Evaluation of the ENWORKS Project: "Embedding Resource Efficiency in Key Sectors" 2009-2013

Final Report

April 2013

This page is intentionally blank

Evaluation of the ENWORKS Project: "Embedding Resource Efficiency in Key Sectors" 2009-2013

Final Report

A report submitted by ICF GHK

Date: April 2013

Job Number 30258561

This page is intentionally blank

ICF GHK
30 St Paul's Square
Birmingham
B3 1QZ
T +44 (0) 121 233 8900
FF +44 (0) 121 212 0308
birmingham@ghkint.com
www.ghkint.com

Document Control

Document Title	Evaluation of the Embedding Resource Efficiency in Key Sectors Project
Job number	30258561
Prepared by	James Medhurst & Richard Smith
Checked by	Richard Smith
Date	April 2013

ICF GHK is the brand name of GHK Consulting Ltd and the other subsidiaries of GHK Holdings Ltd. In February 2012 GHK Holdings and its subsidiaries were acquired by ICF International.

Contents

Executive Summary

Introduction

GHK Consulting was appointed in April 2011 to carry out a long term evaluation of the ENWORKS Embedding Resource Efficiency in Key Sectors Project ("the Project") covering the period 2009 - 2013.

The Project commenced in October 2009 and was designed to:

- Improve the competitiveness and productivity of Northwest companies, focusing on priority sectors, high growth and high environmental impact companies, by reducing their exposure to environmental risk and improving their resource efficiency.
- Reduce the CO_2 emissions, energy, water and material usage of Northwest companies and divert commercial and Industrial waste from landfill.
- Create a single, regional, resource efficiency and environmental risk business support offer that is accessible by all NW companies and is fully compliant with the government's Business Support Simplification Programme (BSSP).

The Project has been funded by the European Regional Development Fund (ERDF) and the UK Government's Single Programme funds, which have been managed by the Northwest Regional Development Agency (NWDA) and the Department for Business, Innovation and Skills (BIS). The ENWORKS Central Team is responsible for overall programme management, including securing funding and reporting expenditure and results to funders. Alongside this, the Central Team manages the delivery partnership and all its activities and provides a number of services to partners both to help realise economies of scale and to ensure quality and consistency of service to business.

Project Rationale

The lack of investment (either in time or finance) in resource efficiency or environmental risk management by firms, when it would be rational to make an investment, indicates the presence of market failure. A 'market failure' is said to exist when the market, if left to its own devices, does not lead to an economically efficient outcome. A range of market failures lead to under-investment in resource efficiency and environmental risk management, providing the rationale for intervention. A review of evidence in relation to market failure in this space illustrates the following key points:

- Market failure relating to resource efficiency and environmental risk results in companies that do not act rationally (although they might think they are) and fail to make investments (intellectual or monetary) which would benefit their business.
- Financial savings from resource efficiency can be significant but the significance of different resources and related savings varies between sectors. This supports the proposition that business support should target different types of business according to the potential type, as well as scale, of savings.
- It is important to understand how business support can be effectively targeted to motivate more businesses to make greater use of and benefit from support. This targeting of support must consider issues such as, for example, management structures, growth aspirations etc. as well as the size of firm and the sector that the firm operates within.

The Project was designed to address a range of market failures that result in businesses under investing in resource efficiency. The Project was also intended to provide a good strategic fit with the objectives of Single Programme and ERDF funders

Project activity

ENWORKS business support services in this project include:

- Tailored on-site reviews to identify ways to improve energy and resource efficiency and environmental risk management

- Ongoing technical support with implementing improvements, on and off-site
- Bespoke software to quantify and prioritise improvements and report on savings
- Environmental information services (including 24 tailored e-bulletins per year)
- Knowledge and skills transfer, through training and networking events.

The Accountable Body for ENWORKS at the start of this project was Groundwork UK, this changed in April 2011 to Economic Solutions Ltd.

Expenditure and Outputs

Analysis of expenditure and output data for the Project illustrates the following key points:

- The grant funding offered to the project changed over time, finishing lower than anticipated at the beginning of the project;
- The project expenditure to January 2013 was £8.4m, an additional £15.6m of capital spend was leveraged in by beneficiary firms to implement identified opportunities;
- Expenditure remained close to target throughout project delivery, with 94 per cent of available funding utilised at the time of writing this report (i.e. before project completion);
- The project was highly effective in engaging firms across the region, assisting far more firms than funder output targets; and,
- The project produced cost savings, jobs and sales among beneficiary firms that exceeded funder targets and resulted in a higher level of value for money than planned.

Beneficiary Experience and Quality of Service

A beneficiary survey was undertaken in 2012. There were 167 responses from a total beneficiary population of 1,080, a survey response rate of 15 per cent. The following key findings were evident from the survey:

- In all sub-regions at least three quarters of businesses suggested that maximising resource efficiency was important, compared to just 5 per cent of businesses who felt it was not important.
- There was a higher share of businesses stating that they possess a high level of knowledge to *identify* resource efficiency improvements (76 per cent) than those stating they have a high level of knowledge to *implement* improvements (69 per cent).
- More than a third of firms surveyed (37 percent) stated that they did not possess effective appraisal techniques to analyse costs and benefits of investments in resource efficiency.
- The most significant stimulus to invest in resource efficiency improvement cited by respondents was the need to keep customers.
- In most sectors, over half of businesses had previously identified resource efficiency improvements prior to their engagement with ENWORKS.
- 95 per cent of respondents were 'highly satisfied' or 'satisfied' with the on-site audit that they had received.
- 96 percent of respondents were 'highly satisfied' or 'satisfied' with the ongoing support that they had received.
- 96 percent of respondents were 'highly satisfied' or 'satisfied' with the support to understand and manage environmental risk that they had received.
- 96 percent of respondents were 'highly satisfied' or 'satisfied' with the training that they had received.

Impacts and Outcomes

Economic Impact Assessment

The economic impact assessment of Project was based on a review of the outputs captured by the project (all signed-off by the business beneficiaries) alongside a review of the project outcomes, as collected in the ENWORKS Efficiency Toolkit (and again verified by the beneficiaries) and information from the beneficiary survey. The data used is correct to January 2013 so does not include the full impact of the project as results continue to be captured through to April 2013. The results of the economic impact assessment are outlined in Table 1.1.

The research indicates that, after due allowance for the usual additionality factors, an attributable increase in annual GVA of £47.5m and 744 additional and safeguarded jobs have been generated for a programme expenditure of £8.4m. In addition £0.3m of environmental benefit shave been secured. Given the reported persistence of impacts a further £40.2m of GVA is expected to occur. The programme has also identified additional opportunities in beneficiary firms which, if implemented, would deliver a further £46.6m of GVA.

Table 1.1 Results of the Additionality Assessment of the Project 2010-13

Variable	Definition	Number
All Businesses Assisted	Gross output of the Project (includes all business assisted)	1,133
Average Cost Saving	Estimated average ANNUAL cost savings per business assisted, achieved to-date	£18,000
Average Sales generated (includes new sales and sales safeguarded)	Estimated average ANNUAL new sales and sales safeguarded per business assisted, achieved to-date	£114,000
Gross GVA generated	Gross ANNUAL economic value generated from the Project through beneficiary firm cost savings and sales	£58.8m
Deadweight	The benefits associated with an intervention which might have occurred in any event	21%
Gross additional impact	Gross ANNUAL economic value through business cost savings and sales minus deadweight	£46.5m
Displacement	The extent to which the impact of the Project has been offset by a reduction of activity elsewhere in the region	25%
Leakage	The share of impact which has benefited companies outside of the region.	10%
Net direct additional regional impact	Gross ANNUAL economic impact adjusted for displacement and leakage.	£36.6m
Multiplier	The extent to which assisted businesses increased purchases of goods and services from regional producers as a result of the	1.53

Variable	Definition	Number
	assistance received.	
Net regional impact	Net ANNUAL regional economic impact resulting from business cost savings and sales.	£47.5m
Environmental benefits	Present value of current and future monetary value of environmental savings	£0.3m
Total Economic Benefit of programme	GVA and environmental benefit	£47.8m

Sources: Gross output (businesses assisted) from ENWORKS output data. Additionality factors obtained from the beneficiary survey are detailed in Annex 5

Assessment of Strategic Added Value

To assess the SAV of the Project, interviews were undertaken with stakeholders in early 2012. A full list of stakeholders consulted forms Annex 4 of this paper. The following key findings resulted from this research:

1. **Strategic Leadership**: it is clear that effective strategic leadership has been provided by the ENWORKS Central Management Team, based on a programme of business support that has built on previously delivered activity. In addition, the Project has benefitted other organisations in the region that deliver business support and regulatory guidance.
2. **Co-ordination, alignment and partnership:** the business support landscape has undergone a period of change during the project delivery period. This has been challenging for ENWORKS and may have been confusing for firms. However, the Central Management Team has provided effective coordination and alignment of activities.
3. **Promoting Intelligence Sharing and Awareness Raising:** The Project has effectively promoted intelligence and raised awareness of the benefits of resource efficiency to firms in the North West. Engagement through a network of providers has been useful in this respect; however, engagement remains a significant issue for firms. The ENWORKS Efficiency Toolkit has been further developed during the Project and is recognised as an example of good practice in tracking business support impact.

Conclusions and Recommendations

Conclusions

The conclusion from this project evaluation is that the project is highly successful in meeting its objectives of addressing market failure and realising high levels of economic and environmental benefits.

As a result of the analysis presented in this report the following detailed conclusions are evident**:**

1. **The project was an appropriately designed programme of business support**. The project design addressed the nature of multiple market failures in relation to firms' investment in resource efficiency and reducing exposure to environmental risk, through providing support which both identified opportunities to improve and provided ongoing assistance to implement those opportunities.

2. **The project was effectively coordinated by the ENWORKS Central Management Team and ENWORKS board**. The following issues were successfully managed during the programme:

    a. ENWORKS developed the application and managed the approval process with funders, providing a coordination function for partners.

b. A number of changes in the level of available funding took place during the project. The ENWORKS Central Management Team ensured that this did not impact on delivery.

c. The ENWORKS Central Management Team enabled the delivery network to concentrate on delivering business support, by managing outputs and funder reporting .

d. ENWORKS Central Management Team also provided a learning and good practice exchange forum through regular delivery partner meetings. Furthermore the ENWORKS board provided strategic oversight and direction.

3. **Delivery of the project through a network of providers was an effective model delivering support based on the requirements of firms across the region**. Expert local providers were undoubtedly a key strength of the programme.

4. **The project has successfully supported business growth and jobs in beneficiary firms in the North West**. The beneficiary survey, outputs verified by beneficiaries and the ENWORKS Efficiency Toolkit provide strong evidence that the support provided resulted in increased sales and jobs (as well as jobs and sales safeguarded) that would not have occurred without the project. The Project assisted beneficiary firms to achieve an average sales increase of £114k per firm.

5. **The project has delivered positive environmental impacts**. The reduced use of energy, water and waste among beneficiary firms in the region has had valuable environmental impacts. The Project assisted beneficiary firms to achieve an average cost saving of £15k per firm through resource efficiency. In addition the promotion of sustainable business practices may continue to influence behaviours of both firms and individuals.

6. **The Project benefitted from the delivery of previous programmes**. Both the delivery network and the ENWORKS Central Team were able to build on previous activity and lessons learned in order to deliver a project with extremely high value for money, delivering cost effective, well-targeted and tailored business support services.

7. **The ENWORKS Efficiency Toolkit is a valuable resource to monitor opportunities created and the level of implementation**. The Toolkit provides a resource for firms to monitor the range of identified opportunities and the potential and actual returns from actions. Moreover, it provides real-time data about project performance, a robust audit trail for all outcomes reported by the project and is a valuable data-set for policy makers.

Recommendations

The following recommendations for future funders are evident from the analysis carried out during the evaluation:

8. **Market failures in relation to business investment in resource efficiency remain and require public sector intervention**. A business support programme which provides firms with support to identify and implement opportunities to increase resource efficiency and reduce exposure to environmental risk should therefore continue. The impacts of projects like this help to deliver both growth and the transition to a low carbon economy – goals that are shared at local, national and international level.

9. **The ENWORKS delivery model remains appropriate**. Delivery through a network of providers gives flexibility, local accountability, access to an appropriately wide range of specialisms and is cost effective. Funders should utilise the expertise of the ENWORKS Central Management Team in creating and managing complex yet effective delivery networks for a range of policy/funding regimes in any future opportunities. . Support through a central management structure provides significant added value (and reduced administrative burden on delivery teams and funders) and it is recommended that this is included as an essential element of any future project.

10. **The ENWORKS Efficiency Toolkit is a valuable resource for business support providers**. The Toolkit is both a project management tool – providing data in real time to monitor and manage project performance, as well as a business support tool – removing

barriers to change within businesses and increasing the effectiveness of an intervention. In addition, it provides a robust audit trail to funders, allowing every impact (e.g. every 1p or gram of CO_2) to be traced to an individual beneficiary and a specific action, alongside disaggregating project impacts into those that have been achieved and those that have been identified but not yet fully implemented, giving unrivalled accuracy in project data. It should therefore be included in any future funding agreement.

1 Introduction

GHK Consulting was appointed in April 2011 to carry out a long term evaluation of the ENWORKS Embedding Resource Efficiency in Key Sectors Programme (the Project) covering the period 2009 - 2013.

1.1 ENWORKS

ENWORKS is a unique, not-for-profit organisation, set up in 2001 by a regional board of decision-makers and influencers as the direct result of research by the Environment Agency, to provide coordinated environmental support to businesses across North West England.

The aim of ENWORKS is to improve the environment and economy for the North West, by engaging businesses of all sizes and sectors in sustainable business practice. Core activity focuses on reducing energy, water, fuel and material use at all stages in the value chain – from product design to manufacture and distribution and within the business premises – through simple changes in behaviour as well as more advanced technological solutions. ENWORKS also helps businesses to manage risks – from compliance with environmental regulations to meeting supply chain requirements and planning for extreme weather events such as flooding. The organisation exists to combat market failure, by helping companies to understand environmental risks and opportunities and convert them into competitive advantages.

The ENWORKS Partnership for this Project consists of three core elements[1]:

- **Governance – the independent partnership board:** The role of the ENWORKS board is to provide leadership, to set goals for the partnership, to scrutinise all activity and to influence the environmental business agenda in the North West. The independence of the board is crucial as it enables ENWORKS to put the interests of the North West region as a whole to the forefront of the agenda, rather than those of any one organisation.
- **Management and Co-ordination – the Central Team:** The role of the Central Team is to translate the board's vision and the local priorities into a workable, practical model of business support. This includes establishing and maintaining a partnership of delivery organisations; securing funding from a range of regional, national and European sources; managing the funding and continually driving up performance to maximise effectiveness and value for money; specifying and quality assuring the support provided to ensure it meets both business need and policy objectives; and providing a range of resources that support the activities of delivery partners.
- **Delivery to Business – the delivery partnership:** the ENWORKS delivery model provides support through a network of organisations in order to ensure that wherever a business is based, or whatever sector the business operates in, there will always be a support provider nearby that understands and can respond to business need and is locally accountable. This diverse network of delivery partners gives ENWORKS local knowledge, accountability and credibility, plus a wide range of skills and experience; it also enables the partnership to respond easily to policy and funding changes at both local and national levels.

ENWORKS business support services in this project include:

- Tailored on-site reviews to identify ways to improve energy and resource efficiency and environmental risk management
- Ongoing technical support with implementing improvements, on and off-site
- Bespoke software to quantify and prioritise improvements and report on savings
- Environmental information services (including 24 tailored e-bulletins per year)

[1] Further information can be found at: http://www.enworks.com/about

- Knowledge and skills transfer, through training and networking events.

The Accountable Body for ENWORKS at the start of this project was Groundwork UK, this changed in April 2011 to Economic Solutions Ltd.

1.2 The Evaluation – Aims and Objectives

The purpose of the evaluation of the ENWORKS Embedding Resource Efficiency in Key Sectors project has been to:

- Provide an independent evaluation of the performance and impact of the Project, over the period to 2013; and,
- Provide robust evidence of ENWORKS impact to enable lessons from the evaluation to inform future project design and delivery
- The invitation to tender set out the evaluation objectives more specifically; these were confirmed during the inception meeting and include
- An assessment of the gross and net outputs of the project, including the levels of additionality (deadweight, leakage, displacement, substitution and multiplier effects).
- The overall value for money of the project.
- An assessment of how far the project has met its initial objectives.
- An assessment of any other measures set out in the monitoring and evaluation (M&E) plan.
- Consideration of the nature and scope of the Strategic Added Value (SAV) and how this has contributed to the achievement of objectives.

1.3 This report

This report continues in the following sub-sections:

- Section 2 provides an overview of the Project, including the project rationale and the specific aims and objectives.
- Section 3 outlines project expenditure and outputs.
- Section 4 presents the results of the survey of beneficiaries, examining their attitude toward resource efficiency and views regarding the quality of support received.
- Section 5 presents the impacts and outcomes from the Project, this includes an assessment of the economic impact of the Project and the Strategic Added value of the approach taken.
- Section 6 outlines conclusions and recommendations.

Annexes contain further supporting material.

2 The ENWORKS "Embedding Resource Efficiency in Key Sectors" Project

2.1 Introduction to the Project

The ENWORKS Embedding Resource Efficiency in Key Sectors Project was established to provide a continuation of business support to companies in the North West with the aim of increasing the market penetration, quality, consistency, rate of adoption and impact of resource efficiency support to businesses in the region, particularly within the key priority sectors (as defined by the North West Regional Economic Strategy (RES)); high growth companies and companies with high resource efficiency opportunities, whilst building on the lessons learnt through delivery of the previous Environmental Business Support programme (see: ENWORKS EBS Independent Evaluation).

The Project commenced in October 2009 and was designed to:

- Improve the competitiveness and productivity of Northwest companies, focusing on priority sectors, high growth and high environmental impact companies, by reducing their exposure to environmental risk and improving their resource efficiency.
- Reduce the CO_2 emissions, energy, water and material usage of Northwest companies and divert commercial and Industrial waste from landfill.
- Create a single, regional, resource efficiency and environmental risk business support offer that is accessible by all NW companies and is fully compliant with the government's Business Support Simplification Programme (BSSP).

The Project has been funded by the European Regional Development Fund (ERDF) and the UK Government's Single Programme funds, which have been managed by the Northwest Regional Development Agency (NWDA) and the Department for Business, Innovation and Skills (BIS).

2.2 Project aims and objectives

The key objective of the Project was to create a regional programme to cover the full spectrum of environmental impacts generated by a business – from the products it makes, through to the processes it uses and the waste it generates – the full 'lifecycle' of impacts.

Specifically the aims of the Project were to:

- Reduce the environmental impact of businesses across the Northwest through improvements in resource efficiency, residual waste management and the mitigation of environmental risk.
- Improve the performance and productivity of businesses through resource efficiency, by increasing profitability, facilitating business growth and aiding the retention and creation of new markets
- Increase skills and knowledge of environmental management within businesses
- Reduce business greenhouse gas emissions by improved resource use and waste management
- Reduce commercial and industrial waste to landfill
- Support businesses to respond positively to the pressures and opportunities presented by Sustainable Procurement

2.3 Business support

The Project provided companies with a range of on and off-site support, focusing on resource use and environmental risk management.

To support businesses particularly within the key priority sectors, high growth companies and companies with high resource efficiency opportunities, support was provided through three work-streams:

- Tier 1 - high impact RES priority sectors
- Tier 2 - other organisations which, whilst not deemed "priorities" within the RES, had the potential to achieve significant environmental improvements and/or growth
- Tier 3 - organisations which do not fall into either of the other two categories

Examples of the types of support provided include:

- A range of audits/reviews – starting with opportunity identification and leading to more specialist audits to target specific opportunity areas as determined by the initial findings, e.g. material usage, waste generation, energy management, water utilisation, compressed air optimisation, thermal efficiency;
- Support with the implementation of the audit findings – e.g. on-site assistance with root cause analysis, option analysis & prioritisation, monitoring & measurement, change management; off-site research into best practice or alternative material / technology options;
- Skills transfer – includes both on-site staff training and open training events (both general awareness raising and subject targeted) to embed both knowledge and 'know how' into business, as well as providing individuals with transferable skills that are increasingly valuable in the marketplace and support wider dissemination if/when staff change companies;
- Information provision – e.g. targeted electronic information; newsletters; and, best practice.

