates of displacement. For those Activity Categories where the low end of the range would be zero or negative by deducting the Confidence Interval from the mean, we have re-set the low end of the range as the mean. On this basis the low end of the range is somewhat pessimistic, but given the very low levels of displacement presented by the projects we believe it sensible to include some displacement even at the low end of the range for those Activity Categories where there is evidence of displacement occurring.

Table A2.14: Displacement of activity from other projects

Activity Category	N	Mean	95 per cent Confidence Interval	Range on displacement used in additionality adjustment (per cent)	
				Low	High
1. Community	25	2.4	3.3	2.4	5.7
2. Crime	49	4.9	5.8	4.9	10.7
3. Education	21	0.0	–	–	–
4. Worklessness	41	1.5	2.0	1.5	3.5
5. Health	20	0.0	–	–	–
6. Housing and the Physical Environment	10	4.0	7.8	4.0	11.8
7. Cross-cutting	5	0.0	–	–	–

Source: CEA analysis of local project evaluations

Product market displacement (employment outputs from worklessness activities only)

As noted above, it is appropriate to apply estimates of product market displacement to those jobs created or safeguarded in the private sector as a result of NDC intervention.

As with the leakage estimates above, we have drawn on the BIS additionality benchmark material to inform these estimates.

We noted earlier how NDC projects have worked with businesses and with individuals to try and achieve employment outputs. We have therefore applied sub-regional benchmark data on displacement for "individual enterprise support" and for "matching people to jobs" to correspond to our own broad classification. Table A2.15 shows the leakage rates applied to these job outputs in the analysis.

Table A2.15: Product market displacement – assumptions used in the additionality adjustment

Activity Category	Mean	95 per cent Confidence Interval	Range (based on 95 per cent CI)	
			Low	High
4a. Worklessness – business (Individual enterprise support benchmark)	16.5	5.4	11.1	21.9
4b. Worklessness – individuals (Matching people to jobs benchmark)	27.5	22.9	4.6	50.4

Source: Sub-regional benchmarks drawn from BIS Research to improve the assessment of additionality, October 2008

Displacement summary

Table A2.16 summarises the displacement rates which were applied as part of the additionality adjustment.

Table A2.16: Summary of displacement types and rates applied to the additionality adjustment (per cent)

	Com-munity	Crime	Educa-tion	Workless-ness (range)	Health	HPE	Cross-cutting
Displacement of other regeneration project activity	2-6	5-11	0	2-4	0	4-12	0
Product market displacement – jobs created/ safeguarded by business interventions	N/A	N/A	N/A	11-22	N/A	N/A	N/A
Product market displacement – jobs created/ safeguarded by individual worklessness interventions	N/A	N/A	N/A	5-50	N/A	N/A	N/A

Source: CEA analysis of local project evaluations (displacement from other projects) and sub-regional benchmarks drawn from BIS (2008) Research to improve the assessment of additionality

Substitution

Concept and approach

Substitution is a negative effect that arises when a firm substitutes a jobless person to replace an existing worker to take advantage of public sector assistance.

Data sources

We have no sources of data from within the national NDC evaluation to directly inform estimates of substitution. Instead we have applied sub-regional benchmark evidence from the recent BIS additionality study referred to above.

Application of method

Table A2.17 shows the benchmark evidence that we have applied to employment outputs from business interventions in the Worklessness Activity Category and to interventions targeted at individuals. These have been drawn from benchmarks for the "individual enterprise support" and "matching people to jobs" categories in the BIS classification.

Table A2.17: Substitution – assumptions used in the additionality adjustment

Activity Category	Mean	95 per cent Confidence Interval	Substitution range adopted for the NDC additionality adjustment (per cent)	
			Low	High
4a. Worklessness – business (Individual enterprise support benchmark)	2.7	5.4	2.7	8.1
4b. Worklessness – individuals (Matching people to jobs benchmark)	7.6	11	7.6	18.6

Source: CEA application of sub-regional benchmarks from BIS Research to improve the assessment of additionality, October 2008

Note: Low end of range taken as mean, because mean minus Confidence Interval would be negative or zero which is judged to be overly optimistic.