2.4 Delivery and Management

2.4.1 Delivery

All potential beneficiary businesses were inducted into a multi-stage 'triage' process to determine whether a business was categorised as Tier 1, Tier 2 or Tier 3, in order to match the support available to their needs and the project offer in the most cost effective way. This is described diagrammatically in Annex 1.

The triage process enabled the Project to tailor a package of support designed to meet individual business need and deliver return on investment for the Project, by identifying how an individual business would be supported dependent on its sector and scope of improvements. This ensured that all North West businesses had access to support, while focusing effort into the priority sectors and high opportunity companies.

The three tiers of support provision were established as follows:

Tier 1	
Businesses targeted	Businesses within high impact priority sectors identified as Food & Drink, Automotive, Chemicals and Textiles (Advanced Flexible Materials)
Intensity of support	Medium – High
Description of support	A comprehensive support package was offered to enable companies to improve their competitiveness through reducing their environmental impact at all stages in a product lifecycle, including support on product design (using existing technologies), manufacturing processes and residual wastes and measuring the lifecycle carbon footprint of specific products where appropriate.

Delivered by	Four Cluster organisations delivered the Tier 1 support, although not for the whole project duration (see figure 2.1). They each employed sector specialists who acted as the relationship manager with businesses, identifying the appropriate support package and commissioning it from the Consultants Consortium (see below). This was a new model of delivery designed to test whether the difficulties of engaging businesses on an issue suffering significant market failures were reduced by delivering the message through sector specialists rather than environmental professionals. Each Cluster organisation was allocated a proportion of the overall project budget and output/outcome targets, which they were responsible for delivering. The contractual arrangements were formalised through a business plan and in a Service Level Agreement with ENWORKS. The cluster organisations were responsible for engaging businesses into the project and for recording and reporting the impacts of that support to ENWORKS. Delivery of the appropriate environmental business support was provided through the Tier 1 Consultants Consortium (see below). Each cluster organisation was also responsible for maintaining key linkages with sub-regional stakeholders, to ensure the Project was embedded within the regional landscape. A consortium of consultants (Tier 1 Consultants Consortium) was OJEU procured and managed by ENWORKS to work through the cluster organisations to deliver the full spectrum of environmental services to their business beneficiaries. The arrangements were formalised in a Service Level Agreement with ENWORKS. Services were commissioned and managed by the Clusters, with support from the lead Consortium organisation to ensure the recipient businesses received the most appropriate environmental support and that information provided to the businesses was quality assured.

Tier 2

Businesses targeted	Businesses from other sectors with the potential for significant environmental improvements and/or growth.
Intensity of support	Medium – High
Description of support	This activity was to focus on companies in other key sectors with either high growth potential or those businesses which could generate significant saving opportunities; targeting improvements in the efficiency of energy, water and materials usage and the management and avoidance of environmental risk

Delivered by	A sub-regional network of local, third-sector organisations delivered the Tier 2 support (ENWORKS Sub-regional Delivery Partners). These organisations have a track record of delivering high-quality and effective environmental advice to businesses and have in-house teams of qualified environmental auditors. These organisations collectively provided fully regional coverage for the Project, with the Tier 1 sector support over-laid on top, (ensuring there was no postcode lottery of support for beneficiaries) and delivered advice and support direct to businesses in their area. Each organisation was allocated a slice of the overall project budget and output/outcome targets (aligned to the number of target businesses in their area) which they were responsible for delivering and which was formalised through a business plan and in a Service Level Agreement with ENWORKS. Delivery partners were responsible for engaging businesses into the Project, for delivering appropriate advice and support to them and for recording and reporting the impacts of that support to ENWORKS. They were also responsible for ensuring the Project was well embedded within their local policy, government and business landscape. A bank of consultants (Tier 2 Consultants Bank) was procured by ENWORKS to provide sub-regional delivery partners with additional capacity when needed and with specialist skills that are not cost effective to embed permanently in each organisation. The arrangements were formalised in a Service Level Agreement with ENWORKS and services were commissioned and managed by the sub-regional delivery partners.

Tier 3

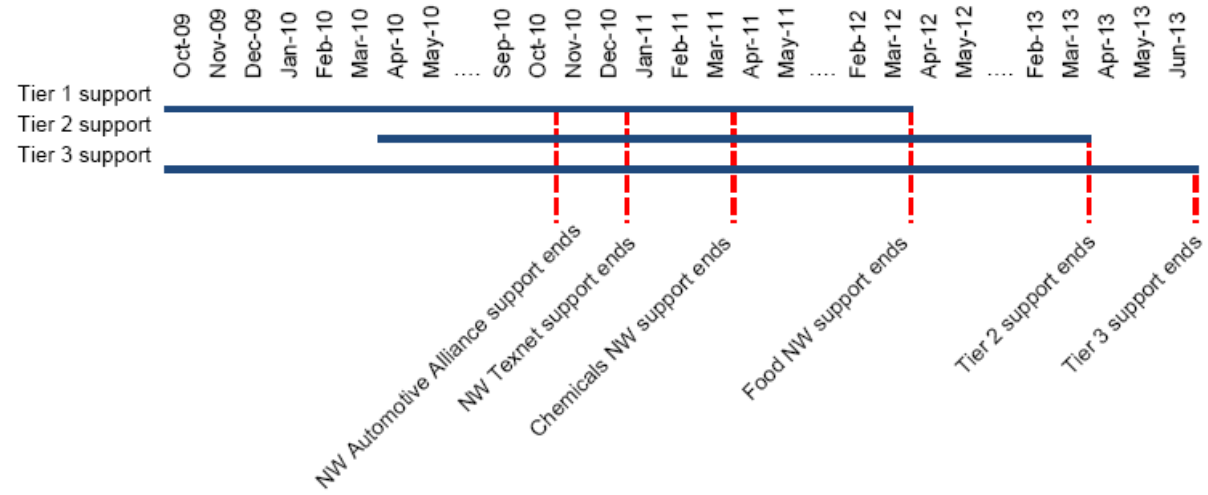
Businesses targeted	Businesses which do not fall into either of the other two categories
Intensity of support	Low – Medium
Description of support	Companies that are not in the priority sectors and/or those that did not have the potential to realise savings were offered 'light touch' support through, for example, electronic information updates (ENWORKS "Green Intelligence") and signposting services (e.g. to Business Link Environment Connect) to access other Regional and National business support provision.
Delivered by	Resources developed by the ENWORKS Central Team and utilised/signposted via the Cluster organisations and Sub-regional partners.

2.5 Delivery timescales

The Project was governed by two contracts administering the funding received from both the European Regional Development Fund (ERDF) and the UK Government's Single Programme funds (SP funds). The contracted earliest Start Date for the Project was 1st October 2009, with a completion date for the SP funded activity of the 31st March 2013. Delivery of ERDF funded activity also ceased at the end of March 2013, with a financial completion date of 30th June 2013.

Project delivery of the Tier 1 support started on 1st October 2009. Tier 2 support launched on the 1st April 2010 to coincide with the end of the previous ENWORKS EBS Programme.

Figure 2.1 Delivery Timeline



Source: ENWORKS Central Management Team Delivery Plan

2.6 Management

The ENWORKS Central Team is responsible for overall project management including securing funding and reporting expenditure and results to funders. Alongside this, the Central Team manages the delivery partnership and all its activities and provides a number of services to partners both to help realise economies of scale and to ensure quality and consistency of service to business. These include:

- ENWORKS Online Resource Efficiency Toolkit – bespoke software developed and managed by the Central Team that allows individuals to access a secure account on which to log the opportunities for resource efficiency improvements that are identified, and then to prioritise, track and report on the economic and environmental savings generated as changes are implemented.[2]
- Green Intelligence – a free, fortnightly e-bulletin of environmental news and information, tailored by the individual recipients to be relevant to their business size and sector, produced by ENWORKS.
- ENWORKS in a Box – an accessible online portal for sharing best practice developed and managed by ENWORKS Central Team to disseminate information, practical tools and guidance produced by ENWORKS to businesses and other organisations. Documents can be downloaded from the site free of charge in a range of different file formats, and content is updated regularly.
- Get Support – an online resource developed by ENWORKS for delivering light touch support to businesses. The website provides businesses with some initial advice, ideas and links to support them in making environmental improvements within their organisation.
- Marketing & Communications – raising awareness of the environmental business agenda and marketing the project to external stakeholders at a regional and national level through, for example, presence on relevant steering groups and committees and the ENWORKS website, to ensure the project is embedded in relevant policy and strategy and that business referrals are generated into the project; plus supporting delivery partners with their marketing to business beneficiaries through, for example, video case studies, and ensuring that communications are compliant with funder requirements.

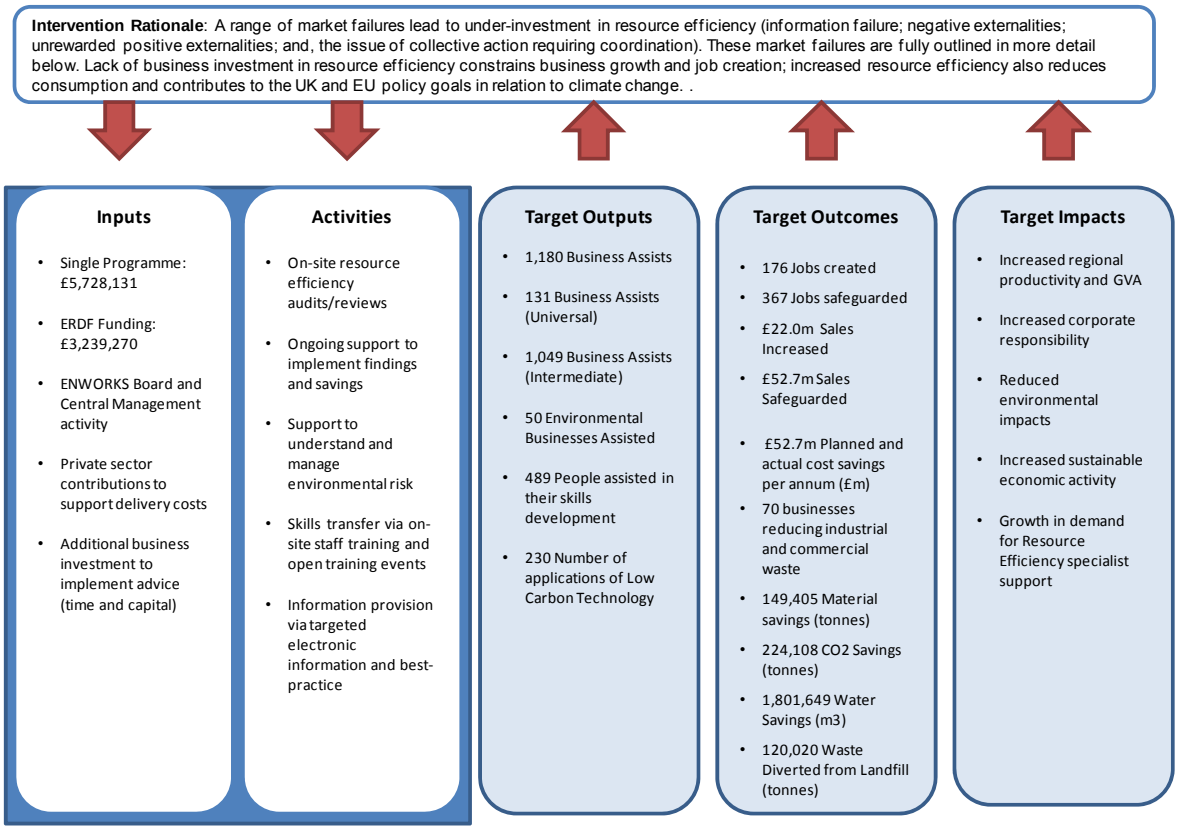
[2] The Toolkit is accessed via secure log-in at www.efficiencytoolkit.net

- Triage & standardisation – the Central Team have used a triage system, developed prior to this Project to target resources at those businesses with greatest potential to save at the project outset
- Consultancy support – the procurement and management of environmental consultants to support Tier 1 and Tier 2 delivery, as described in Section 2.4.
- Independent evaluation – setting out the terms of reference for this evaluation, aligned with the requirements of the BIS Independent Evaluation Framework (IEF), and procuring consultants and managing the delivery of the evaluation, paying particular attention to gaining evidence of market failure on this issue.
- Additional activities – a wide variety of additional activities are carried out by the Central Team including, but not limited to: working with the Regional Leaders Board, the Business Support Transition Group and the European Economic Strategy Group (EESG) to input into their strategic priorities.

2.7 Rationale for the Project

A logic model for the Project is shown in Figure 2.2; it presents an overview of the project from its rationale to expected impacts, providing the basis against which actual project achievements can be tested. The rationale, inputs and activities are reviewed below; outputs and impacts are analysed in Section 3.

Figure 2.2 ENWORKS Embedding Resource Efficiency in Key Sectors Project Logic Model



Source: GHK Analysis of project documentation

The fundamental rationale for developing and securing funding for the Embedding Resource Efficiency in Key Sectors Project was the persistence of market failures relating to resource efficiency investment and environmental risk management.

Market failure provided the key rationale for the previous ENWORKS 'Environmental Business Support' Project and a detailed analysis of the market failures relating to

resource efficiency was provided as part of the independent evaluation for that project[3]. This report reviews any developments and improvements in market failures in relation to this Embedding Resource Efficiency in Key Sectors Project and is discussed in more detail in the following section.

2.8 Market failure and the Project

The lack of investment[4] in resource efficiency by firms when it would be rational to make investment indicates the presence of market failures. A 'market failure' is said to exist when the market, if left to its own devices, does not lead to an economically efficient outcome.[5] The nature and scale of market failure provides the rationale for policy intervention; to provide the information, signals and incentives necessary for an efficient market to operate. It is in such circumstances that policy intervention, including state aid, has the potential to improve the market outcome in terms of prices, output and use of resources.

A range of market failures lead to under-investment in resource efficiency providing the rationale for intervention. These are illustrated in the box below.

Market Failure and Resource Efficiency

- **Information failure:** Information failure prevents businesses and individuals from understanding the long-term cost of their production and consumption choices and the cost savings of opting for resource-efficient solutions. Difficulties in processing information to make rational decisions are stronger when there are long-term horizons involved, very small probabilities and complex information. This is the dominant rationale for ENWORKS Embedding Resource Efficiency in Key Sectors project.
- **Negative externalities:** Key externalities reflect the way in which resources are used and they mean that prices often do not reflect total social costs.[6] This in turn distorts resource allocation. For example, human-induced climate change is therefore an externality that is not corrected through any institution or market unless policy intervenes.
- **Unrewarded positive externalities:** Aspects of resource efficiency measures relate to the creation and reward of positive externalities linked to taking action. For instance, the results of businesses and individuals adopting a more responsible approach towards the consumption of water would benefit everyone with water shortages being reduced.
- **Co-ordination or collective action problem:** Public intervention under this goal can also be justified by coordination problems. There is a case for public intervention to encourage or enable cooperation when there is a large and heterogeneous group of beneficiaries and risks are prohibitive for individual agents and where free-riders are likely to be present.

Source: GHK Literature Review of Resource Efficiency Market failure

In summary, market failure relating to resource efficiency results in companies that do not act rationally (although they might think they are) and fail to make investments which would benefit their business.

[3] http://www.enworksinabox.com/sites/default/files/ENWORKS%20EBS%20Programme%20Independent%20Eval%202011_0.pdf, section 2.3, pages 9 – 17.

[4] Investment in this case is defined as both the capital and revenue costs of improved resource efficiency

[5] *DG Competition management Plan (2012), European Commission. Available at: http://ec.europa.eu/atwork/synthesis/amp/doc/comp_mp.pdf*

[6] HM Treasury (2006) "Stern Review on the economics of climate change " 183 HM Treasury

2.8.1 There are still significant cost saving opportunities for businesses

In 2006 Defra estimated that £6.4 billion per year could be saved by UK firms if they implemented no cost / low cost resource efficiency opportunities. Five sectors were found to account for around 70% of the estimated savings: road freight, food and drink, retail, chemicals, rubber and plastics and construction.

The results were updated in 2011, based on research conducted in 2009 to provide more recent data[7]. This work also sought to identify benefits from resource efficiency activities requiring more investment (with immediate payback and payback periods greater than one year). This analysis illustrates that there remains significant potential for businesses to benefit from improved use of resources. In summary, the value of savings from no/low cost improvements increased to £23 billion, with a further increase to £55 billion if improvements that required investment but had a payback greater than one year.

Table 2.1 provides a breakdown of the results of this analysis.

Table 2.1 Summary of estimated resource efficiency opportunities in 2009

		Estimated savings opportunity	
Type	**Resource**	**£ bn**	**MtCO2**
No cost / low cost	Energy	4	13
	Waste	18	16
	Water	1	0
	Sub-Total	23	29
Payback greater than 1 year	Energy	7	30
	Waste	22	29
	Water	4	1
	Sub-Total	33	61
GRAND TOTAL		55	90

Source: Defra (2011), *p.5*[8]

2.8.2 The scale of opportunity varies by resource type and sector

The scale of no/low cost opportunities is also illustrated through this analysis, illustrating the following:

- The scale of opportunities are very different across different resource types
  - For energy, Freight: Mainly own account; Freight: HGV; and, Freight: LGV account for 72% of identified opportunities
  - For waste, Chemicals / non-metallic minerals; Metal Manufacturing; Power & utilities; and, Construction account for 77% of opportunities
  - For water, Public administration; Agriculture; Food & drink; Other services; and, Education account for 74% of opportunities.

A full breakdown of this analysis is provided in Annex 2.

[7] Lee, P., MacGregor, A., Willis, P., *Further Benefits of Business Resource Efficiency*, 2011, Oakdene Hollins for the Department of Environment, Food & Rural Affairs (Defra).

[8] Available at: http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=2&ProjectID=16943

In summary, financial savings from resource efficiency are still significant but there is a high degree of variance regarding which resource types are most significant to which sectors. This supports the proposition that a segmented offer which targets types of businesses is the most relevant approach.

2.8.3 Despite opportunities take up of business support is still low

Recent BIS research indicates that there is sub-optimal use of external business support among SMEs. Three in five SME employers do not use any formal sources of business support. There is a correlation between use of business support and growth in the business, and businesses report that they value advice and report significant improvements because of it[9].

- 40% of SMEs use external advice;
- Growth-orientated SMEs are more likely to use external assistance (46%) than are survival orientated SMEs (36%); as were larger SMEs (57%) compared to micro-enterprises (39%)
- 28% of SMEs had a latent demand for external assistance, most of which were non-users. A poor benefit:cost ratio was the main reason for firms not accessing assistance.
- 50% of information users and 60% receiving strategic advice reported business improvements. Private sector strategic advice had the greatest impact, especially when combined with public information sources

Furthermore it was noted that constraints change as businesses change sizes. For example, businesses focussed on near-term survival exhibit high implied discount rates on investment (time or money). In this respect micro-enterprises present particular challenges because of the very high opportunity costs of the owner/managers time.

It is therefore important to understand how business support can be effectively targeted to motivate more businesses to make greater use of and benefit from support. This targeting of support must also consider other issues rather than concentrate upon the sector that the firm operates within.

2.9 Policy rationale

The ENWORKS 'Embedding Resource Efficiency in Key Sectors' Project follows previous activity coordinated by ENWORKS in the region. The environmental and business growth objectives supported the priorities of the North West Regional Economic Strategy (RES), coordinated by the former North West Regional Development Agency, and the European Regional Development Fund (ERDF).

As outlined in the project application, the project rationale aimed to address RES Action 23 and ERDF Action1-3; supporting sustainable consumption and production by improving business resource efficiency and waste minimisation. The project was established to deliver activity to support these policy objectives and build on previously funded activity to improve the quality, consistency and waste minimisation support to businesses in targeted clusters. The Project rationale is clearly aligned to these high level policy goals, seeking to address barriers within firms that prevent adoption of resource efficiency measures through increasing awareness of the commercial and environmental benefits of resource efficiency.

The tracking of companies' resources and cost savings alongside assistance with implementing 'resource efficiency improvement plans' has a direct impact on improving Business Resource Efficiency in the North West and in key sectors.

[9] CEEDR and BMG, *Research to understand the barriers to take up and use of business support.* (BIS, 2011) http://www.bis.gov.uk/assets/biscore/enterprise/docs/r/11-1288-research-barriers-to-use-of-business-support

The Project also addresses complimentary ERDF objectives through providing assistance for design optimisation in beneficiary firms to reduce the environmental impact of products and reduce productions cost as well as supporting companies with travel planning (in line with ERDF AA1-3). Additionally, the project also supports sustainable procurement (as outlined in ERDF Action Area 1-3), providing awareness and access to sustainable procurement solutions.

The targeting of support to priority sectors is also consistent with RES Actions 8, 4 and 27 and ERDF AA1-3 Strand 1. All are aimed at developing higher value added activity, productivity and business support and skills in high priority sectors. These high priority sectors (defined as food and drink, chemicals, automotive, aerospace and textiles) are also combined with a broader regional cluster development activity aimed at increasing the knowledge and skill base of employees in these sectors.

Facilitating a culture change toward integrating environmental management within mainstream business decision making is another important aspect of the project rationale. The promotion of the region as a leader in Corporate Social Responsibility (CSR) and environmental management is consistent with RES Action 35 as well as strand 1 AA1-3 of ERDF. The support of innovative approaches to change the culture and increase the sustainable behaviour aims to move the companies beyond compliance. It provides practical skills to managers and staff to identify issues, opportunities and implement improvement. The project not only raises awareness of CSR and climate change risks and opportunities, but develops practical case studies with identifying transferable learning. As such, the project rationale recognises the value of communicating learning with other projects also delivering this strand of the ERDF.

Another important linked action is the key gateway role this project plays with other business support and environmental improvement organisations (RES Action 1). The Project application outlines the fact that the Project has a valuable role in facilitating easier communication with sector leaders and targeted brokers of support to businesses in this policy area. More broadly, the project directly contributes to the Regional Climate Change Action Plan (RES Action 24) by reducing energy demand and total carbon emissions, as well as promoting energy efficiency by supporting companies to create their own carbon management plans (RES Action 91).

3 Project expenditure and outputs

3.1 Grant Funding Agreement (GFA)

The Project has been funded by the European Regional Development Fund (ERDF) and the UK Government's Single Programme funds (SP funds), which have been managed by the Northwest Regional Development Agency (NWDA) and the Department for Business, Innovation and Skills (BIS). Provision of ERDF funding for the project was contingent upon match funding from the SP funds. The project deployed this funding by using co-financed ERDF and SP funds (50% intervention rate from each) to support ERDF-eligible SMEs and SP-only funding to support ERDF-ineligible companies, both SMEs and non-SMEs.

The original GFA between the funders and ENWORKS totalled £9,924,000 (£3,515,575 ERDF and £6,408,425 SP), however changes to the contracted funding for the Project have made by the funders throughout the project life, primarily related to the closure of RDAs and leading to a reduction in the number of delivery partners. This is outlined in the table below:

Table 3.1 Change to GFA

Funding Source	Original GFA	GFA Feb 2013
SP funding	£6,408,425	£5,728,131
ERDF funding	£3,515,575	£3,239,270
Total	£9,924,000	£8,967,401

Source: Programme Monitoring Data

3.2 Total Project spending

A full funding breakdown is provided in Table 3.2 below showing total expenditure to January 2013 (i.e. before project completion) against the lifetime project targets in the most recent GFA. Table 3.3 shows expenditure against funding deployment (ERDF co-financed and SP-only).

Table 3.2 Programme Funding Sources and Spending

Funding Source	Target Spend	Actual Spend to 31 Jan 13	% Spent
SP funding	£5,728,131	£5,269,145	92%
ERDF funding	£3,239,270	£3,132,504	97%
Total	£8,967,401	£8,401,649	94%

Source: Programme Monitoring Data

Table 3.3 Funding deployment

Businesses Supported	Target Spend	Actual Spend to 31 Jan 13	% Spent
Non-ERDF/Non-SMEs (SP-only funded)	£2,488,861	£2,136,641	86%
SMEs (ERDF Co-financed funded)	£6,478,540	£6,265,008	97%
Total	£8,967,401	£8,401,649	94%

Source: Project Monitoring Data

Analysis of the Project spending to January 20013 illustrates the following:

- Project expenditure was very close to target, with 94 per cent of available funding utilised at the time of writing.
- The total available expenditure for the Project was lower than anticipated at the beginning of the Project. Given the annual adjustment to available resources undertaken by funders the achieved expenditure illustrates the strength of the ENWORKS Central Management Team. Their experience in project management of multiple funding sources enabled the network of delivery partners to concentrate efforts on delivering the achieved outputs (discussed below).

3.3 Project Outputs

Table 3.3 presents the range of outputs achieved by the Project at 31st January 2013 (i.e. before project completion).

Table 3.4 Project Outputs

Output	Target	Actual	% Achieved
Number of Businesses Assisted	1,180	2,413	204
Businesses assisted to improve performance (universal)	131	1,280	977
Businesses assisted to improve performance (intermediate)	1,049	1,133	108
Environmental Business Assisted	50	64	128
People Assisted in their Skills Development	489	618	126
Number of Applications of Low Carbon Technologies	230	331	144
No. of firms reducing Industrial and Commercial Waste	70	71	101
Jobs Created	176	232	132
Jobs safeguarded	367	512	140
Sales Increased (£m)	22.0	42.7	194
Sales Safeguarded (£m)	52.7	86.2	164
Cost Savings (£)	52.7	85.0	161
Material Savings (tonnes)	149,405	81,167	54
CO_2 Savings (tonnes)	224,108	320,871	143
Water Savings (m^3)	1,801,649	2,510,689	139
Waste Diverted from Landfill (tonnes)	120,020	290,243	242

Source: Project Monitoring Data

Analysis of Project spending illustrates the following key findings

- The number of universal and intermediate business assists provided by the project was above target. In the case of universal business assists actual performance was nearly five times greater than target. This reflects the fact that the Project was highly effective in engaging firms across the region.
- The Project also assisted more firms with specific environmental advice and skills development than funder output targets. These outputs were achieved mainly through attendance at events, reflecting the high interest among firms.
- The Project produced jobs and sales among beneficiary firms that also exceeded funder targets. The fact that these targets were achieved amid challenging economic conditions is a further illustration of the quality of advice and guidance provided.

- The Project was successful in delivering against the cost savings target. This illustrates that the Project was successful in providing advice which not only targeted growth potential (through increased jobs and sales) but also produced bottom-line savings for firms, increasing profitability.
- The four specific environmental outputs listed last in the table are not formal funder targets against which performance is firmly monitored and reported. These targets are considered notional targets, based on the business needs supported in previous projects, and are a sub-set of Cost Savings (which is a formal target). Performance across these targets is determined by the needs of the particular businesses engaged in the project, as assessed by delivery partners on the ground. Most of these targets were exceeded, with the exception of Material Savings,. It is interesting to note that this data illustrates that other forms of cost savings, in particular waste, have been more appropriate to the beneficiaries engaged in this project than the last project delivered by ENWORKS.

The success of the Project in achieving output targets is reflective of the experience of the Central Management Team in managing delivery partners and promoting "what works" in engagement and delivery of support. In addition, the quality and quantity of data in the ENWORKS Toolkit and number of existing relationships with firms that were interested in the type of support available through the project provided a valuable resource from the outset of the project.

4 Beneficiary Experience and Impacts

A beneficiary survey was undertaken in 2012. There were 167 responses from a total beneficiary population of 1,080. The survey response rate was therefore 15 per cent. Box 1 presents a summary of findings.

It should be noted that the respondents were providing responses having already received support to identify resource efficiency opportunities (through the Tier 2 element of delivery) and may have also implemented identified actions. In this respect the survey respondents are not a random sample of businesses and the findings presented below do not challenge the market failures outlined above.

Box 1 Summary of findings

- At least three quarters of businesses suggested that maximising resources was important, compared to just 5 per cent of businesses who felt it was not important.
- There was a higher share of businesses stating that they possess a high level of knowledge to *identify* resource efficiency improvements (76%) than those stating they have a high level of knowledge to *implement* improvements (69%).
- More than a third of firms surveyed (37 percent) stated that they did not possess effective appraisal techniques to analyse costs and benefits of investments in resource efficiency.
- The most significant stimulus to invest in resource efficiency improvement cited by respondents was customers.
- In most sectors, over half of businesses had previously identified resource efficiency improvements prior to their engagement with ENWORKS.
- 95 per cent of respondents were 'highly satisfied' or 'satisfied' with on-site audit that they had received.
- 96 percent of respondents were 'highly satisfied' or 'satisfied' with the ongoing support that they had received.
- 96 percent of respondents were 'highly satisfied' or 'satisfied' with the support to understand and manage environmental risk that they had received.
- 96 percent of respondents were 'highly satisfied' or 'satisfied' with the training that they had received.

4.1 Profile of survey respondents

The majority of responses were received from businesses operating in the manufacturing sector (30%) with a further 11 per cent from the construction sector and 12 businesses (7%) stated that they were operating in the food and drink sector. A full breakdown of survey respondents is contained in Annex 3.

4.2 Attitude and Awareness towards resource efficiency

The survey asked respondents to consider their business' awareness and attitudes towards resource efficiency. Over half of businesses stated that maximisation of resource use was 'very important' (ranked 1 out of 10).

4.2.1 The importance of maximising resource use

at least three quarters of businesses suggested that maximising resources was important (ranking 1 to 3), compared to just 5 per cent of businesses who felt it was less important (ranking 8 to 10).

When the attitudes to maximising resource use are considered by sector, all businesses in six sectors indicated that maximising resource use is 'very important' (care and youth

services, creative industries, energy, environmental technology, maritime and textiles[10]) compared to 55 per cent of all businesses. Across most sectors, there was an appreciation of the importance of resource efficiency with less than 10 percent of businesses rating the issue as of little or no importance (6 or higher).

Table 4.1 Importance of maximising resource use to businesses in the North West by sector of operation

How important is maximising the use of resources to your company?	Very Important					Neutral				Of no importance
	1	2	3	4	5	6	7	8	9	10
Care and youth services (n=8)	**100%**	0%	0%	0%	0%	0%	0%	0%	0%	0%
Creative Industries (n=4)	**100%**	0%	0%	0%	0%	0%	0%	0%	0%	0%
Energy (n=1)	**100%**	0%	0%	0%	0%	0%	0%	0%	0%	0%
Environmental Technology (n=1)	**100%**	0%	0%	0%	0%	0%	0%	0%	0%	0%
Maritime (n=1)	**100%**	0%	0%	0%	0%	0%	0%	0%	0%	0%
Textiles (n=4)	**100%**	0%	0%	0%	0%	0%	0%	0%	0%	0%
Recycling Services (n=4)	**75%**	25%	0%	0%	0%	0%	0%	0%	0%	0%
Hotel and accommodation (n=7)	**71%**	0%	14%	0%	0%	0%	14%	0%	0%	0%
Aerospace (n=3)	**67%**	33%	0%	0%	0%	0%	0%	0%	0%	0%
Leisure (n=3)	**67%**	0%	0%	33%	0%	0%	0%	0%	0%	0%
Retail (n=3)	**67%**	0%	33%	0%	0%	0%	0%	0%	0%	0%
Food and drink (n=10)	**60%**	10%	0%	0%	0%	0%	20%	0%	0%	10%
Warehousing and logistics (n=5)	**60%**	20%	0%	20%	0%	0%	0%	0%	0%	0%
All sectors (n=143)	**55%**	**15%**	**14%**	**4%**	**3%**	**1%**	**3%**	**3%**	**1%**	**1%**
Manufacturing (n=42)	**52%**	21%	14%	2%	2%	0%	2%	2%	2%	0%
Automotive (n=2)	**50%**	**50%**	0%	0%	0%	0%	0%	0%	0%	0%
Business Administration (n=2)	**50%**	0%	**50%**	0%	0%	0%	0%	0%	0%	0%
Chemicals (n=4)	**50%**	25%	25%	0%	0%	0%	0%	0%	0%	0%
Creative Industries (n=4)	**50%**	25%	0%	25%	0%	0%	0%	0%	0%	0%
Sport (n=2)	**50%**	**50%**	0%	0%	0%	0%	0%	0%	0%	0%
Construction (n=14)	**43%**	14%	36%	7%	0%	0%	0%	0%	0%	0%

[10] It should be noted that three of these sectors (energy, environmental technology and maritime) were based on a low base of 1 response.

How important is maximising the use of resources to your company?	Very Important				Neutral					Of no importance
	1	2	3	4	5	6	7	8	9	10
Charity and Voluntary Sector (n=6)	**33%**	17%	**33%**	0%	17%	0%	0%	0%	0%	0%
Engineering (n=3)	**33%**	0%	**33%**	0%	**33%**	0%	0%	0%	0%	0%
Other (n=6)	**33%**	17%	0%	0%	0%	0%	0%	**33%**	17%	0%
Arts and Crafts (n=1)	0%	**100%**	0%	0%	0%	0%	0%	0%	0%	0%
Financial and Professional Services (n=4)	0%	0%	**50%**	25%	25%	0%	0%	0%	0%	0%
Health (n=1)	0%	0%	0%	0%	0%	0%	0%	**100%**	0%	0%

Base: 143 responses. Sectoral base indicated in brackets (n=143).

Source: GHK Survey of Beneficiary firms

The survey responses of the ten respondents with the greatest identified cost savings in the ENWORKS Efficiency Toolkit were compared with the ten firms with the lowest identified cost savings from the Toolkit. This comparison illustrated that the firms with highest cost savings placed a greater importance on maximising resource use than the businesses with the lowest savings. All of the 10 firms responding to the survey that had greatest value of cost savings ranked the importance of maximising resource use as either 1 or 2, compared with just 5 of the bottom 10.

Table 4.2 Importance of maximising resource use to businesses in the North West, by cost savings identified

How important is maximising the use of resources to your company?	Very Important				Neutral					Of no importance
	1	2	3	4	5	6	7	8	9	10
Highest identified cost savings 10 (n=10)	**7**	3	0	0	0	0	0	0	0	0
Lowest identified cost savings (n=9)	**5**	0	3	1	0	0	0	0	0	0

Base: 19 responses

Source: GHK Survey of Beneficiary firms

4.2.2 Knowledge of resource efficiency

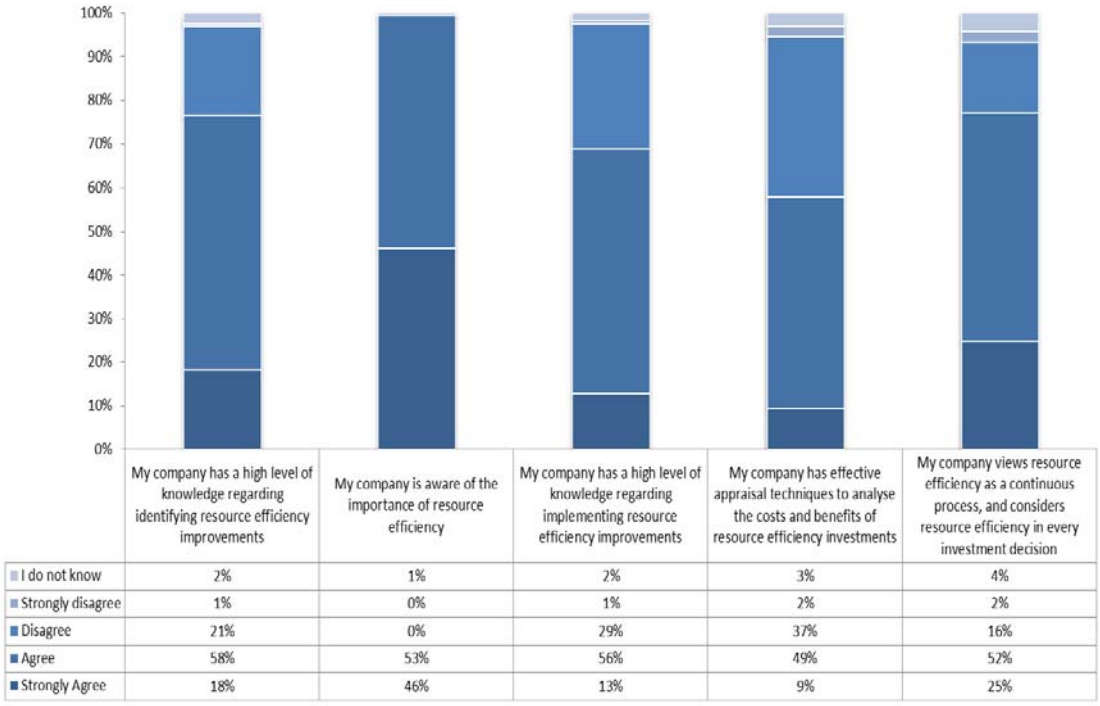
Respondents were asked to consider the extent of their business' knowledge regarding resource efficiency; their company's technical capacity to identify and implement improvements; their ability to analyse costs and benefits; and, the extent to which resource efficiency improvements form part of wider decision making processes. The results are shown in Figure 4.1, the key findings from this analysis are:

- The extent of *awareness* and knowledge of resource efficiency issues within firms was high - 99% of firms agreed with the statement that their firm had a high level of knowledge regarding resource efficiency.
- A greater share of businesses stated that they have a high level of knowledge to *identify* resource efficiency improvements (76%) than those stating they have a high level of knowledge to *implement* improvements (69%).

- A smaller share of businesses stated that they had effective appraisal techniques to *analyse costs and benefits* of investments in resource efficiency (49%)

When the sector of respondents agreeing or disagreeing with the statements is considered, they provide little indication as to sectoral variance in attitudes or awareness.