Table A2.18 summarises the substitution assumptions that have been applied in the additionality adjustment.

Table A2.18: Summary of substitution rates applied to the additionality adjustment (per cent)

	Com-munity	Crime	Educa-tion	Workless-ness (range)	Health	HPE	Cross-cutting
Substitution – jobs created/ safeguarded by business interventions	N/A	N/A	N/A	3-8	N/A	N/A	N/A
Substitution – jobs created/ safeguarded by individual worklessness interventions	N/A	N/A	N/A	8-19	N/A	N/A	N/A

Source: CEA application of sub-regional benchmarks drawn from BIS (2008) Research to improve the assessment of additionality

Multiplier effect

Concept and approach

Multipliers quantify the further economic activity (in this case jobs) stimulated by the direct effects of an intervention. They take two principle forms: an income ("induced") multiplier which is associated with the spending of additional incomes by those employed directly by projects or as a result of them, and a supply ("indirect") multiplier associated with the purchase of goods and services by organisations employing these direct beneficiaries. The multiplier effect here is a short-run multiplier – it does not take account of longer term dynamic effects such as induced inward migration.

Data sources

We have drawn on the most recent version (Version 3, 2008) of the Additionality Guide produced by English Partnerships (EP), a predecessor to the Homes and Communities Agency.

Application of method

The EP Additionality Guide recommends a combined multiplier range of 1.05 to 1.15 for the neighbourhood level, with 1.05 recommended where the potential for multiplier effects is limited. We judge that NDC areas, which are predominantly residential in character, will offer limited potential for stimulating multiplier effects and that most of these effects will take place outside the areas concerned.

A combined supply/income multiplier of 1.05 has therefore been applied to all additional jobs created or safeguarded by NDC. It is not applied to any other outputs.

Towards an estimate of net additionality – bringing the adjustments together

Having derived estimates (in some cases in ranges) for deadweight, leakage, displacement, substitution and multiplier effects, these now need to be applied in an appropriate manner to the gross outputs generated by the NDC Programme.

The analysis was carried out on gross outputs generated by projects in each Activity Category. Two calculations were performed. One was on an "optimistic" basis, adopting the most positive evidence available from within the ranges set out above (i.e. with the lowest deadweight, lowest displacement, lowest leakage etc). A pessimistic result was also generated (i.e. with the highest deadweight, highest leakage, highest displacement etc.).

The equation adopted was:

G*(1-DWT)*(1-L)*(1-PMD)*(1-PJD)*(1-S)*M

Where G = gross outputs; DWT = deadweight; L = leakage; PMD = product market displacement; PJD = displacement from other projects; S = substitution; and M = the multiplier.

As noted above, not all of these adjustments were applied to every Activity Category or, within Activity Categories, to every type of gross output. Thus, Product Market Displacement and Substitution were only applied to non-delivery jobs within the Worklessness Activity Category; the Multiplier effect was only applied to jobs created and safeguarded, not other outputs.

The application of the estimates above generated an array of net additional outputs for each Activity Category.

When these are expressed as a percentage of their corresponding gross outputs, the result is called a "net additionality ratio". The analysis presented in this Annex allowed a range to be placed on the additionality of outputs by activity category. In the analysis presented in Chapter 3 we have adopted a mid-point estimate in order to translate gross outputs into net outputs. The total net outputs estimated by applying the net additionality ratios are presented in Table A2.19 below.