Figure 4.1 Extent to which businesses agreed with statements relating to resource efficiency



	My company has a high level of knowledge regarding identifying resource efficiency improvements	My company is aware of the importance of resource efficiency	My company has a high level of knowledge regarding implementing resource efficiency improvements	My company has effective appraisal techniques to analyse the costs and benefits of resource efficiency investments	My company views resource efficiency as a continuous process, and considers resource efficiency in every investment decision
I do not know	2%	1%	2%	3%	4%
Strongly disagree	1%	0%	1%	2%	2%
Disagree	21%	0%	29%	37%	16%
Agree	58%	53%	56%	49%	52%
Strongly Agree	18%	46%	13%	9%	25%

Base: 143 responses

Source: GHK Survey of Beneficiary firms

Awareness and knowledge of resource efficiency was highest among firms with greatest identified cost savings than those with lowest identified savings. The firms with the highest level of cost savings were more likely to 'strongly agree' than the bottom 10 with each of the five statements. They were also less likely to disagree. These responses are shown in Table 4.3

Table 4.3 Extent to which businesses agreed with statements relating to resource efficiency, by savings

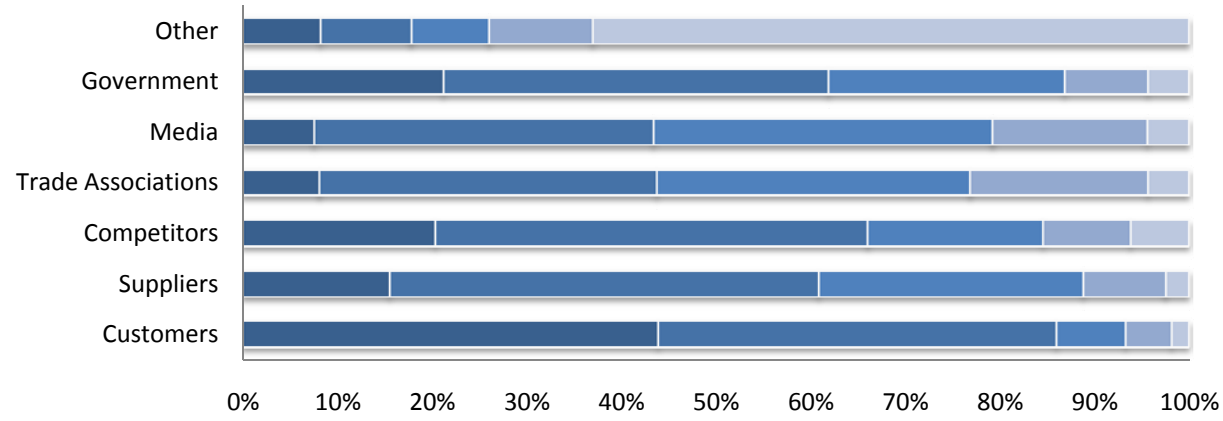
	Strongly Agree	Agree	Disagree	Strongly disagree	I do not know
My company is aware of the importance of resource efficiency					
Highest identified cost savings 10 (n=10)	8	2	0	0	0
Lowest identified cost savings (n=10)	3	7	0	0	0
My company has a high level of knowledge regarding identifying resource efficiency improvements					
Highest identified cost savings 10 (n=10)	5	5	0	0	0
Lowest identified cost savings (n=10)	2	6	2	0	0
My company has a high level of knowledge regarding implementing resource efficiency improvements					

	Strongly Agree	Agree	Disagree	Strongly disagree	I do not know
Highest identified cost savings 10 (n=10)	4	4	2	0	0
Lowest identified cost savings (n=10)	2	6	2	0	0
My company has effective appraisal techniques to analyse the costs and benefits of resource efficiency investments					
Highest identified cost savings 10 (n=10)	3	5	2	0	0
Lowest identified cost savings (n=10)	2	5	3	0	0
My company views resource efficiency as a continuous process, and considers resource efficiency in every investment decision					
Highest identified cost savings 10 (n=10)	6	4	0	0	0
Lowest identified cost savings (n=10)	2	5	2	0	1

Source: GHK Survey of Beneficiary firms

Businesses were also asked to consider the importance of different groups in motivating them to invest in resource efficiency; these results are presented in Figure 4.2. Businesses were most likely to consider that customers were a key motivation for their investment in resource efficiency (86% described customers as 'very' or 'quite important'). Whilst suppliers, competitors and Government were also significant drivers; businesses were more likely to describe them as 'quite important' than 'very important'. Interestingly, trade associations and the media were more likely to be viewed as irrelevant or not very important in business' decision to invest (52% in both cases). Other drivers that were deemed 'very important' included an internal business desire to reduce costs from management and staff and also local authorities.

Figure 4.2 Importance of different groups in motivating businesses to invest in resource efficiency



	Customers	Suppliers	Competitors	Trade Associations	Media	Government	Other
Very Important	44%	16%	20%	8%	8%	21%	8%
Quite Important	42%	45%	46%	36%	36%	41%	10%
Not very important	7%	28%	19%	33%	36%	25%	8%
Irrelevant	5%	9%	9%	19%	16%	9%	11%
I do not know	2%	2%	6%	4%	4%	4%	63%

Base: 167 responses

Source: GHK Survey of Beneficiary firms

4.2.3 Types of investments in resource efficiency

In most sectors, over half of businesses stated they had previously identified resource efficiency improvements prior to their engagement with ENWORKS (58%)[11]. Where this was the case, the businesses reported the improvements they had identified were primarily focused on improving operating costs (86%). Other improvements included product quality (17%), price (14%), sales (10%) and product type (10%).

Of the firms with most significant identified cost savings, 6 had previously identified specific resource efficiency improvement measures prior to engagement with ENWORKS. Of those with least significant identified cost savings 4 out of 10 had done so.

When making general investment decisions, the payback period considered optimum varied. Over half of businesses stated that a payback period of over three years was acceptable. Of these – this included 16 per cent of businesses citing 5 years as the optimum payback period and a further 15 per cent over 5 years. One in four businesses did not know what payback period was optimum in their organisations. This data is outlined in Table 4.4.

Table 4.4 Payback Periods for business investments

	0 -1 year	1 year	2 years	3 years	4 years	5 years	5+ years	I do not know
All investments	4%	5%	12%	19%	3%	16%	15%	26%

[11] Firms were not asked to name these identified improvements and specify whether they had been fully quantified prior to engagement with ENWORKS.

Base: 165 responses

Source: GHK Survey of Beneficiary firms

Interestingly, 23 per cent of businesses (37 businesses) stated that their payback period for resource efficiency investment was different from other investments. Where the payback period differed, there were mixed responses as to whether a longer or shorter period of payback was expected. For instance, of the 33 businesses that identified a payback period for both types of investment, 58 per cent were lower and 42 per cent were higher. On average however, 67 per cent of businesses cited their payback period for resource efficiency was over three years, compared to just over half for 'any type' of investment. This is outlined in Table 4.5.

Table 4.5 Comparison of payback periods where they differed for resource efficiency

		Payback period for RE investment							
		0 -1 year	1 year	2 years	3 years	4 years	5 years	5+ years	Total
Payback period for all investments	0 -1 year			1	1				**2**
	1 year	1					1		**2**
	2 years		4		1	1	1		**7**
	3 years			1	1		3	2	**7**
	4 years				2				**2**
	5 years			2	4			1	**7**
	5+ years			2	2		1	2	**7**
	I do not know			1	2				**3**
	Total	**1**	**4**	**7**	**13**	**1**	**6**	**5**	**37**

Base: 37 responses

Source: GHK Survey of Beneficiary firms

4.3 Quality of Service

Over three quarters of businesses had received an on-site resource efficiency audit (78%) and one third of respondents had received ongoing support through the Project (32%). Support with environmental risk had been received by 28 per cent of respondents, and 7 per cent of businesses were uncertain what support they had received through the programme,

As one may expect, the businesses with the greatest value of cost savings identified had received more forms of support than those with the lowest value of identified cost savings, the forms of support received are outlined in Table 4.6.

Table 4.6 Support received by survey respondents, by savings

	Ongoing support	On-site RE Audit	Training	Environ-mental Risk Support	I do not know
Top 10 savers (n=10)	8	9	6	5	0
Bottom 10 savers (n=10)	5	6	3	4	0

Source: GHK Survey of Beneficiary firms

4.3.2 Views on the quality of service received

The following section provides business' perceptions on the quality of services received.

On-site resource efficiency audit

78 per cent of respondents received support through an on-site resource efficiency audit to identify resource efficiency savings, with 53 per cent of businesses highly satisfied with the support received. Only 5 per cent of businesses were not satisfied with the on-site audit that they had received. 92 per cent of respondents stated that they would recommend the on-site audit to other businesses.

When asked to consider whether any improvements could be made to the on-site audit, a number of suggestions were put forward relating to the time commitment required from businesses and a need to improve communication and feedback between the auditor and business. It is recognised that these comments are not representative of all support provided and may reflect the view of particular respondents with only partial understanding of all support received. Specific comments and suggestions included:

- A small number of firms suggested that more time could be spent with each firm. This may reflect the fact that the project concentrated support where greatest potential returns from resource efficiency opportunities were identified;
- Improvements to communication following the audit were suggested, for example:
  - Introduction of a telephone discussion following the audit to keep momentum going and,
  - More regular communication – and perhaps the introduction of an annual review in order to see whether improvements have been made and actions completed.

  However, it should be noted that both of these elements were part of the offer where advisors and firms decided it was appropriate;
- Provision of support by auditors with a higher degree of sector-specific knowledge in order to ensure that sector specific advice is provided, taking cognisance of industry trends and legislation. Interestingly this was available through the Consultants Bank, therefore it is possible that in these cases it was judged by the advisor that the potential returns were not significant enough to merit this approach; and,
- Provision of financial support or support to access grant funding:
  - Financial support through assistance with access to finance, grant forms etc. was identified as a mechanism to improve business' ability to implement improvements more quickly. This is something which the project could provide, it may, therefore, not have been appropriate at the time support was provided.

4.3.3 Ongoing support to implement identified savings

One third of respondents had received ongoing support to implement identified savings (32%). The level of satisfaction with ongoing support amongst businesses was high. 56 per cent of respondents were 'highly satisfied' with the ongoing support received with a further 40 per cent 'satisfied'. 87 per cent of businesses would recommend the ongoing support that they had received to implement resource efficiency savings

Where businesses suggested improvements for the ongoing support service, responses included:

- More support from the service provider to lead the improvement action plan
  - through attendance at company meetings on resource efficiency; and,
  - through external suggestions about opportunities that have been identified within the company.

- Better communication regarding the ways in which they could extract and use information from ENWORKS Efficiency Toolkit and to demonstrate impact of investment;
- More frequent contact from the service provider.

Both the firms with highest identified cost savings and firms with less significant identified cost savings reported similarly high levels of satisfaction with the ongoing support to implement identified savings.

4.3.4 Support to understand and manage environmental risk

Over one in four businesses had received support to understand and manage environmental risk (28%). 57 per cent of businesses were 'highly satisfied' with the support received to understand and manage environmental risk with 4 per cent either 'unsatisfied' or 'very unsatisfied'. Three quarters of businesses that received support to understand and manage environmental risk would recommend it

4.3.5 Training

One in three respondents had received training from the Project (29%). Over three quarters of businesses would recommend the training they had attended.

When asked to provide suggestions for improvements on the training received, businesses suggested they would like there to be a greater variety of courses offered, specification of the level of training and provision of higher level courses (e.g. WAMITAB for waste, CIEH Level 3 courses, NEBOSH and IEMA courses).

4.3.6 Other comments on support received

Businesses were asked to provide further comment on the support they had received through the project.

- A number of businesses praised the support they had received through specific advisors:
  - The advisors were considered to be knowledgeable, approachable and friendly;
  - One business felt their provider had been 'very supportive, always helpful and that they had learnt a lot from them';
  - One firms also cited the difficulties faced on a day to day basis to ensure that resource management remained a priority compared to competing priorities. The business felt that having an advisor meant that resource efficiency remained a top priority;
  - Two businesses described the guidance as 'invaluable';
- A number of businesses identified impacts that had been achieved as a result of the support received, this included:
  - Gaining ISO14001;
  - Making significant resource and financial savings at a time of austerity;
  - Making significant year on year savings;
  - Sharing of best practice with other companies;
  - Entering and winning the North West Business Environmental award in the best practice category for resource efficiency improvements'.

5 Impacts and Outcomes

5.1 Our Approach to the Assessment of Additionality

The economic impact assessment of the Project was based on a review of the reported outputs, alongside data collected in the ENWORKS Efficiency Toolkit (both of which are verified by the business beneficiaries) and information from the beneficiary survey. The economic impact assessment uses project output data and data from the Toolkit to provide gross values. The beneficiary survey is used to calculate additionality factors, which establish net impact (deadweight, displacement, leakage, and the economic multiplier); information relating to these issues is not collected in the toolkit. A list of data and sources used in the impact assessment is contained in Annex 5.

The approach adopted for the estimate of regional additional impact is based on the methodology developed under the Impact Evaluation Framework[12], adopted by the former Regional Development Agencies and recognised by BIS as a robust methodology upon which to base economic impact of a range of public policy interventions. This approach stresses the importance of basing additionality estimates on information obtained from project beneficiaries to calculate the relevant additionality factors. To this end all beneficiaries were invited to participate in an e-survey in 2012.

The following sections of this chapter present the results of the economic impact assessment.

5.2 Impact of cost savings

Table 5.1 outlines the economic impact of cost savings in beneficiary firms. This analysis uses Toolkit data to show that, to-date, the project has assisted firms to implement an average of £18,000 in cost savings, a gross additional impact for the region of £16.0m when adjusted for deadweight (established using the beneficiary survey returns). Cost Savings increase profits but do not directly result in increased sales and purchases, it is therefore not appropriate to apply displacement and leakage adjustment factors. The net economic impact for the region is, therefore, £16.0m.

Table 5.1 Economic impact from cost savings

Variable	Definition	Number
All Businesses Assisted	Gross output of the Project (includes all business assisted)	1,133
Average Cost Saving	Average ANNUAL cost savings per business assisted, achieved to-date	£18,000
Gross impact generated from cost savings	Gross ANNUAL economic value generated from the Project through beneficiary firm cost savings	£20.2m
Deadweight	The benefits associated with an intervention which might have occurred in any event	21%
Gross additional impact	Gross ANNUAL economic value through business cost savings minus deadweight	£16.0m
Displacement	The extent to which the impact of the Project has been offset by a reduction of activity elsewhere in the region.	N/A*
Leakage	The share of impact which has benefited companies outside of the region. This factor is not applied to cost savings	N/A*
Net direct additional	Gross ANNUAL economic impact adjusted for displacement and leakage.	

[12] See: http://www.berr.gov.uk/files/file21900.pdf

Variable	Definition	Number
regional impact		
Multiplier	The extent to which assisted businesses increased purchases of goods and services from regional producers as a result of the assistance received.	N/A*
Net regional impact	Net ANNUAL regional economic impact resulting from business cost savings and sales.	£16.0m

* Displacement, leakage and economic multiplier factors are not applied due to the fact that cost savings are bottom line savings which improve the individual business's profitability. They don't lead to additional economic activity through purchases along the supply chain and/or employee spending

5.2.2 Future Impact of cost savings

Table 5.2 outlines the predicted future economic impact of the Project through a combination of the likely future impact of cost savings implemented and opportunities identified, but not yet implemented.

Firstly, there will be depreciation in value of cost savings implemented. Based on the beneficiary survey it is estimated that the average cost saving will last for 6 years (a depreciation factor of 17%). The depreciation in impact of implemented cost savings is calculated on this basis, with a standard discount rate of 3.5% applied. Over the next five years the implemented cost savings are likely to be worth £36.0m to the regional economy.

Secondly, it is likely that there will be additional future regional economic impact as a result of identified cost savings in beneficiary firms that have not yet been implemented. This assumes, however, that specialist implementation advice that is similar to that provided through the Project is available and accessed by firms with identified cost savings. Based on the value of cost savings identified in the Toolkit and the share of identified opportunities implemented each year during the Project period it is estimated that a further £45.6m of cost savings may be implemented in the next five years, based on an annual conversion rate from identified savings to implemented actions of 23%, with a standard discount rate of 3.5% applied.

Table 5.2 Future impact of cost savings

	Depreciation in impact of implemented cost savings (£m)	Impact from further implemented cost savings (£m)
Total Cost Savings (Net)	14.6	68.0
+1 Year total cost savings	12.1	15.6
+2 Year total cost savings	10.0	12.1
+3 Year total cost savings	8.4	9.3
+4 Year total cost savings	6.9	7.1
+5 Year total cost savings	5.8	5.5
Present Value of cost savings (cumulative 5 year total)	36.0	45.6

Sources: GHK analysis of established net cost savings, Present Value discount rate HMT[13]

[13] http://www.hm-treasury.gov.uk/d/green_book_complete.pdf

5.3 Environmental benefits

Table 5.3 outlines the economic impact of carbon reduction. This analysis uses Toolkit data to calculate the economic value of carbon savings in beneficiary firms. This analysis calculates the average economic benefit per firm to be £300. Allowing for displacement the net regional economic impact is £0.3m. Deadweight is applied but it is not appropriate to apply displacement and leakage due to the fact that there are no increases in sales and purchases directly associated with these benefits.

Table 5.3 Economic impact from carbon reduction

Variable	Definition	Number
All Businesses Assisted	Gross output of the Project (includes all business assisted)	1,133
Average CO_2e saving	Average ANNUAL savings per business assisted, achieved to-date	£300[14]
Gross impact generated from cost savings	Gross ANNUAL economic value generated from the Project through beneficiary firm CO_2e savings	£0.4m
Deadweight	The benefits associated with an intervention which might have occurred in any event	21%
Gross additional impact	Gross ANNUAL economic value through business environmental savings minus deadweight	£0.3m
Displacement	The extent to which the impact of the Project has been offset by a reduction of activity elsewhere in the region.	N/A*
Leakage	The share of impact which has benefited companies outside of the region. This factor is not applied to environmental savings	N/A*
Net direct additional regional impact	Gross ANNUAL economic impact adjusted for displacement and leakage.	£0.3m
Multiplier	The extent to which assisted businesses increased purchases of goods and services from regional producers as a result of the assistance received.	N/A*
Net regional impact	Net ANNUAL regional economic impact resulting from business cost savings and sales.	£0.3m

* Displacement, leakage and economic multiplier factors are not applied due to the fact that environmental savings don't lead to additional economic activity through purchases along the supply chain and/or employee spending

Sources: GHK Analysis. Total CO_2e savings from ENWORKS output data. Price per tonne CO_2 from DECC[15]. Additionality factors obtained from the beneficiary survey are detailed in Annex 5

5.3.2 Future Impact of environmental benefits

Table 5.4 outlines the predicted future economic impact of carbon reduction as a result of cost savings implemented by beneficiary firms. The table presents a combination of the likely future impact of cost savings already implemented and cost savings that have been identified, but not yet implemented.

[14] Based on a CO2 price per tonne of £5.76 (source: http://www.decc.gov.uk/assets/decc/11/cutting-emissions/carbon-valuation/6667-update-short-term-traded-carbon-values-for-uk-publ.pdf)

[15] ECC (2012) Updated short-term traded carbon values used for UK public policy appraisal, 15 October 2012. Available at: http://www.decc.gov.uk/assets/decc/11/cutting-emissions/carbon-valuation/6667-update-short-term-traded-carbon-values-for-uk-publ.pdf

The calculation of Present Value of implemented savings is based on the identified net total environmental benefit (£0.2m) with the cost saving depreciation factor established as part of the beneficiary survey applied (17%, on the basis that respondents predicted impact to last an average of 6 years). As a result the 5 year cumulative impact, when a standard discount rate of 3.5% is applied, is £0.6m.

Calculation of further impact from currently identified, but not yet implemented cost savings is also outlined in Table 5.4[16]. The calculation is based on a net total of £1.4m pipeline CO_2e savings identified by the Project, but not yet implemented (the gross total of £1.8m, minus deadweight of 21%). Future implementation of cost savings is based on an annual conversion rate from identified savings to implemented actions of 23%, with application of a standard discount rate of 3.5%. as a result it is predicted that a further £1.0m impact from reduced carbon usage may be realised over the next 5 years as a result of the Project

Table 5.4 Future impact of carbon reduction

	Present Value impact of carbon reduction (£,000)	Predicted value of carbon reduction from further implemented cost savings (£m)
Total CO_2e Savings (Net)	0.2	1.4
+1 Year value of carbon reduction	0.2	0.3
+2 Year value of carbon reduction	0.2	0.3
+3 Year value of carbon reduction	0.1	0.2
+4 Year value of carbon reduction	0.1	0.2
+5 Year value of carbon reduction	0.1	0.1
Present Value of carbon reduction (cumulative 5 year total)	0.6	1.0

Sources: GHK analysis of established value of CO_2e savings, Present Value discount rate HMT[17]

5.4 Economic impact of sales

Table 5.5 outlines the economic impact of new sales and sales safeguarded in beneficiary firms. This analysis uses Toolkit data to establish the gross impact generated from sales at £38.7m. Deadweight, leakage, substitution and an economic multiplier are all applicable to increased sales. The net economic impact of sales is, therefore, estimated at £31.5m.

Table 5.5 Economic impact from sales

Variable	Definition	Number
All Businesses Assisted	Gross output of the Project (includes all business assisted)	1,133
Average sales generated per company	Average ANNUAL savings per business assisted, achieved to-date	£114,000

[16] As stated above , this analysis assumes that specialist implementation advice that is similar to that provided through the Project is available and accessed by firms with identified cost savings.

[17] http://www.hm-treasury.gov.uk/d/green_book_complete.pdf

Variable	Definition	Number
Gross impact generated from sales	Gross GVA generated in the region from new sales[18]	£38.7m
Deadweight	The benefits associated with an intervention which might have occurred in any event	21%
Gross additional impact	Gross ANNUAL economic value through business environmental savings minus deadweight	£30.5m
Displacement	The extent to which the impact of the Project has been offset by a reduction of activity elsewhere in the region (reduced sales in competitor firms).	25%
Leakage	The share of impact which has benefited companies outside of the region.	10%
Net direct additional regional impact	Gross ANNUAL economic impact adjusted for displacement and leakage.	£20.6m
Multiplier	The extent to which assisted businesses increased purchases of goods and services from regional producers as a result of the assistance received.	1.53
Net regional impact	Net ANNUAL regional economic impact resulting from business cost savings and sales.	£31.5m

5.5 Economic impact of jobs

Table 5.6 outlines the economic impact of new jobs and jobs safeguarded in beneficiary firms. As a result of additional sales generated through assistance from the Project a total of 232 jobs were created and 512 jobs safeguarded in beneficiary firms. The net impact from jobs at is estimated at £15.0m. This analysis also presents additional income to HM Treasury as a result of employer-paid National Insurance contributions, made as a result of additional salaries (an additional £1.8m). This analysis uses the HMRC National Insurance payment calculator for employers (this analysis assumes that all jobs created and safeguarded are permanent, full-time and located in the region)[19].

Table 5.6 Economic impact from jobs

Variable	Definition	Number
Jobs created and safeguarded	Total number of new jobs created (232) and jobs safeguarded (512) as a result of support provided through the project	744
Average value per job	Median average earnings for full time jobs in the North West of England	£25,000
Gross GVA from sales	Gross GVA generated in the region from new sales[20]	£18.3m
Deadweight	The benefits associated with an intervention which might have occurred in any event	21%
Displacement	The extent to which the impact of the Project has been offset by a reduction of activity elsewhere in the region ()(reduced	25%

[18] Average GVA to turnover ratio for North West = 0.3 (Source: http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-268862). The GVA to Turnover ratio calculates the share of turnover to GVA for the NW. 'Sales' are 'turnover'

[19] http://nicecalculator.hmrc.gov.uk/Class1NICs1.aspx

[20] Average GVA to turnover ratio for North West = 0.3 (Source: http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-268862). The GVA to Turnover ratio calculates the share of turnover to GVA for the NW. 'Sales' are 'turnover'

Variable	Definition	Number
	sales in competitor firms).	
Leakage	The share of impact which has benefited companies outside of the region.	10%
Net direct additional regional impact	Gross ANNUAL economic impact adjusted for displacement and leakage.	£9.8m
Multiplier	The extent to which assisted businesses increased purchases of goods and services from regional producers as a result of the assistance received.	1.53
Total impact (net)	Net ANNUAL regional economic impact resulting from business cost savings and sales.	£15.0m
Additional monetised benefits	National Insurance paid to HMRC by employers[21]	£1.8m
Total impact (Net)	Total net impact of jobs (safeguarded and created) and the additional revenue generated through additional National Insurance payments to HMRC	£16.7m

5.6 Calculation of GVA generated from the project

Calculation of GVA for the project uses cost savings and sales impact data. The results of this analysis are broken down in Table 5.7. The results of this analysis are discussed below.

Table 5.7 Calculation of GVA from the Project, broken down by contribution of cost savings and sales

Variable	Cost Savings (p.a.)	Sales generated and sales safeguarded
Total value of gross output of the Project	£20.2m	£128.9m
Gross GVA Generated	£20.2m	£38.7m
Deadweight	21%	21%
Gross additional impact	£16.0m	£30.5m
Total GROSS GVA Impact	£46.5m	
Displacement	N/A	25%
Leakage	N/A	10%
Net direct additional regional impact	£16.0m	£20.6m
Total net direct additional regional impact	£36.6m	
Multiplier	N/A	1.53
Net regional impact	£16.0m	£31.5m
Total NET GVA Impact	£47.5m	

Sources: GHK Analysis. Gross output (businesses assisted) from ENWORKS output data. Additionality factors obtained from the beneficiary survey are detailed in Annex 5

[21] NI contributions paid by employers as a result of jobs created and safeguarded (based on Annual salary of £24,649) Source: http://nicecalculator.hmrc.gov.uk/Class1NICs1.aspx

5.6.2 Gross Outputs

The gross outputs from the Project have been achieved as a result of assistance provided to 1,133 firms in the North West. The beneficiary survey asked firms to identify cost savings achieved; new sales and sales safeguarded; and, new jobs created and jobs safeguarded to-date as a result of the support received. Comparison with the data collected on an ongoing basis by the project, and verified by the business beneficiaries, suggested that survey respondents underestimated the value of sales generated and safeguarded; and, jobs created and safeguarded[22]. For the additionality assessment ENWORKS monitoring data for cost savings and sales has been used in place of data gathered in the beneficiary survey. ENWORKS monitoring data is collected by business support providers and verified by senior managers in beneficiary firms.

The gross value of annual cost savings achieved through the Project was £20.2m, an average of £18K per assisted firm. A further gross impact of £128.9m from new sales and sales safeguarded was generated by beneficiary firms, an average of £114k per firm.

5.6.3 Gross Additional Impact

The gross additional impact is the gross output adjusted for deadweight, allowing for the fact that even though firms received advice they may have been intending to achieve these resource savings in any event. Based on the beneficiary survey, 21% of the gross outputs would have been achieved in the absence of the Project.

Following adjustment for deadweight, cost savings equate to a gross additional impact of £16.0m. The gross additional impact, adjusted for deadweight attributable to sales from the programme is £30.5m. The total gross additional impact from the Project to the regional economy is therefore £46.5m.

5.6.4 Net Direct Regional Impact

The net direct regional impact calculation takes into account the issues of displacement and leakage[23]:

- Displacement relates to the extent to which impacts achieved by beneficiary firms have been at the expense of other non-assisted businesses in the region because improved business performance may have enabled them to compete and take market share from other regional businesses. The extent to which is the case depends on their reliance on regional customers and the extent to which competitors are located in the region. The beneficiary survey in this study identified displacement of 25% of gross impact
- Leakage relates to the share of impact which has benefited companies outside of the region. The extent to which is the case depends on whether firms plan to relocate out of the region and/or the share of their employees that are resident outside of the region. The beneficiary survey in this study identified displacement of 10% of gross impact.

Displacement and leakage are not applied to cost savings. There is no market displacement since assisted businesses are simply bottom-line cost savings, which increase profitability. The net direct additional impact from cost savings is therefore £16.0m.

Displacement and leakage effects are relevant to sales impacts due to the fact that increased sales in beneficiary firms may adversely impact on sales of competitors in the region. Increased sales will also be lost to the regional economy if firms choose to

[22] This may be for a number of reasons (for example, they particular survey respondent may not have been in post when the assistance was provided or they may not have had a sufficiently detailed understanding of the impact on company

[23] These displacement and leakage questions are calculated from responses to the beneficiary survey

relocate and/or increased sales taken as wages by new employees are spent outside of the region. The net direct additional impact from sales is £31.5m. The overall net direct additional regional impact is £36.6m

5.6.5 Net Additional Regional Impact

Net additional regional impact is calculated by applying a multiplier effect to the net direct regional impact; the purpose of this is to account for additional indirect economic impact in the region which results from increased purchases of goods and services. The beneficiary survey in this study identified a multiplier of 1.53

The multiplier is not applied to cost savings due to the fact that this does not result in any expansion of business activity and any related increase in purchasing, and, therefore no indirect impact on other producers. The net additional regional impact from cost savings is £16.0m.

Sales generated and sales safeguarded may lead to increased purchases of goods and services from regional producers as a result of the assistance received. The net additional regional impact from sales is calculated to be £31.5m; the overall net additional regional impact is therefore £47.5m per annum, a cost/benefit ratio of 5.7.

5.7 Impact assessment findings

The economic benefits from the project are presented in Table 5.8. It should be noted that the different elements in Table 5.8 cannot be added together to produce total economic impact, for example sales generated in beneficiary firms fund new jobs they create.

Table 5.8 Itemised economic benefits of the project 2009-13

Economic Benefit	Gross	Net
Impact of cost savings	£20.2m	£16.0m
Impact of environmental savings	£0.4m	£0.3m
Impact from new sales and sales safeguarded	£38.7m	£31.5m
Impact from new jobs and jobs safeguarded	£20.1m	£16.7m

Sources: GHK Analysis. Gross output (businesses assisted) from ENWORKS output data. Additionality factors obtained from the beneficiary survey are detailed in Annex 5

The following headline findings are evident from the analysis presented above:

- As a result of sales and cost savings generated in beneficiary firms, the project resulted in generation of gross additional GVA of £46.5m and net additional GVA of £47.5m.
- Total economic benefit of the project (the GVA impact plus quantified environmental benefits) is a gross impact of £59.2m, or a net economic impact of £47.8m.
- The project was responsible for the creation of 232 new jobs and safeguarding of 512 jobs. The monetised value of jobs created is estimated at £16.7m
- Project expenditure (to 31 January 2013) was £8.4m, the net benefit / cost ratio of current costs and benefits is 5.7.
- The five year cumulative total of value of future benefits from achieved cost savings in beneficiary firms is estimated at £39.6m, and the value of environmental benefits is estimated to be £0.6m; a further £40.2m of GVA is therefore expected to occur
- Additional economic impact through achieving identified, but not yet achieved, opportunities, is likely to result in an additional £45.6m of GVA and an additional £1.0m in environmental benefits; bringing the potential of a further £46.6m of GVA to the region.

5.8 Strategic Added Value (SAV)

5.8.1 Assessing Strategic Added Value

The concept of SAV recognises the need to take into account the catalytic and influencing role of project investments which may not be fully captured in the quantified outputs and impacts of direct project support. The three elements of SAV are illustrated below.

Figure 5.1 The elements of Strategic Added Value

In the context of the Project the three elements to the SAV assessment can be understood as follows:

- **Strategic leadership:** this relates to the extent to which the Project delivers a shared vision and set of objectives that relevant stakeholders and stakeholders can recognise and commit to. It requires, therefore, that the project rationale is recognised and shared and that the design and planned delivery of the project is seen to be 'fit for purpose'.
- **Coordination, alignment and partnership:** this relates to the avoidance of duplication and the delivery of a consistent, high quality service. This requires effective use of organisational capacity and expertise to work in partnership with key stakeholders.
- **Intelligence sharing and awareness raising:** this element seeks to capture how project activity supports better policy development and implementation through stronger evidence, understanding of 'what works' and the dissemination of good practice.

5.8.2 The method of assessing Strategic Added Value

The assessment of SAV was based on stakeholder interviews and discussions, with individuals representing public and private sector organisations that have an understanding of one or more of the following issues:

- experience of the Project from a delivery or management perspective;
- experience of delivery and management of similar business support initiatives to the Project;

- understanding the issues relating to resource efficiency in business; and / or,
- an understanding of wider business support delivery structures in the region.

To assess the SAV of the Project, interviews were undertaken with stakeholders in early 2012. A full list of stakeholders consulted forms Annex 4 of this paper. The following sections contain a synthesis of the main findings from these consultations.

5.8.3 Strategic leadership

The following findings relating to strategic leadership were evident from the stakeholder consultations:

- Stakeholders understand the project rationale and recognise resource efficiency as an issue of growing importance for business. The benefits of resource efficiency and the direct link to profitability through cost reduction are well articulated by ENWORKS to businesses and stakeholders.
- The Project is recognised as an effective programme of business support which identifies opportunities and accurately quantifies savings. Stakeholders noted that the current project was strengthened by the knowledge and delivery capabilities developed during delivery of similar previous projects in the region.
- ENWORKS are recognised as effective communicators providing significant benefit to other business support and environmental regulation organisations operating in the region. Key activities noted by stakeholders in this regard are:
  - awareness raising activities through direct approaches to businesses and contacting them through existing networks and business fora;
  - information, advice and guidance materials provided through the ENWORKS website; and,
  - commissioning of specialist consultants for activities such as the provision of specific technical support to businesses
- In terms of regional and national stakeholders, those most frequently identified by stakeholders interviewed as part of this study as having benefitted from ENWORKS strategic leadership in the region were: the Environment Agency, Chambers of Commerce, the Federation of Small Businesses (FSB) and Groundwork Trusts.
- As a result of significant investment of public funds over the past decade through ENWORKS, stakeholders noted that the region has a particular specialist asset in relation to resource efficiency business support, the following issues were identified as important in this respect:
  - The use of the ENWORKS Efficiency Toolkit to record and monitor opportunities has built a valuable dataset and information source to illustrate impact and guide future delivery;
  - As a public sector agent, the ENWORKS advisors are viewed by firms as honest and independent.
  - Provision of business support services through ENWORKS central team (in addition to that provided by delivery partners) provides all firms, including those with limited/low resource savings potential, with some assistance (e.g. access to online resources through the 'getsupport' website and the fortnightly Green Intelligence e-newsletter). The well established 'triage system' ensures that project resources are allocated to where the largest impacts can be expected.
  - There are few private sector organisations providing the type of assistance available through the Project. Stakeholders noted that, despite activity to increase awareness of the potential significance of resource efficiency savings, this remains the case. i.e. there is no demand due to multiple market failures. As a result ENWORKS support activity is not crowding out the private sector.

- Without the existence of ENWORKS in the region, it was noted there may have been some programmes and projects established to deliver similar services (as has been the case in other regions). However, the co-ordination with other organisations working in business support and environmental policy may not have been as effective.
- Most stakeholders noted that the removal of ENWORKS would leave a significant gap in the region, with no other organisation equipped with the required expertise, capacity or detailed knowledge of resource efficiency to delivery this type of support.
- Stakeholders consulted recognised that the importance of the delivery structure of the programme in enabling the strategic leadership function to be provided by ENWORKS: two aspects were commonly highlighted by stakeholders:
  - Firstly, delivery through a network of providers allows the central team to oversee management and delivery and to work with external stakeholders to identify ways in which the service can be delivered more effectively.
  - Secondly, the ability of key individuals in the Central Management Team to provide strategic direction through building effective relationships was highlighted as a key factor in this respect.

In summary, it is clear that effective strategic leadership has been provided by the ENWORKS Central Management Team, based on a programme of business support that has built on previously delivered activity. In addition, the Project has benefitted other organisations in the region that deliver business support and regulatory guidance.

5.8.4 Co-ordination, alignment and partnership

The following findings relating to co-ordination, alignment and partnership were evident from the stakeholder consultations:

- ENWORKS support is delivered through a network of providers, each of which has regular contact with businesses in their area through existing local networks and contacts from previous ENWORKS programmes. They understand how to identify and engage with businesses likely to benefit from support.
- The model of devolved delivery is seen by stakeholders as a highly successful one, which is key strength of the project. Among the particular strengths of the approach identified by interviewees were:
  - ENWORKS provides a learning environment within which delivery partners can exchange engagement and service delivery practices;
  - ENWORKS overseas delivery of outputs at a project level. This ensures that delivery partners can pursue priorities within their areas and not be too driven by overall project targets (for example, sub-regions do not need to ensure equal weighting of savings achieved between energy, waste, and water, or between certain sectors, i.e. resulting in targeting savings rather than responding to business need); and,
  - In delivering the project, ENWORKS has been able to identify areas of underperformance and provide additional advice and guidance to improve service delivery in partner organisations when required.
  - The delivery partners have been successful in using local knowledge and networks to engage a wide range of firms
- ENWORKS has been able to ensure that a high level of quality in service provision has been maintained across the region through effective coordination of delivery partners. Stakeholders highlighted the importance of strong, clear communication and coordination from Central Management Team in this respect.

- It was also noted that maintaining effective partnership working with other business support delivery organisations has been difficult due to the number of business support brands and initiatives that the Government has introduced in recent years. The Project has also been delivered during a period when a range of other support organisations have ceased to operate, such as Business Link and Envirolink.
- Building the necessary alliances and explaining the Project service offer to beneficiaries has been a challenge for the project. It was noted that this difficulty may continue into the future with the introduction of local low-carbon plans for cities and LEP initiatives which may present new brands to companies.
- Some stakeholders suggested that whilst the relationship with sub-regional delivery partners has been positive, a more diverse partnership structure may have been beneficial as it may have led to more dynamism in delivery through increased competition among providers.

In summary, the business support landscape has undergone a period of change during the project delivery period. This has been challenging for ENWORKS and may have been confusing for firms. However, the Central Management Team have provided effective coordination and alignment of activities. Introducing competition through a more diverse delivery network may have improved service delivery.

5.8.5 Promoting Intelligence Sharing and Awareness Raising

The following findings relating to intelligence sharing and awareness raising were evident from the stakeholder consultations:

- ENWORKS has taken a lead role in the region in raising the level of awareness among stakeholders, delivery stakeholders and businesses regarding issues relating to business resource efficiency.
- Despite a relatively high level of manufacturing compared to other regions, stakeholders noted that there was nothing specific to the North West economy that makes the Project more, or less, relevant to the region. This is a project which other regions would benefit from.
- It was noted that ENWORKS web-based tools now provide intelligence and awareness raising activity, for example…. which benefit firms and support organisations outside the region, especially where there are no relevant programmes to deliver support for implementation.
- Stakeholders also noted that ENWORKS has been at the forefront of developing an empirical beneficiary evidence base through collecting data to track identified resource efficiency measures and actions taken to implement opportunities. This has continued during the Project.
- During the course of this project further improvements have been made to the ENWORKS Efficiency Toolkit, as a result it is now easier to use with enhanced functionality to enable a wider range of analysis. The Toolkit has been identified as a good practice tool nationally and by the European Commission.
- Stakeholders noted though that, despite the work of ENWORKS in the region, a number of challenges relating specifically to the market failure of information failure persist, for example:
  - there remains a significant lack of awareness among firms in the region regarding the 'bottom line' financial savings that can be achieved through improved resource efficiency; and,
  - knowledge silos within firms were also identified as a problem, preventing a full understanding of the potential cost savings from resource efficiency measures.
- Stakeholders noted the support provided was appropriate to tackling the specific issue of information failure. For example continuous, face-to-face interaction with

companies, over the long-term is an effective method of disseminating information at various levels within companies. The Green Intelligence service provided by ENWORKS is also considered a useful complementary element of the project.

- It was also noted that, during the course of delivering the Project, the Central Management Team have sought to improve their capacity to manage and improve the project. This has been done through refreshing the membership of the ENWORKS board. The board consists of high level of representation from those who operate in business support and the private sector.
- It was noted by stakeholders that sub-regional delivery partners have significant brand recognition within the business community; this has been a useful way for the Project to engage with firms.

In summary, ENWORKS has effectively promoted intelligence and raised awareness of the benefits of resource efficiency to firms in the North West. Engagement through a network of delivery partners has exceeded all targets; however, future engagement of firms in the resource efficiency agenda will continue to require public policy intervention due to the multiple market failures associated with resource efficiency. The ENWORKS Efficiency Toolkit has been further developed during the Project and is recognised as an example of good practice in tracking business support impact.

5.8.6 Future challenges

The following issues were noted by stakeholders as important future delivery challenges and options to be investigated in future for ENWORKS:

1. Delivering projects through a network of partners inevitably means that one organisation will be the strongest performer and one will be the weakest at any one point in time. This will also change over time and variances in performance may be linked to a wide variety of factors. Supporting partners to keep staff turnover to a minimum and to retain highly skilled advisors were noted as the most important factors to effective delivery.
2. Delivery through sector specialists was not possible during the Project due to a lack of relevant capacity within these organisations to provide effective support. However, stakeholders noted the logic of differentiated approaches to targeted sectors (where there may be common opportunities). A targeted sector approach could, therefore, be considered in future.
3. It was noted that there is still a significant number of firms that ENWORKS has not engaged with. Given the clear economic benefit for beneficiaries it was noted by stakeholders that there are significant further economic impacts that can be achieved through public funding for this type of business support. For example, there are approximately 5,000 firms with resource saving opportunities logged in the Toolkit, whereas there are approximately 250,000 firms in the region.
4. It was recognised that the introduction of charging models was likely in the future. There was concern though that this may result in fewer businesses engaging with the project, particularly in the current economic climate, i.e. companies are unwilling to pay for support they not value due to the significant multiple market failures in this area.
5. The quality of individuals and strategic thinking in the ENWORKS Central Team was a noted strength of the current project, but also a future vulnerability if these individuals were lost to other organisations.