Table A2.19 Estimates of net additional outputs for the NDC Programme as a whole: 1999-2000 to 2007-08

	Total net outputs	
Activity categories and output codes	**Net additional outputs**	**Net additional outputs per 1000 population**
Community outputs		
No. community/voluntary groups supported	9,843	26.2
No. community chest type grants awarded	2,531	6.7
No. people employed in voluntary work	18,535	49.4
No. new or improved community facilities	320	0.9
No. people using new or improved community facilities	84,069	224.1
Crime outputs		
No. additional police	29	0.1
No. additional wardens	109	0.3
No. victims of crime supported	42,394	113.0
No. young people benefiting from youth inclusion/ diversionary projects	302,508	806.3
No. homes or businesses with improved security	18,822	50.2
Education outputs		
No. pupils benefiting from projects designed to improve attainment	562,671	1,499.7
No. schools physically improved	104	0.3
No. adults obtaining qualifications through NDC projects (accredited)	20,421	54.4
Worklessness outputs		
No. jobs created	1,089	2.9
No. jobs safeguarded	4,916	13.1
No. people receiving job training	32,834	87.5
No. people trained entering work	2,246	6.0
No. new childcare places provided	3,004	8.0
No. people accessing improved careers advice	174,976	466.4
No. businesses receiving advice/support	1,411	3.8
No. people becoming self employed	306	0.8

Table A2.19 Estimates of net additional outputs for the NDC Programme as a whole: 1999-2000 to 2007-08 *(continued)*

	Total net outputs	
Activity categories and output codes	**Net additional outputs**	**Net additional outputs per 1000 population**
No. new business start ups surviving 52 weeks	1,085	2.9
No. community enterprise start ups	56	0.2
Health outputs		
No. new or improved health facilities	221	0.6
No. people benefiting from new or improved health facilities	88,794	236.7
No. people benefiting from healthy lifestyle projects	175,954	469.0
Housing and physical environment outputs		
No. homes improved or built	13,012	34.7
No. buildings improved & brought back into use	65	0.2
No. traffic calming schemes	12	0.03

Source: Cambridge Economic Associates analysis of validated System K data for five case studies, grossed up to expenditure for the 39 NDCs and translated to net additional outputs.

Appendix 3

System K core outputs and selected SRB outputs used in the output analysis

Table A3.1 Core outputs recorded on System K database

Ref	Description
1	Number of Local People Going into Employment
2	Number of People Employed in Voluntary Work
3	Number of People Becoming Self Employed
4	Number of People Receiving Job Training
5	Number of Person Weeks of Job Related Training Provided
6	Number of People Trained Entering Work
7	Number of People Accessing Improved Careers Advice
8	Number of New Business Start Ups
9	Number of New Business Start Ups Surviving 52 Weeks
10	Number of New Businesses Receiving Advice/Support
11	Number of Jobs Safeguarded
12	Number of New Childcare Places Provided
13	Number of Pupils Benefiting from Projects Designed to Improve Attainment
14	Number of Teachers/Teaching Assistants Attracted/Retained in Schools Serving NDC Children
15	Number of Schools Physically Improved
16	Number of Adults Obtaining Qualifications through NDC Projects (Accredited)
17	Number of Adults Obtaining Qualifications through NDC Projects (Non-Accredited)
18	Number of Grants/Bursaries Awarded for Study Purposes
19	Number of Homes or Businesses with Improved Security
20	Number of Additional Police
21	Number of Additional Wardens
22	Number of CCTV Cameras Monitored and Installed
23	Number of Victims of Crime Supported
24	Number of Young People Benefiting from Youth Inclusion/Diversionary Projects

Table A3.1 Core outputs recorded on System K database *(continued)*	
Ref	**Description**
25	Number of New or Improved Health Facilities
26	Number of People Benefiting from New or Improved Health Facilities
27	Number of People Benefiting from Healthy Lifestyle Projects
28	Number of Homes Improved or Built
29	Number of Traffic Calming Schemes
30	Number of New or Improved Community Facilities
31	Number of People Using New or Improved Community Facilities
32	Number of Community/Voluntary Groups Supported
33	Number of Community Chest Type Grants Awarded
34	Number of Project Feasibility Studies Funded