6 Conclusions and Recommendations

6.1 Headline conclusions

The conclusion from this evaluation is that the project is highly successful in meeting its objectives of addressing market failure and realising high levels of economic and environmental benefits.

The research indicates that, after due allowance for the usual additionality factors, an attributable increase in annual GVA of £47.5m and 744 additional and safeguarded jobs have been generated for a programme expenditure of £8.4m. In addition £0.3m of environmental benefit shave been secured. Given the reported persistence of impacts a further £40.2m of GVA is expected to occur. The programme has also identified additional opportunities in beneficiary firms which, if implemented, would deliver a further £46.6m of GVA.

This high rate of return is due to a number of reasons:

- The project addresses substantial market failures, and actively assists businesses to identify and invest in resource efficiency which for well documented reasons they would otherwise ignore. These failures were even higher during the current programme period due to the economic crisis and difficulties in accessing finance;
- Resource efficiency measures are capable of producing substantial financial returns with short payback periods, as documented by the project and supported by this research and in the wider literature. The high levels of industry energy costs;
- The typical barriers to business engagement and incentives have been addressed in project design and delivery building on the continuity and coherence built up by the central management team and delivery partners in previous programmes. This leads to higher levels of business interest (Not just information) and a willingness of business to take action;
- Management approaches and related tools have been tested and refined to the benefits of the current project. This has enabled effective delivery during a period of financial pressures and related management challenges, which might have seriously damaged less robust projects.

6.2 Detailed Conclusions

As a result of the analysis presented in this report the following conclusions are evident:

6. **The Project was an appropriately designed programme of business support**. The project design addressed the nature of multiple market failures in relation to firms' investment in resource efficiency and reducing exposure to environmental risk, through providing support which both identified opportunities to improve and provided ongoing assistance to implement those opportunities.

7. **The project was effectively coordinated by the ENWORKS Central Management Team and ENWORKS board**. The following issues were successfully managed during the programme:

    a. ENWORKS developed the application and managed the approval process with funders, providing a coordination function for partners.

    b. A number of changes in the level of available funding took place during the project. The ENWORKS Central Management Team ensured that this did not impact on delivery.

    c. The ENWORKS Central Management Team enabled the delivery network to concentrate on delivering business support, by managing outputs and funder reporting .

d. ENWORKS Central Management Team also provided a learning and good practice exchange forum through regular delivery partner meetings. Furthermore the ENWORKS board provided strategic oversight and direction.

8. **Delivery of the project through a network of providers was an effective model delivering support based on the requirements of firms across the region**. Expert local providers were undoubtedly a key strength of the programme.
9. **The project has successfully supported business growth and jobs in beneficiary firms in the North West**. The beneficiary survey, outputs verified by beneficiaries and the ENWORKS Efficiency Toolkit provide strong evidence that the support provided resulted in increased sales and jobs (as well as jobs and sales safeguarded) that would not have occurred without the project. The Project assisted beneficiary firms to achieve an average sales increase of £114k per firm.
10. **The project has delivered positive environmental impacts**. The reduced use of energy, water and waste among beneficiary firms in the region has had valuable environmental impacts. The Project assisted beneficiary firms to achieve an average cost saving of £15k per firm through resource efficiency. In addition the promotion of sustainable business practices may continue to influence behaviours of both firms and individuals.
11. **The Project benefitted from the delivery of previous programmes**. Both the delivery network and the ENWORKS Central Team were able to build on previous activity and lessons learned in order to deliver a project with extremely high value for money, delivering cost effective, well-targeted and tailored business support services.
12. **The ENWORKS Efficiency Toolkit is a valuable resource to monitor opportunities created and the level of implementation**. The Toolkit provides a resource for firms to monitor the range of identified opportunities and the potential and actual returns from actions. Moreover, it provides real-time data about project performance, a robust audit trail for all outcomes reported by the project and is a valuable data-set for policy makers.

6.3 Recommendations

6.3.1 Recommendations for future potential funders

The following recommendations for future funders are evident from the analysis carried out during the evaluation:

1. **Market failures in relation to business investment in resource efficiency remain and require public sector intervention**. A business support programme which provides firms with support to identify and implement opportunities to increase resource efficiency and reduce exposure to environmental risk should therefore continue. The impacts of projects like this help to deliver both growth and the transition to a low carbon economy – goals that are shared at local, national and international level.

2. **The ENWORKS delivery model remains appropriate**. Delivery through a network of providers gives flexibility, local accountability, access to an appropriately wide range of specialisms and is cost effective. Funders should utilise the expertise of the ENWORKS Central Management Team in creating and managing complex yet effective delivery networks for a range of policy/funding regimes in any future opportunities. . Support through a central management structure provides significant added value (and reduced administrative burden on delivery teams and funders) and it is recommended that this is included as an essential element of any future project.
3. **The ENWORKS Efficiency Toolkit is a valuable resource for business support providers**. The Toolkit is both a project management tool – providing data in real time to monitor and manage project performance, as well as a business support tool – removing barriers to change within businesses and increasing the effectiveness of an

intervention. In addition, it provides a robust audit trail to funders, allowing every impact (e.g. every 1p or gram of CO_2) to be traced to an individual beneficiary and a specific action, alongside disaggregating project impacts into those that have been achieved and those that have been identified but not yet fully implemented, giving unrivalled accuracy in project data. It should therefore be included in any future funding agreement.

6.3.2 Considerations for future Delivery Design

The operational and funding context of any new successor programme to the Project will be significantly different to that which exists at the present time. We briefly review the lessons of the evaluation for the design of any future programme.

Operating environment

Preparation for the 2014 – 2020 Structural Fund Programme in the UK is currently underway, with the UK Government proposing to bring together ERDF, ESF and a proportion of the European Agricultural Fund for Rural Development into a 'EU Growth Programme' with a single governance structure.

The Funds available in the EU Growth Programme will be notionally allocated to Local Enterprise Partnerships (LEPs). Each LEP will be preparing an EU Investment Strategy to be submitted to the UK Government in autumn 2013 for consideration and approval.

ERDF is likely to continue to play a prominent role in delivering the UK Government's core economic policy objective as outlined in its Plan for Growth (2011) of achieving 'strong, sustainable and balanced growth that is more evenly shared across the country and between industries' .

The ERDF component of the EU Growth Programme will be strongly aligned to, and complement the priorities of UK green growth/climate change and business, innovation and competitiveness policy. A key priority under the UK Growth Programme is likely to include a shift to a low carbon economy (especially energy efficiency and low carbon technologies). Other objectives include climate change adaptation, risk prevention and management and environmental protection.

Funding

Under EU funding proposals for 2014-2020, UK ERDF programmes will be required to earmark 20% of expenditure for climate related expenditure. This is available to any activity that can be demonstrated to be delivering carbon emission savings and/or improvement in the climate resilience of the regional infrastructure.

ERDF funds have been reduced slightly at the EU level; and the scope to identify matched funding will be harder given the continued squeeze on public spending and continuing poor economic prospects that may curtail private sector funding. However, the earmarking offers potential scope for a larger allocation of funding for resource efficiency.

6.3.3 Implications for ENWORKS

In this context the question is whether a larger programme would be viable (subject to match funding) in terms of the delivery and targeting of approaches.

Demand – the continued demand for programme services suggests that there remains sufficient numbers of beneficiaries subject to market failure that could benefit from resource efficiency support.

Delivery – the use of LEPs (probably in formal co-operation) as the main delivery agents reinforces the sub-regional delivery structure used by the Programme. However, since the RDA network does not exist, it might be conceivable that ENWORKS develops a national service (using local delivery agents) and which all interested LEPs could secure. This has implications for the specification and selection process of delivery partners

Targeting (sectors) – the cross-sectoral approach currently employed is likely to be more relevant in the context of an increased level of activity; and simplifies delivery. Sectoral

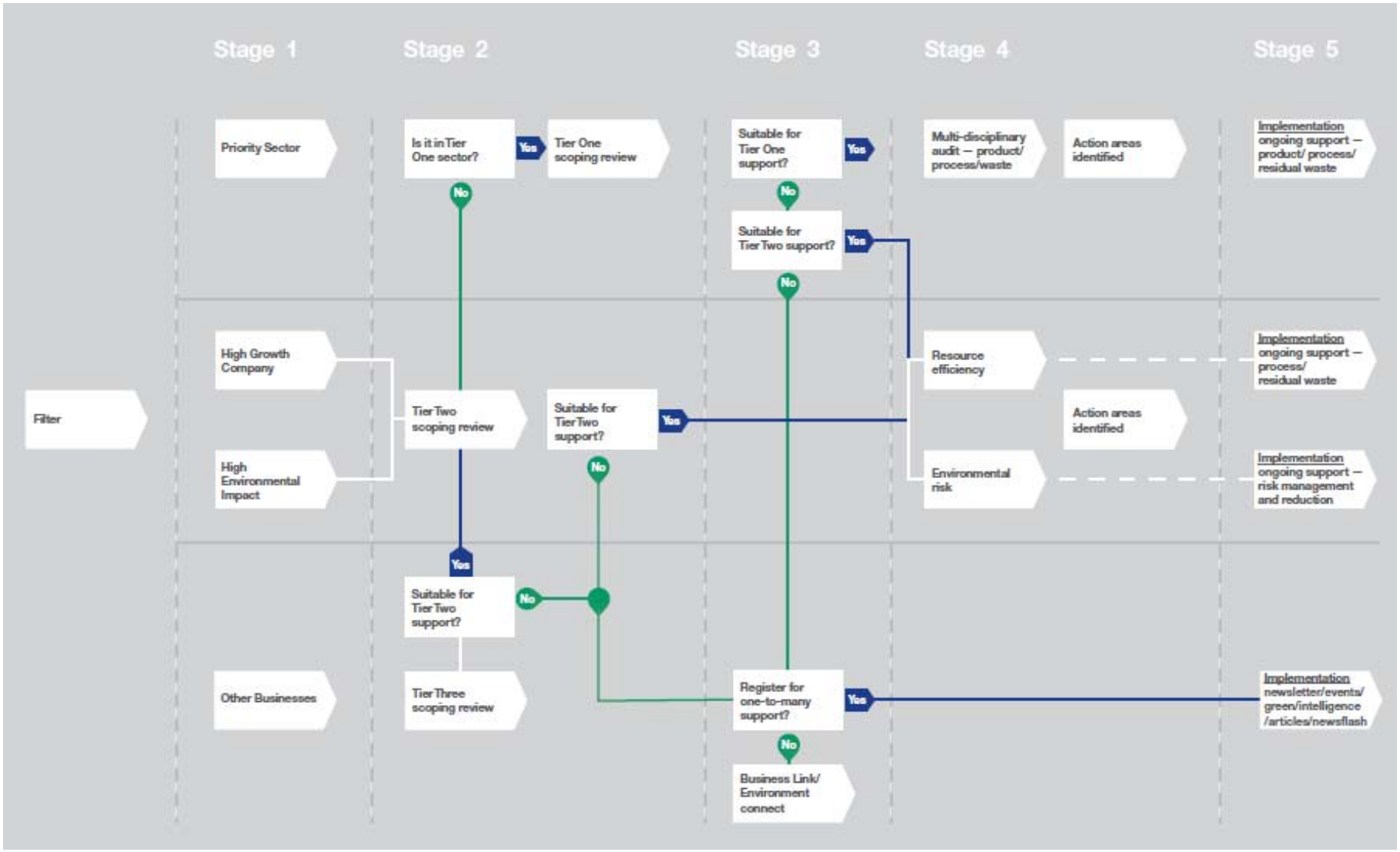
priorities could be introduced if particular LEPs had evidence that this would not curtail effective demand.

Targeting (businesses) – the current 'triage' system will be more important in managing an increased level of activity in line with the capacity of local delivery partners and technical support capacity, and maintaining the value for money. The SME focus required by ERDF will remain.

Diversification – there maybe opportunities to diversify into other resource efficiency initiatives, directed to business. This may require partners depending on services. Bio-energy with the emphasis on establishing local supply chains might be one such opportunity. The introduction of Integrated Projects under the LIFE programme (where climate related funding is combined with ERDF / ESF funding) may also provide the basis of new service models.

ANNEXES

Annex 1 Triage Process



Annex 2 Resource Efficiency Opportunities by Sector

Energy			Waste			Water		
Sector	**Estimated Savings Opportunity (£M)**	**% of Energy Savings**	**Sector**	**Estimated Savings Opportunity (£M)**	**% of Waste Savings**	**Sector**	**Estimated Savings Opportunity (£M)**	**% of Water Savings**
Freight: Mainly own account	1,050	27%	Chemicals / non-metallic minerals	4,396	24%	Public administration	154	29%
Freight: HGV	1,027	27%	Metal Manufacturing	3,675	20%	Agriculture	84	16%
Freight: LGV	686	18%	Power & utilities	3,499	19%	Food & drink	76	14%
Retail	140	4%	Construction	2,601	14%	Other services	43	8%
Commercial offices	101	3%	Textiles / wood / paper / publishing	1,388	8%	Education	37	7%
Hotels	99	3%	Transport & storage	912	5%	Health & social work	27	5%
Others	717	19%	Others	1,789	10%	Others	106	20%
TOTAL	3,820	100%	TOTAL	18,260	100%	TOTAL	524	100%

Source: Defra (2011), *p.9*

Annex 3 Further detail from the beneficiary survey

Table A3.1 Geographical and sectoral composition of survey respondents

	Bury, Bolton, Oldham & Rochdale	Cumbria	Cheshire & Warrington	Merseyside	Manchester, Salford, Stockport, Tameside & Trafford	Lancashire	Total in sector
Aerospace		1			2		**3**
Arts and Crafts					1		**1**
Automotive			1			1	**2**
Business Administration and Services		1					**1**
Care and youth services		4		4			**8**
Charity and Voluntary Sector			1	5	1		**7**
Chemicals		1		2		1	**4**
Construction	1	1	4	3	4	5	**18**
Creative Industries					3	1	**4**
Digital Industries	1						**1**
Energy		1					**1**
Engineering	1	1	1		2		**5**
Environmental Technology					1		**1**
Financial and Professional Services			3	1			**4**
Food and drink	2	6	2			2	**12**
Health			1				**1**
Hotel and accommodation		6	3				**9**
Leisure					1	2	**3**
Manufacturing	6	3	7	8	10	16	**50**
Maritime				1			**1**
Other			1	1	4	2	**8**
Recycling Services				1	2	1	**4**
Retail		2			1		**3**
Sport		1	1	1			**3**

	Bury, Bolton, Oldham & Rochdale	Cumbria	Cheshire & Warrington	Merseyside	Manchester, Salford, Stockport, Tameside & Trafford	Lancashire	Total in sector
Textiles					1	3	**4**
Unknown					1		**1**
Warehousing and logistics	1		1	2	1	1	**6**
All sectors	**12**	**28**	**26**	**29**	**35**	**35**	**167**

Base: 167 responses

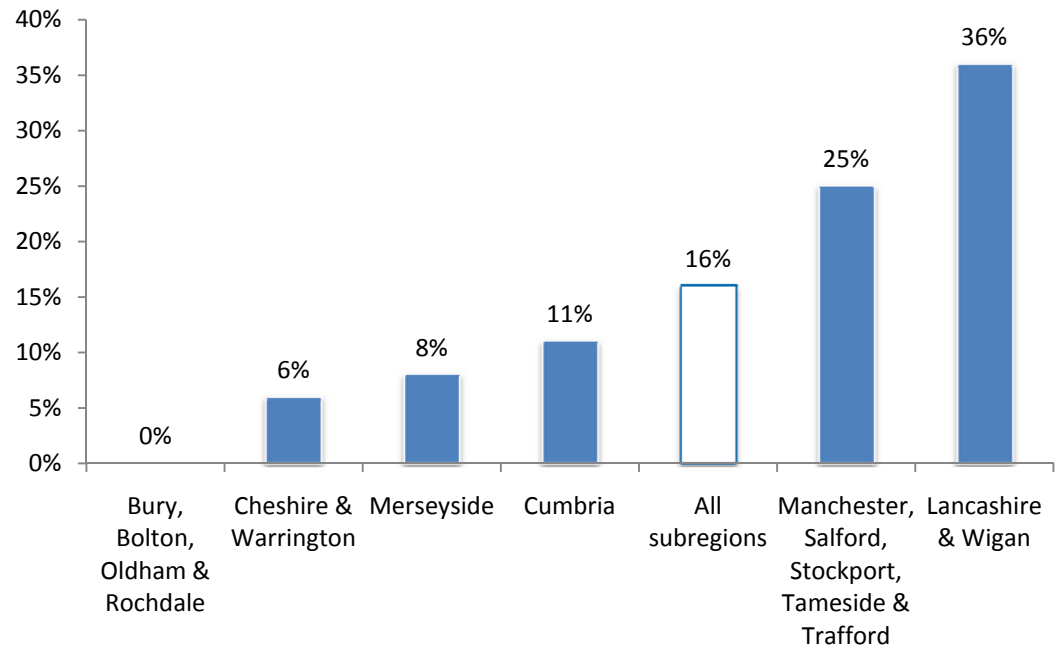
Willingness to pay

Businesses were asked to state whether they would pay for the support they had received if it had not been provided free of charge. A low response rate was achieved regarding to estimates of the cost that businesses would be willing to pay for services received.

Resource efficiency audit

16 per cent of businesses would be willing to pay for a resource efficiency audit. This was most likely in Lancashire and Manchester, Salford, Stockport, Tameside and Trafford where 36 per cent and 25 per cent of businesses respectively would pay for the support. In contrast, no businesses would pay for the support in Bury, Bolton, Oldham and Rochdale.

Figure A3.1 Share of organisations that would be willing to pay for a resource efficiency audit



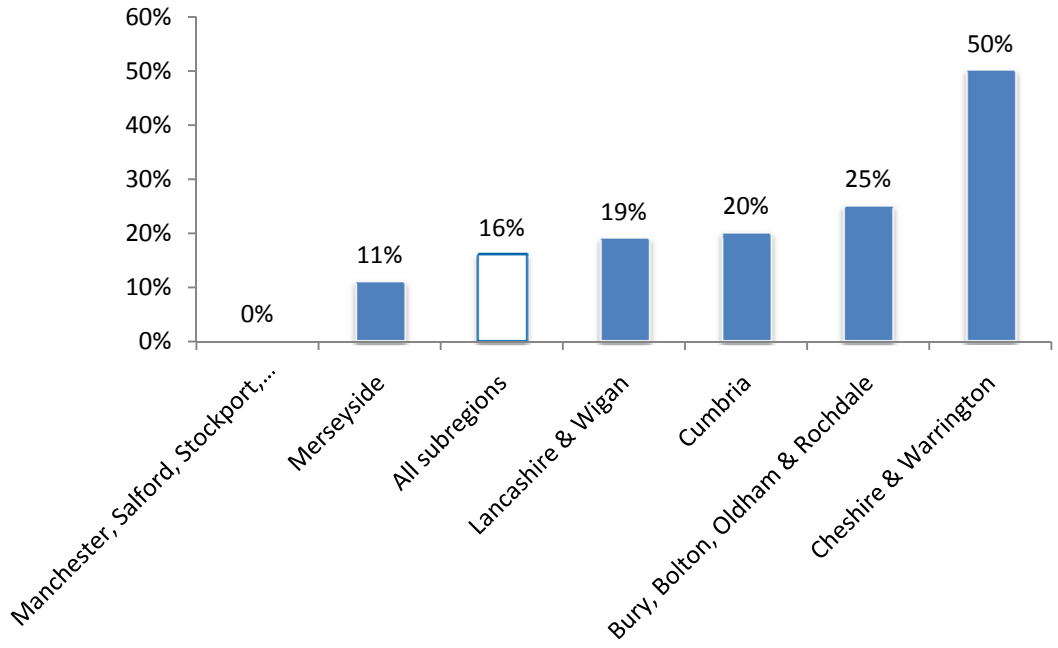
Base: 82 businesses where 13 were willing to pay.

Only three businesses provided a figure to indicate the price they would be willing to pay for a resource efficiency audit – one business suggested they would pay £20 per hour while two stated they would be willing to pay £50 per hour. The majority of businesses favoured payment terms based on payment on the results achieved (7 out of 10 businesses), with a membership fee (2 businesses) and one-off upfront fee (1 business) also considered favourable.

Ongoing support

16 per cent of businesses stated that they would pay for the ongoing support they had received. Organisations were most likely to state they were willing to pay in Cheshire and Warrington (50%) – compared to zero per cent of businesses in Manchester, Salford, Stockport, Tameside and Trafford (0%).

Figure A3.2 Share of organisations that would be willing to pay for ongoing support



Base: 50 businesses where 8 were willing to pay

Only three businesses indicated a figure that they would be willing to pay – with prices ranging from £25 to £75 per hour. Payment terms considered by business also varied – with 50 per cent citing payment upon results (3 businesses), 33 per cent citing a membership fee (2 businesses) and 17 per cent citing a one-off upfront fee (1 business).

Training

One in ten businesses stated that they would be willing to pay for training (10%). No businesses based in Cheshire and Warrington and Merseyside would pay for the training they had received (0%).

Figure A3.3 Share of organisations that would be willing to pay for training

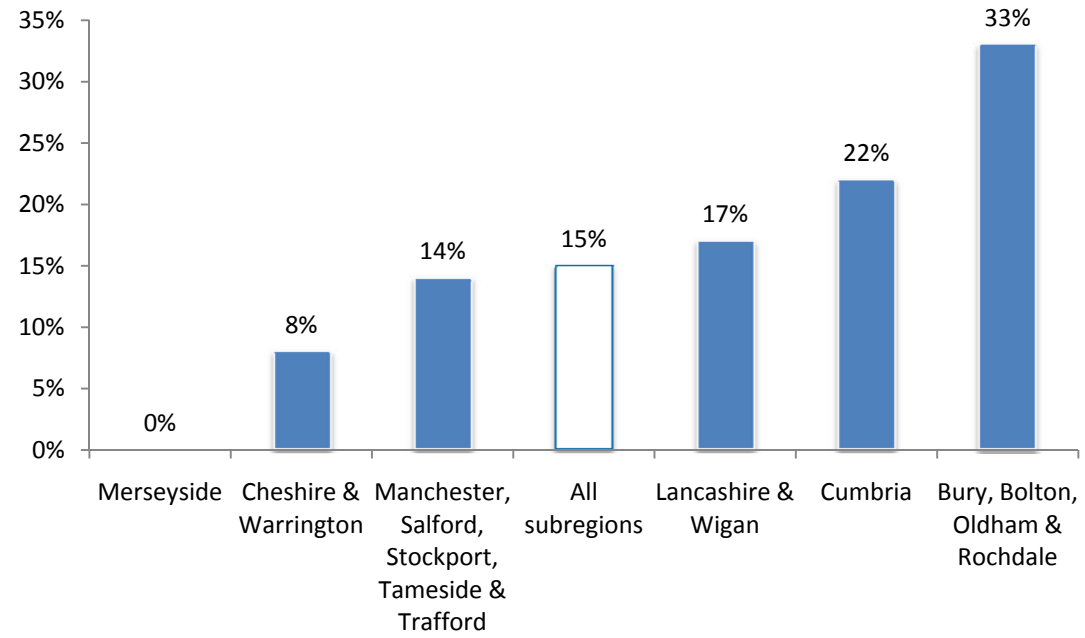
Base: 48 businesses where 5 were willing to pay

2 businesses that stated they were willing to pay for training provided by Enworks provided further information. One business stated they would pay £200 per session, while another stated they would pay 'the going industry rate'. When considering payment terms, businesses were more likely to favour a one-off upfront fee (40% of 5 businesses) with the remainder suggesting either payment on results (20%), a membership fee (20%) or a monthly direct debit (20%).

Toolkit

15 per cent of businesses would pay for use of the toolkit. Businesses based in Bury, Bolton, Oldham and Rochdale (33%) and Cumbria (22%) were most likely to state they would pay for the toolkit. However none of the businesses who had accessed the toolkit in Merseyside would have paid for the tool.

Figure A3.4 Share of organisations that would be willing to pay for the toolkit



Base: 93 businesses where 14 would pay

When asked to consider a price for the toolkit, organisations stated they would be willing to pay between £20 and £50. 44 per cent of businesses stated that they would pay on results achieved, while one third favoured a one-off fee (33%) and the remainder a membership fee (22%).

Sub-regional analysis

Table A3.2 provides a further breakdown of business's knowledge of resource efficiency by sub-region. While some awareness of the importance of resource efficiency exists across all sub-regions, there was less consensus among businesses of viewing resource efficiency as a continuous process that is considered in all investment decisions. Similarly, there was a perception that not all businesses had the capacity to effectively appraise the costs and benefits of such investments.

Businesses that are based in Cumbria and in Bury, Bolton, Oldham and Rochdale were most likely to 'strongly agree' with statements relating to company awareness of the importance of resource efficiency, knowledge to identify and implement resource efficiency improvements. In addition they were the most likely to consider resource efficiency as a continuous process that is considered in every investment decision made. Conversely, businesses based in the sub-regions of Merseyside, Cheshire and Warrington were less likely to 'strongly agree' that they possessed a high level of knowledge on the identification and implementation of improvements related to resource efficiency or that they had effective appraisal techniques to assess costs and benefits of such improvements.

Table A3.2 Sub-regional perceptions on organisational understanding of resource efficiency

	Strongly Agree	Agree	Disagree	Strongly disagree	I do not know
My company is aware of the importance of resource efficiency					
Cumbria	67%	33%	0%	0%	0%
Bury, Bolton, Oldham & Rochdale	50%	50%	0%	0%	0%
Merseyside	46%	54%	0%	0%	0%

	Strongly Agree	Agree	Disagree	Strongly disagree	I do not know
All sub-regions	**46%**	**53%**	**0%**	**0%**	**1%**
Lancashire	46%	51%	0%	0%	3%
Manchester, Salford, Stockport, Tameside & Trafford	38%	62%	0%	0%	0%
Cheshire & Warrington	35%	65%	0%	0%	0%
My company has a high level of knowledge regarding identifying resource efficiency improvements					
Cumbria	33%	59%	4%	4%	0%
Bury, Bolton, Oldham & Rochdale	25%	42%	25%	0%	8%
Lancashire	20%	63%	11%	0%	6%
All sub-regions	**18%**	**58%**	**21%**	**1%**	**2%**
Manchester, Salford, Stockport, Tameside & Trafford	16%	51%	32%	0%	0%
Cheshire & Warrington	15%	54%	27%	0%	4%
Merseyside	4%	71%	25%	0%	0%
My company has a high level of knowledge regarding implementing resource efficiency improvements					
Cumbria	19%	74%	4%	4%	0%
Bury, Bolton, Oldham & Rochdale	17%	50%	25%	0%	8%
Lancashire	14%	54%	29%	0%	3%
Manchester, Salford, Stockport, Tameside & Trafford	14%	49%	38%	0%	0%
All sub-regions	**13%**	**56%**	**29%**	**1%**	**2%**
Cheshire & Warrington	12%	54%	31%	0%	4%
Merseyside	4%	56%	41%	0%	0%
My company has effective appraisal techniques to analyse the costs and benefits of resource efficiency investments					
Bury, Bolton, Oldham & Rochdale	18%	27%	36%	9%	9%
Manchester, Salford, Stockport, Tameside & Trafford	11%	43%	43%	0%	3%
Cumbria	11%	63%	22%	4%	0%
Lancashire	9%	54%	29%	6%	3%
All sub-regions	**9%**	**49%**	**37%**	**2%**	**3%**
Cheshire & Warrington	8%	50%	35%	0%	8%
Merseyside	4%	43%	54%	0%	0%
My company views resource efficiency as a continuous process, and considers resource efficiency in every					

	Strongly Agree	Agree	Disagree	Strongly disagree	I do not know
investment decision					
Cumbria	37%	52%	7%	4%	0%
Bury, Bolton, Oldham & Rochdale	33%	25%	33%	0%	8%
Lancashire	29%	54%	9%	6%	3%
Cheshire & Warrington	27%	38%	19%	0%	15%
Merseyside	25%	54%	14%	4%	4%
All sub-regions	**25%**	**52%**	**16%**	**2%**	**4%**
Manchester, Salford, Stockport, Tameside & Trafford	8%	68%	24%	0%	0%

Base: 143 responses

Source: GHK Survey of Beneficiary firms

Quality of Service

A greater share of businesses based in Lancashire (80%), Cheshire and Warrington (81%) and Cumbria (86%) had received an on-site audit, compared to just two thirds of businesses in Merseyside.

The incidence of ongoing support among respondents was much higher in Lancashire, with 46 per cent of respondents receiving intensive support. Contrastingly, just one in five had received such intensive support in Cumbria, Cheshire and Warrington.

Table A3.3 Support received by survey respondents

	Ongoing support	On-site RE Audit	Training	Environ-mental Risk Support	I do not know
Lancashire	46%	80%	40%	46%	3%
Bury, Bolton, Oldham & Rochdale	33%	75%	25%	25%	0%
Merseyside	31%	66%	24%	24%	14%
All sub-regions	**32%**	**78%**	**29%**	**28%**	**7%**
Manchester, Salford, Stockport, Tameside & Trafford	32%	78%	27%	24%	14%
Cheshire & Warrington	23%	81%	27%	12%	0%
Cumbria	21%	86%	25%	32%	4%

Base: 163 responses

Source: GHK Survey of Beneficiary firms

Levels of satisfaction were particularly high in Lancashire, Cheshire and Warrington with over two thirds of businesses 'highly satisfied'. Conversely, levels of dissatisfaction were highest in Merseyside where 11 per cent of businesses were 'unsatisfied' with the support provided.

Table A3.4 Satisfaction with On-site resource efficiency audit to identify savings

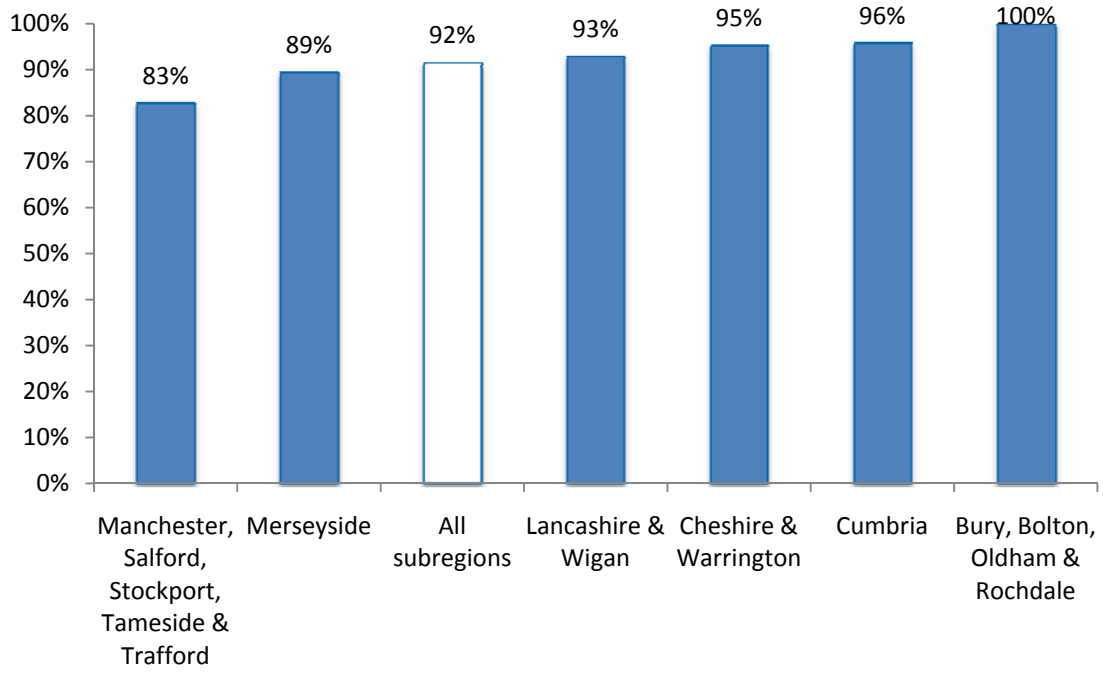
	1 Highly Satisfied	2 Satisfied	3 Unsatisfied	4 Very unsatisfied
Lancashire (n=28)	68%	29%	4%	0%
Cheshire & Warrington (n=21)	67%	29%	0%	5%
Bury, Bolton, Oldham & Rochdale (n=9)	56%	44%	0%	0%
Cumbria (n=24)	54%	42%	0%	4%
All sub-regions (n=129)	**53%**	**42%**	**3%**	**2%**
Manchester, Salford, Stockport, Tameside & Trafford (n=28)	43%	54%	4%	0%
Merseyside (n=19)	32%	58%	11%	0%

Base: 129 responses

Source: GHK Survey of Beneficiary firms

All businesses based in Bury, Bolton, Oldham and Rochdale would recommend the support they had received (100%), while in Manchester, Salford, Stockport, Tameside and Trafford 83 per cent of businesses would do so.

Figure A3.5 Share of businesses that would recommend the on-site resource efficiency audit



Base: 130 businesses

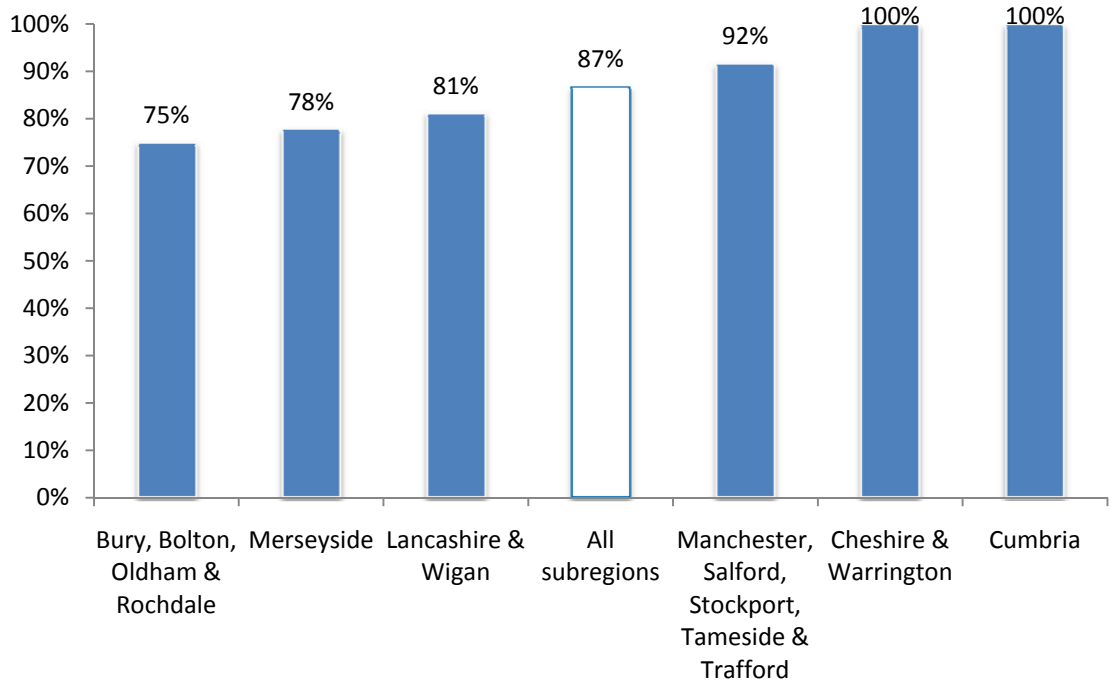
Source: GHK Survey of Beneficiary firms

Ongoing support to implement identified savings

When the sub-regional location of businesses is considered, more businesses had received support in Lancashire (46%) and just one in five businesses in Cumbria (21%) and Cheshire and Warrington (23%).

In Bury, Bolton, Oldham, Rochdale and Merseyside the share of businesses that would recommend the ongoing support was lowest (75% and 78% respectively). However in both cases over three quarters of businesses would still recommend the service they had received.

Figure A3.6 Share of businesses that would recommend the ongoing support to implement resource efficiency savings



Base: 53 businesses

Source: GHK Survey of Beneficiary firms

Support to understand and manage environmental risk

Respondents based in Lancashire (46%) and Cumbria (32%) were more likely to have received support related to environmental risk, than businesses in other sub-regions, particularly Cheshire and Warrington (12%).

Table A3.5 Satisfaction with support to understand and manage environmental risk

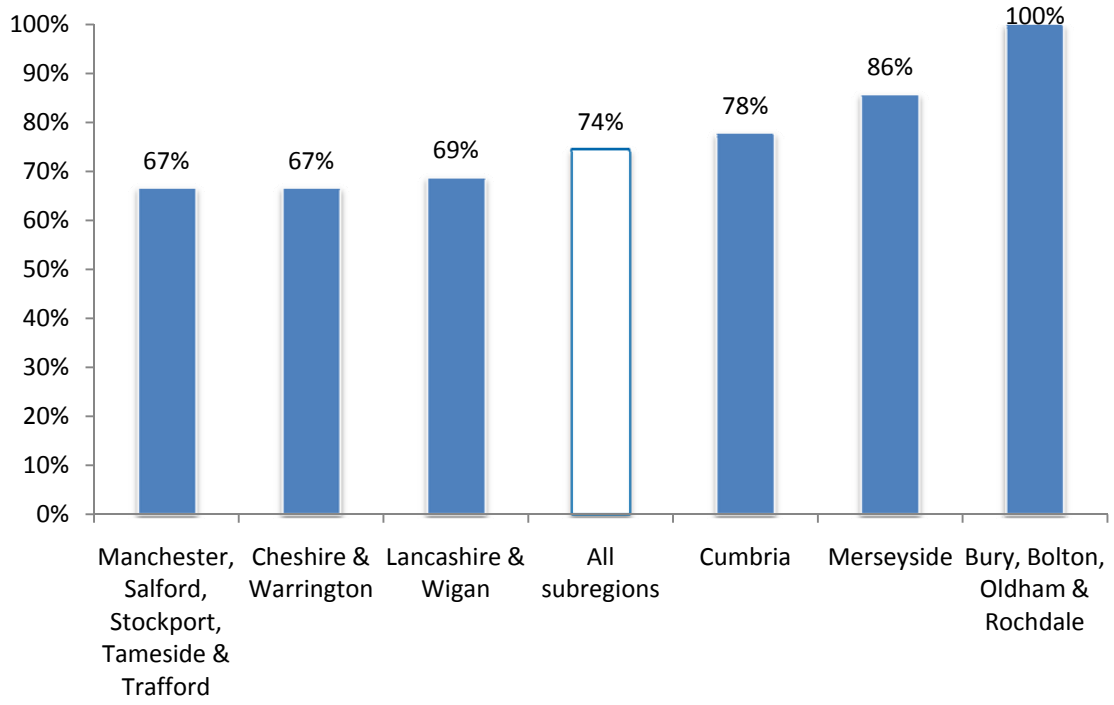
	1 Highly Satisfied	2 Satisfied	3 Unsatisfied	4 Very unsatisfied
Bury, Bolton, Oldham & Rochdale (n=3)	67%	33%	0%	0%
Lancashire (n=15)	67%	33%	0%	0%
All sub-regions (n=44)	**57%**	**39%**	**2%**	**2%**
Cumbria (n=9)	56%	44%	0%	0%
Manchester, Salford, Stockport, Tameside & Trafford (n=9)	56%	44%	0%	0%
Cheshire & Warrington (n=2)	50%	0%	0%	50%
Merseyside (n=6)	33%	50%	17%	0%

Base: 44 businesses

Source: GHK Survey of Beneficiary firms

Organisations based in Cumbria (78%), Merseyside (86%) and Bury, Bolton, Oldham and Rochdale (100%) were most likely to recommend the support. These responses are illustrated in Figure A3.7. Just two businesses identified improvements to the service they had received – both related to a desire for increased ongoing support.