Source: CEA

Table A3.2: Selected outputs from Single Regeneration Budget projects used in analysis	
Ref	**Description**
1a1	Number of jobs created
1l	Number of people from disadvantaged groups targeted getting a job
2b1	Area of new business/commercial floorspace (m2)
2b2	Area of improved business/commercial floorspace (m2)
5a1	Number of beneficiaries of community safety initiatives
6a	Land improved/reclaimed for open space (ha)
6b	Land improved/reclaimed for comm/residential dev (ha)
6c	Number buildings improved & brought back into use
6d2	Roads improved (km)
6f	Number of waste management – recycling schemes
8e	Number of community enterprise start-ups
8f	Number of capacity building initiatives carried out

Source: CEA

Appendix 4

Shadow pricing models

Model 1 – Base model

This is the main model to be used to value indicators. The specification of the base model is:
Dependent variable: Quality of life score
Independent variables:

- real equivalised household income
- tenure
- feel 'very' or 'fairly' satisfied with accommodation
- feel trapped in current accommodation
- feel 'very' or 'fairly' satisfied with area
- feel part of the local community
- know neighbours
- neighbours look out for each other
- feel that you can influence decisions
- feel 'very' or 'fairly' unsafe walking alone after dark
- high fear of crime index score
- been a victim of a least one crime in the past 12 months
- household composition
- sex
- age
- ethnicity
- have no qualifications
- need to improve basic skills
- health not good over the past year
- high (good) SF 36 mental health score

- smoke
- do no exercise for at least 20 minutes at a time
- feel 'very' or 'fairly' satisfied with GP
- high problems with local environment score
- high problems with lawlessness and dereliction score
- in employment
- typology grouping of NDC
- survey wave.

The results from this model can be seen in Table A4.1

Model 2 – Satisfaction with area model

This model is used to compute a value for 'being very or fairly satisfied' with your area as a place to live. The specification of this model is the base model excluding place perception indicators:

- feel part of the local community
- know neighbours
- neighbours look out for each other
- feel that you can influence decisions
- feel unsafe walking alone after dark
- high fear of crime index score
- been a victim of a least one crime in the past 12 months
- high problems with local environment score
- high problems with lawlessness and dereliction score.

The rational for this specification is that if satisfaction is to be used to cover all place based benefits the value of satisfaction with the area should be computed excluding such indicators.

The results from this model can be seen in Table A4.2

Model 3 – Want to move model

This model is used to compute a value for 'want to move'. The specification of this model is the base model with 'want to move' replacing the following indicators:

- satisfied with accommodation
- feel trapped in current accommodation.

The rational for this specification is that 'want to move' is highly correlated with both 'satisfaction with accommodation' and 'feeling trapped'. In this case due to potential problems associated with multicollinearity 'want to move' has had to be modelled separately to 'satisfaction with area' and 'feeling trapped in current accommodation'.

The results from this model can be seen in Table A4.3

Table A4.1: Shadow pricing regression model 1: dependent quality of life score

	Beta	SE	t	Sig
Intercept	3.173	0.025	125.817	0.000
Real eq household income (single person) / 1,000	0.009	0.001	13.076	0.000
Socio demographics				
Tenure (ref case 'owner occupier')				
Private renter	0.020	0.014	1.480	0.139
Social renter	–0.032	0.009	–3.559	0.000
Household composition (ref case 'large adult')				
Couple, no dependent children composition	0.027	0.014	1.999	0.046
Couple, with dependent children	0.031	0.014	2.205	0.027
Lone parent family	–0.053	0.014	–3.723	0.000
Single person household	–0.074	0.013	–5.912	0.000
Sex (ref case 'male')				
Female	0.096	0.008	11.952	0.000
Age (ref case '60+')				
16 - 24	0.032	0.016	2.013	0.044
25 - 49	–0.118	0.012	–9.895	0.000
50 - 59	–0.126	0.013	–10.021	0.000
Ethnicity (ref case 'White')				
Asian inc Chinese	0.002	0.014	0.133	0.894
Black	–0.071	0.012	–5.964	0.000
Typology area (ref case 'cluster 5')				
Cluster 1	0.001	0.013	0.060	0.952
Cluster 2	–0.021	0.011	–1.988	0.047
Cluster 3	–0.062	0.012	–5.193	0.000
Cluster 4	–0.036	0.015	–2.447	0.014
Wave (ref case 'wave 4')				
wave 1	0.020	0.010	1.924	0.054
wave 2	0.015	0.010	1.511	0.131
wave 3	0.012	0.011	1.182	0.237

Table A4.1: Shadow pricing regression model 1: dependent quality of life score *(continued)*

	Beta	SE	t	Sig
Indicators (ref case 'not')				
Very/fairly satisfied with accommodation	0.365	0.010	37.036	0.000
Trapped	–0.112	0.010	–10.637	0.000
Very/fairly satisfied with area	0.409	0.008	48.190	0.000
Feel part of the community a great deal/a fair amount	0.133	0.008	16.815	0.000
Know neighbours	0.053	0.008	6.813	0.000
Neighbours look out for each other	0.104	0.008	12.956	0.000
Can influence decisions that affect local area	0.080	0.009	9.363	0.000
Feel a bit/very unsafe after dark	–0.054	0.008	–6.886	0.000
Fear of crime index, high score	0.002	0.009	0.262	0.793
Been a victim of any crime in last year	–0.084	0.008	–10.309	0.000
No Qualifications	0.020	0.008	2.418	0.016
Needs to improve basic skills	0.013	0.008	1.676	0.094
Taken part in educ./training in the past year	0.020	0.010	2.095	0.036
Feel own health not good	–0.272	0.009	–30.491	0.000
SF36 mental health index, high score	0.298	0.008	37.644	0.000
Smoke cigarettes	–0.053	0.008	–6.908	0.000
Do no exercise for 20 minutes or more	–0.141	0.013	–11.237	0.000
Very/fairly satisfied with family doctor/GP	0.048	0.008	6.076	0.000
Problems with environment index, high score	–0.044	0.010	–4.288	0.000
Lawlessness and dereliction index, high score	–0.088	0.010	–8.685	0.000
In employment	0.043	0.010	4.419	0.000
N	52,819			
R-Squared	0.264			

Source: Ipsos MORI NDC Household Survey

Table A4.2: Shadow pricing regression model 2: dependent quality of life score				
	Beta	**SE**	**t**	**Sig**
Intercept	3.196	0.024	131.494	0.000
Real eq household income (single person) / 1,000	0.000	0.000	12.557	0.000
Socio demographics				
Tenure (ref case 'owner occupier')				
Private renter	–0.013	0.014	–0.911	0.362
Social renter	–0.039	0.009	–4.253	0.000
Household composition (ref case 'large adult')				
Couple, no dependent children composition	0.027	0.014	1.949	0.051
Couple, with dependent children	0.046	0.014	3.287	0.001
Lone parent family	–0.045	0.014	–3.102	0.002
Single person household	–0.078	0.013	–6.128	0.000
Sex (ref case 'male')				
Female	0.088	0.008	11.241	0.000
Age (ref case '60+')				
16 - 24	–0.012	0.016	–0.753	0.451
25 - 49	–0.140	0.012	–11.627	0.000
50 - 59	–0.128	0.013	–10.119	0.000
Ethnicity (ref case 'White')				
Asian inc Chinese	0.018	0.015	1.259	0.208
Black	–0.060	0.012	–4.943	0.000
Typology area (ref case 'cluster 5')				
Cluster 1	–0.010	0.013	–0.791	0.429
Cluster 2	–0.033	0.011	–3.057	0.002
Cluster 3	–0.071	0.012	–5.881	0.000
Cluster 4	–0.038	0.015	–2.557	0.011
Wave (ref case 'wave 4')				
wave 1	–0.015	0.010	–1.462	0.144
wave 2	0.000	0.010	0.039	0.969
wave 3	0.007	0.011	0.657	0.511

Table A4.2: Shadow pricing regression model 2: dependent quality of life score *(continued)*

	Beta	SE	t	Sig
Indicators (ref case 'not')				
Very/fairly satisfied with accommodation	0.402	0.010	40.472	0.000
Trapped	–0.138	0.011	–12.982	0.000
Very/fairly satisfied with area	0.515	0.008	64.625	0.000
No Qualifications	0.022	0.008	2.668	0.008
Needs to improve basic skills	–0.001	0.008	–0.132	0.895
Taken part in educ./training in the past year	0.025	0.010	2.592	0.010
Feel own health not good	–0.290	0.009	–32.123	0.000
SF36 mental health index, high score	0.327	0.008	40.993	0.000
Smoke cigarettes	–0.051	0.008	–6.604	0.000
Do no exercise for 20 minutes or more	–0.153	0.013	–12.088	0.000
Very/fairly satisfied with family doctor/GP	0.060	0.008	7.501	0.000
In employment	0.040	0.010	4.057	0.000
N	52,819			
R-Squared	0.243			

Source: Ipsos MORI NDC Household Survey

Table A4.3: Shadow pricing regression model 3: dependent quality of life score

	Beta	SE	t	Sig
Intercept	3.557	0.024	148.075	0.000
Real eq household income (single person) / 1,000	0.000	0.000	13.968	0.000
Socio demographics				
Tenure (ref case 'owner occupier')				
Private renter	0.014	0.014	1.028	0.304
Social renter	–0.059	0.009	–6.521	0.000
Household composition (ref case 'large adult')				
Couple, no dependent children composition	0.032	0.014	2.284	0.022
Couple, with dependent children	0.025	0.014	1.783	0.075
Lone parent family	–0.061	0.014	–4.265	0.000
Single person household	–0.076	0.013	–6.021	0.000
Sex (ref case 'male')				
Female	0.096	0.008	11.944	0.000
Age (ref case '60+')				
16 - 24	0.045	0.016	2.759	0.006
25 - 49	–0.111	0.012	–9.212	0.000
50 - 59	–0.124	0.013	–9.851	0.000
Ethnicity (ref case 'White')				
Asian inc Chinese	–0.009	0.015	–0.647	0.517
Black	–0.088	0.012	–7.290	0.000
Typology area (ref case 'cluster 5')				
Cluster 1	0.000	0.013	0.013	0.990
Cluster 2	–0.023	0.011	–2.161	0.031
Cluster 3	–0.074	0.012	–6.111	0.000
Cluster 4	–0.036	0.015	–2.445	0.014
Wave (ref case 'wave 4')				
wave 1	0.017	0.010	1.689	0.091
wave 2	0.012	0.010	1.148	0.251
wave 3	0.010	0.011	0.968	0.333

Table A4.3: Shadow pricing regression model 3: dependent quality of life score *(continued)*

	Beta	SE	t	Sig
Indicators (ref case 'not')				
Want to move	–0.226	0.008	–28.199	0.000
Very/fairly satisfied with area	0.411	0.009	47.586	0.000
Feel part of the community a great deal/a fair amount	0.132	0.008	16.560	0.000
Know neighbours	0.048	0.008	6.084	0.000
Neighbours look out for each other	0.107	0.008	13.214	0.000
Can influence decisions that affect local area	0.085	0.009	9.959	0.000
Feel a bit/very unsafe after dark	–0.053	0.008	–6.660	0.000
Fear of crime index, high score	0.004	0.009	0.394	0.693
Been a victim of any crime in last year	–0.087	0.008	–10.534	0.000
No Qualifications	0.012	0.008	1.377	0.169
Needs to improve basic skills	0.013	0.008	1.606	0.108
Taken part in educ./training in the past year	0.021	0.010	2.163	0.031
Feel own health not good	–0.285	0.009	–31.692	0.000
SF36 mental health index, high score	0.304	0.008	38.168	0.000
Smoke cigarettes	–0.059	0.008	–7.669	0.000
Do no exercise for 20 minutes or more	–0.148	0.013	–11.738	0.000
Very/fairly satisfied with family doctor/GP	0.060	0.008	7.575	0.000
Problems with environment index, high score	–0.056	0.010	–5.432	0.000
Lawlessness and dereliction index, high score	–0.089	0.010	–8.750	0.000
In employment	0.049	0.010	4.908	0.000
N	52,819			
R-Squared	0.253			

Source: Ipsos MORI NDC Household Survey

Appendix 5

Monetising net additional outcomes

Due to the fact that the shadow pricing method values indicators using annual income it is necessary to monetise net additional outcomes on an annual basis. An example is provided of how the monetised net additional benefit for SF36 mental health index, high score has been calculated.

The first step is to estimate the net additional impact each year, in terms of the number of individuals affected. This is NDC area change from 2002 to the given year minus comparator area change over the same time period.

If the net additional impact is significant the number of net additional individuals (a) is multiplied by the monetised unit benefit for that outcome (b), GDP deflators (d) are then multiplied by these annual figures to express values in constant prices.

The resultant figures are then summed to give the monetised net additional outcomes for that particular indicator.

Table A5.1: An example how monetised net additional outcomes have been calculated

	2002 to					
	2003	**2004**	**2005**	**2006**	**2007**	**2008**
Net additional impact no. (a)	5500	11100	12900	14800	17300	19900
Monetised unit benefit (b)	33,500	33,500	33,500	33,500	33,500	33,500
(a) multiplied by (b) equals (c)	185,660,000	371,320,000	433,016,000	494,712,000	579,861,000	665,010,000
Monetised net additional outcome 2002 to 2008 (£)	**£2,729,577,000**					

Source: Ipsos MORI NDC Household Survey; ONS

Appendix 6

Ten NDC areas seeing greatest change

Table A6.1: Monetised net impact: 10 areas seeing greatest change: 2002 to 2008

	NDC Net additional outcomes (number)	Monetised impact (£,000)	
		Option	Option 2
Education			
Key Stage 2 English, level 4	500	n/m	n/m
Key Stage 3 English, level 5	200	n/m	n/m
Key Stage 4, five or more GCSEs at A* to C	400	5,669	5,669
No qualifications (a)	5,600	n/m	n/m
Taken part in educ./training in the past year (b)	9,600	57,810	57,810
Worklessness			
Health			
Do no exercise for 20 minutes or more	–1,000	314,490	314,490
Smoke cigarettes	10,700	252,092	252,092
SF36 mental health index, high score	23,700	2,334,793	2,334,793
Health somewhat/much worse than one year ago	11,000	n/m	n/m
Very/fairly satisfied with family doctor/GP (c)	3,800	25,276	25,276
Crime			
Feel a bit/very unsafe after dark	27,200		451,130
Been a victim of burglary in last year	4,600		
Been a victim of criminal damage in last year	6,300		
Been a victim of any crime in last year	13,800		330,484
Lawlessness and dereliction index, high score	33,100		1,363,698
Fear of crime index, high score	1,800		n/m

Table A6.1: Monetised net impact: 10 areas seeing greatest change: 2002 to 2008 *(continued)*

	NDC Net additional outcomes (number)	Monetised impact (£,000)	
		Option	Option 2
Housing and the physical environment			
Very/fairly satisfied with area	24,700	6,438,063	
Very/fairly satisfied with accommodation	5,100		–621,503
Area got much/slightly better in past two years (d)	25,500		
Problems with environment index, high score	15,200		316,564
Community			
Neighbours look out for each other	7,500		867,248
NDC improved area a great deal/ a fair amount (e)	77,400		n/m
Quality of life very/fairly good	6,100		n/m
Involved in NDC activity (e)	21,000		n/m
Total		**9,428,193**	**5,697,751**

Source: Ipsos MORI NDC Household Survey; SDRC;
Base: All; (a) All working age respondents; (b) All working age not currently in full time education; (c) All seen GP in last year; (d) All lived in area two or more years (e) All heard of local NDC;
n/m: not monetised; 2008/09 prices

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