Figure A3.7 Share of businesses that would recommend support received to understand and manage environmental risk



Base: 47 businesses

Source: GHK Survey of Beneficiary firms

Training

The incidence of businesses receiving this support was highest in Lancashire (40%). Satisfaction with training was high with three in five 'highly satisfied' (59%) and further one in three 'satisfied' (37%). Satisfaction levels among respondents was highest in Cumbria and Lancashire where 86 per cent and 79 per cent of business respectively were 'highly satisfied' and the remainder were 'satisfied'. There was a slightly lower level of satisfaction among businesses based in Cheshire and Warrington, where 14% were 'very unsatisfied' (1 business) and in Merseyside, where 17% (1 business) were 'unsatisfied'.

Table A3.6 Satisfaction with training provided by ENWORKS

	1 Highly Satisfied	2 Satisfied	3 Unsatisfied	4 Very unsatisfied
Cumbria (n=7)	86%	14%	0%	0%
Lancashire (n=14)	79%	21%	0%	0%
All sub-regions (n=46)	**59%**	**37%**	**2%**	**2%**
Bury, Bolton, Oldham & Rochdale (n=2)	50%	50%	0%	0%

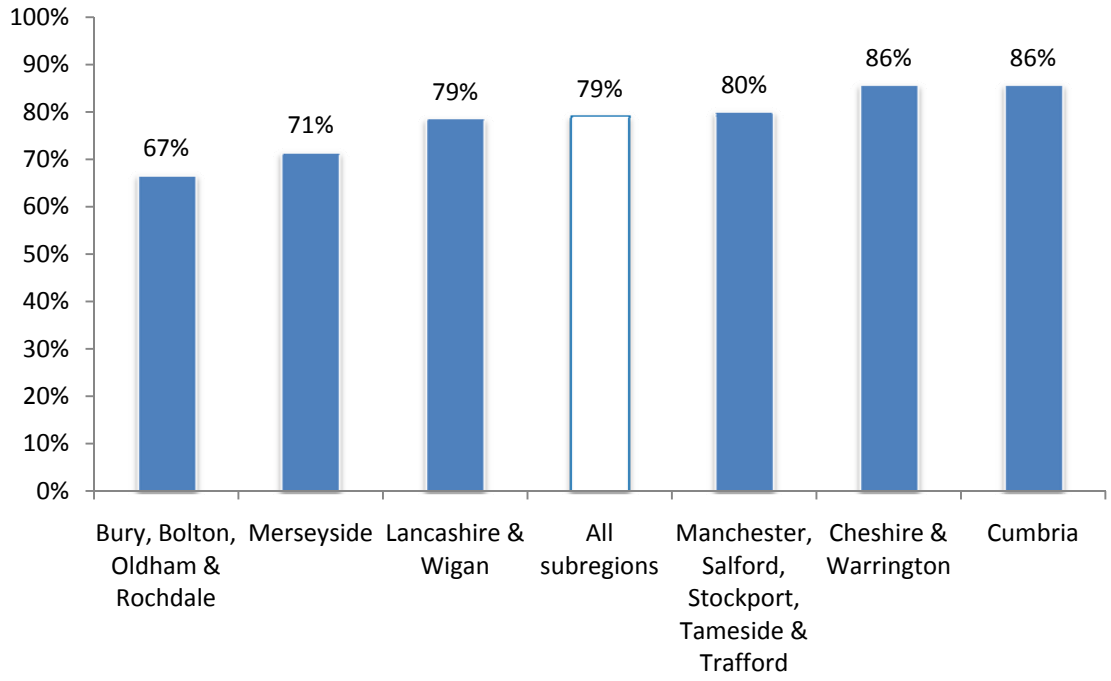
	1 Highly Satisfied	2 Satisfied	3 Unsatisfied	4 Very unsatisfied
Cheshire & Warrington (n=7)	43%	43%	0%	14%
Manchester, Salford, Stockport, Tameside & Trafford (n=10)	40%	60%	0%	0%
Merseyside (n=6)	33%	50%	17%	0%

Base: 46 businesses

Source: GHK Survey of Beneficiary firms

Businesses were even more likely to recommend the training if they were based in Cumbria (86%) or Cheshire and Warrington (86%). Businesses based in Bury, Bolton, Oldham and Rochdale and Merseyside were less likely to recommend the service, however in both cases over two-thirds would still recommend the training (67% and 71% respectively).

Figure A3.8 Share of businesses that would recommend the training provided through the Project



Base: 48 responses

Source: GHK Survey of Beneficiary firms

Annex 4 Stakeholders Interviewed

- Clive Memmott , Chief Executive of Greater Manchester Chamber of Commerce (Chairman of the ENWORKS Board)
- Bill Derbyshire, Strategic Planning Manager, Environment Agency North West
- George Hall, Research and Commercial Project Co-ordinator, University of Central Lancashire
- Philip Harris, Chief Executive of Optic Glyndwr, representative of Institute of Directors (IoD)
- Andrew Darron, Executive Director, Groundwork Lancashire West & Wigan
- Peter Davys, Managing Director of Orrest and National Councillor / Director of Federation of Small Businesses (FSB) in the North West
- Paul Davies and Jo Turnbull, ERDF funding team, Department for Communities and Local Government
- Drew Thomas, Deputy Chief Executive, Manchester Solutions
- Sam Nicholson, ENWORKS Programmes Director
- Todd Holden, Director Low Carbon Policy and Programmes, Greater Manchester Chamber of Commerce
- Mick Smith, Environmental Business Services Manager, Groundwork Pennine Lancashire
- Lynn Fox, Chief Executive, Cumbria Rural Enterprise Agency

Annex 5 Impact Assessment: Additional information

A5.1 Sources

Table A5.1 Sources used in impact assessment

Source	Data used
ENWORKS Output Data (verified by beneficiary firms)	■ Businesses assisted ■ Cost savings ■ Jobs created ■ Sales generated
Beneficiary Survey	■ Deadweight ■ Displacement ■ Leakage ■ Economic Multiplier
Department of Energy & Climate Change	■ Price per tonne CO_2e. Link to source: http://www.decc.gov.uk/assets/decc/11/cutting-emissions/carbon-valuation/6667-update-short-term-traded-carbon-values-for-uk-publ.pdf
Annual Survey of Hours and Earnings, Office of National Statistics	■ Median average NW earnings. Link to source: http://www.nomisweb.co.uk/query/construct/submit.asp?menuopt=201&subcomp=
Her Majesty's Revenue and Customs:	■ Employer National Insurance calculation. Link to source: http://nicecalculator.hmrc.gov.uk/Class1NICs1.aspx
HMT Green Book	■ HMT Discount Rate: http://www.hm-treasury.gov.uk/d/green_book_complete.pdf

A5.2 Comparison of Additionality factors

	Deadweight	Displacement	Leakage	Multiplier	Gross to Net Ratio
EREiKS - GHK	0.21	0.25	0.10	1.53	0.83
EBS - GHK[24]	0.44	0 [0.21]	0	1 [1.45]	0.56
EBS - SQW	0.10	0.13	0.05	1.25	0.92
Ent Support - Median (CEA	0.50	0.29	0.05	1.45	0.49
Ent Support - Mean (CEA)	0..47	0.31	0.13	1.44	0.43

[24] The evaluation concluded that the EBS programme increased GVA through cost savings, market displacement was not considered significant. An estimate of the displacement factor was made as a result of beneficiary survey returns. Similarly there a supply-side multiplier effect was not included in the impact assessment since the GVA does not derive from any increased purchasing activity, although the multiplier has been estimated.

Annex 6 Beneficiary Survey

ENWORKS

Resource Efficiency Business Support Survey

GHK have been commissioned by ENWORKS to undertake an independent evaluation of the resource efficiency support that companies in the North West have received. This support may have been provided to you by Groundwork Manchester, Salford, Stockport, Tameside & Trafford.

The purpose of this work is to:

- provide evidence of impact from the service to date;
- establish the ongoing need for such a service; and,
- to understand how any future service of this type could be most efficiently and effectively delivered for the benefit of businesses receiving it.

You have been invited to take part in this survey because ENWORKS we understand that you were provided with assistance between 2008 -12. The survey will take approximately 20 minutes to complete and all responses received will be treated as confidential. Please note there are a number of especially important questions included in the survey which determine the content of later questions - these are indicated by a grey box.

If you have any questions regarding the survey or would like any further information regarding the work being undertaken, please don't hesitate to contact Richard Smith (Email: richard.smith@ghkint.com or Tel: 0121 233 8900)

We thank you in advance for the time taken to complete the survey.

Supported by

Northwest REGIONAL DEVELOPMENT AGENCY

INVESTING IN englandsnorthwest EUROPEAN REGIONAL DEVELOPMENT FUND

Company Profile

Please provide the following details about you and your company:

Full Name

Job Title

Company Name [compulsory question]

Company Postcode

In what sector does your company primarily operate?

- Advanced Flexible Materials
- Aerospace
- Automotive
- Biotechnology/ Biomedical
- Chemicals
- Construction
- Creative Industries
- Digital Industries
- Energy
- Environmental Technology
- Financial and Professional Services
- Food and drink
- Manufacturing
- Maritime
- Renewable Energy
- Sport
- Textiles
- Other - please specify

Please specify what sector your company primarily operates in:

Is your company part of a larger group or company?

- Yes
- No

Please provide answers below in relation to the impact of support received on your business operations in the North West.

What was your turnover from sales in the North West in the year prior to you receiving support through ENWORKS?

- ○ < £50,000
- ○ £50,000 - <£100,000
- ○ £100,000 - <£250,000
- ○ £250,000 - <£500,000
- ○ £500,000 - <£750,000
- ○ £750,000 - <£1m
- ○ £1m - <£1.5m
- ○ £1.5m- <£2m
- ○ £2m -<£5m
- ○ £5m -<£10m
- ○ £10m -<£25m
- ○ £25m -<£50m
- ○ £50m or more
- ○ I do not know

What share of your staff are resident in the North West?

- ○ 0%
- ○ 1% - 25%
- ○ 26% -50%
- ○ 51% -75%
- ○ 76% - 99%
- ○ 100%
- ○ I do not know

How many Full-Time Equivalent (FTE) employees did your company employ the year before you started receiving support from ENWORKS?

	<10	10 - 24	25 - 49	50 - 249	250 +	I do not know
In the North West	○	○	○	○	○	○
Company Wide	○	○	○	○	○	○

Please estimate the share of the following who are located within the North West region:

	0%	1 - 25%	26 - 50%	51 - 75%	76 - 100%	I do not know
Direct Competitors	○	○	○	○	○	○
Customers	○	○	○	○	○	○

Is your company planning to relocate outside of the North West region in the next three years?

- ○ Yes
- ○ No
- ○ I do not know

Please estimate the share of your purchases which were from suppliers based in the North West region in the last 12 months:

- 0%
- 1 - 25%
- 26 -50%
- 51 - 75%
- 76 - 100%
- I do not know

Your company's awareness and attitudes towards resource efficiency

Resource efficiency can be defined as companies using materials, energy and water more efficiently in what they do and how they do it. Resource efficiency has also been described as "getting the most out of less". This section seeks to gain your company's views and attitudes towards resource efficiency.

On a scale of 1 to 10, where 1 is 'very important' and 10 is 'of no importance', how important is maximising use of resources to your company?

1 Very Important	2	3	4	5 Neutral	6	7	8	9	10 Of no importance
○	○	○	○	○	○	○	○	○	○

To what extent do you agree with the following statements?

	Strongly Agree	Agree	Disagree	Strongly disagree	I do not know
My company is aware of the importance of resource efficiency	○	○	○	○	○
My company has a high level of knowledge regarding **identifying** resource efficiency improvements	○	○	○	○	○
My company has a high level of knowledge regarding **implementing** resource efficiency improvements	○	○	○	○	○
My company has effective appraisal techniques to analyse the costs and benefits of resource efficiency investments	○	○	○	○	○
My company views resource efficiency as a continuous process, and considers resource efficiency in every investment decision	○	○	○	○	○

How important are the following groups in motivating you to invest in resource efficiency?

	Very Important	Quite Important	Not very important	Irrelevant	I do not know
Customers	○	○	○	○	○
Suppliers	○	○	○	○	○
Competitors	○	○	○	○	○
Trade Associations	○	○	○	○	○
Media	○	○	○	○	○
Government	○	○	○	○	○
Other - please specify	○	○	○	○	○

Please state which other group(s) are important in motivating you to invest in resource efficiency:

Prior to support from ENWORKS, had your company identified specific measures to improve resource efficiency?

- ○ Yes
- ○ No

Please provide examples:

Did these changes have a material and positive impact on...?

- ☐ Product Type
- ☐ Product Quality
- ☐ Price
- ☐ Sales
- ☐ Operating Costs
- ☐ None of the above

When making investment decisions, what is the maximum payback period your company considers?

- ○ 0 -1 year
- ○ 1 year
- ○ 2 years
- ○ 3 years
- ○ 4 years
- ○ 5 years
- ○ 5+ years
- ○ I do not know

Does this differ for resource efficiency investments?

- ○ Yes
- ○ No

What type of payback period is considered for resource efficiency investments?

- ○ 0 -1 year
- ○ 1 year
- ○ 2 years
- ○ 3 years
- ○ 4 years
- ○ 5 years
- ○ 5+ years
- ○ I do not know

Please indicate which forms of support you have received through ENWORKS and/or its partners: [compulsory question]

- ☐ Ongoing support to implement savings identified
- ☐ On-site Resource Efficiency Audit to identify savings
- ☐ Training provided by ENWORKS
- ☐ Support to understand and manage environmental risk
- ☐ I do not know

Questions about the impact of ongoing support

What type of ongoing support have you received through the advisor? (please tick all that apply)

- ☐ Telephone support and advice
- ☐ On-site support

How long has your company been receiving ongoing support?

- ○ < 6 months
- ○ Between 6 months and 1 year
- ○ Between 1 and 2 years
- ○ Over 2 years
- ○ I do not know

How regular is contact between your advisor and your company?

- ○ Weekly
- ○ Fortnightly
- ○ Monthly
- ○ Every 2 months
- ○ Quarterly
- ○ Less Frequently
- ○ I do not know

If there had been no ongoing support available through ENWORKS, would you have been willing to pay for the advice?

- Yes
- No

How much would you have been willing to pay for advice? - £ per hour.

What payment terms would be most favourable?

- One-off upfront fee
- Payment on results
- Membership fee
- Other - please specify
- I do not know

Please specify what payment terms would be favourable:

Questions about the impact of your resource efficiency audit

How did you first hear about the opportunity for an on-site resource efficiency audit?

- Through a visit from ENWORKS
- Through a telephone call from ENWORKS
- Through ENWORKS marketing material
- Through a Green Intelligence e-bulletin
- Through a networking event
- Through a friend or colleague
- Through an internet search
- Other - please specify
- I do not know

Please specify how you first heard about the opportunity for an on-site resource efficiency audit:

Why did you choose to have an on-site resource efficiency audit?

	Strongly Agree	Agree	Disagree	Strongly disagree	I do not know
To identify specific resource saving opportunities					
To help quantify specific resource saving opportunities					
To get advice on implementing previously identified resource saving opportunities					
To gain advice on general environmental issues					
Other - please specify					

Please specify why you chose to have an on-site resource efficiency audit:

If there had been no resource efficiency audit available through ENWORKS, would you have been willing to pay for the advice?

- Yes
- No

How much would you have been willing to pay for advice? - £ per hour.

What payment terms would be most favourable?

- One-off upfront fee
- Payment on results
- Membership fee
- Other - please specify
- I do not know

Please specify what payment terms would be favourable:

Questions about the impact of the training

Please indicate the types of training that you attended by the number of sessions:

	0	1	2	3	4	5	5+
Resource efficiency	○	○	○	○	○	○	○
Carbon footprinting	○	○	○	○	○	○	○
Energy management	○	○	○	○	○	○	○
Renewable energy	○	○	○	○	○	○	○
Transport efficiency	○	○	○	○	○	○	○
Water management	○	○	○	○	○	○	○
Waste management	○	○	○	○	○	○	○
Corporate responsibility	○	○	○	○	○	○	○
Other - please specify	○	○	○	○	○	○	○

Please specify what "other" training you have attended:

On average, how many people from your company attended each training session?

- ○ 1 - 5
- ○ 6 - 10
- ○ 11 - 15
- ○ 16 - 20
- ○ 21 - 25
- ○ 26 +
- ○ I do not know

How did you first hear about the training course?

- ○ Through marketing material from ENWORKS
- ○ Through a friend or colleague
- ○ Another company
- ○ Through another publically funded provider
- ○ Through an environmental regulator
- ○ Through the press
- ○ Through a network or member organisation
- ○ From an internet search
- ○ Other - please specify
- ○ I do not know

Please specify how you first heard about the training course:

Please indicate whether your company sought to achieve any of the following aims through attendance at training sessions: (please tick all that apply)

- ☐ To gain further insight into resource efficiency savings for my company
- ☐ To improve company productivity or performance
- ☐ To increase our awareness of sustainable practices
- ☐ To gain information on a specific topic - please specify
- ☐ To generate new contacts or relationships with other companies
- ☐ To identify similar companies that we might learn from
- ☐ Other - please specify
- ☐ None of the above
- ☐ I do not know

Please specify what topic you hoped to gain information on:

Please specify the other aim(s) you hoped to achieve through attending training:

Did the training achieve your aims?

- ○ Yes
- ○ No
- ○ Partially

What was the main outcome of your attendance at the training?

- ○ Gained new information / skills to be used immediately
- ○ Gained new information / skills to be used at a later date
- ○ Gained access to new contacts and networks providing ongoing advice
- ○ None, no new information or skills
- ○ Other - please specify

Please specify what outcome was achieved:

If there had been no training available through ENWORKS, would you have been willing to pay for the advice?

- ○ Yes
- ○ No

How much would you have been willing to pay for advice? - £ per hour.

What payment terms would be most favourable?

- ○ One-off upfront fee
- ○ Payment on results
- ○ Membership fee
- ○ Other
- ○ I do not know

Please specify what payment terms would be favourable:

Questions about environmental management support

Have you received any of the following support from ENWORKS to understand and manage environmental risk? (please tick all that apply)

- ☐ Support with legal compliance
- ☐ Writing an environmental policy
- ☐ Meeting environmental requirements on tenders
- ☐ Support in writing or implementing a green travel plan
- ☐ Climate change risk (such as risk of flooding and other adverse weather conditions)
- ☐ Sustainable procurement
- ☐ Security of supply (such as installation of on-site renewables)
- ☐ I have not received any of this support
- ☐ I do not know

Please indicate whether your company has implemented or achieved any of the following: (please tick all that apply)

- ☐ We have included climate change risks within our main company risk register
- ☐ We have invested in measures to alleviate climate change risk, such as flood defences
- ☐ We have gained access to new supply chains
- ☐ We have installed an on-site generator of renewable energy
- ☐ We have implemented a green travel plan
- ☐ Other - please specify
- ☐ None of the above
- ☐ I do not know

Please specify what "other" achievements have been realised:

Questions about the overall impact on your company

The following section seeks to gauge the impact of support provided through ENWORKS on your company - and the wider impact on the North West region. Please respond to questions as fully as you are able.

As a result of support from ENWORKS have resource efficiency improvements been implemented within your company? [compulsory question]

- ○ Yes
- ○ No

If yes, what types of improvements have been implemented? [compulsory question]

- ☐ Reduced energy consumption
- ☐ Reduced water consumption
- ☐ Reduced raw material use
- ☐ Reduced waste production
- ☐ Other - please specify

Please specify what other improvements have been implemented:

What annual cost savings have been made as a result of implementing resource efficiency improvements?

	£0 - 100	£101- 500	£501 -1,000	£1,001 -5,000	£5,001 -10,000	£10,001 -25,000	£25,001 - 50,000	£50,001 - 100,000	£100,001 +
Reduced energy consumption	○	○	○	○	○	○	○	○	○
Reduced water consumption	○	○	○	○	○	○	○	○	○
Reduced raw material use	○	○	○	○	○	○	○	○	○
Reduced waste production	○	○	○	○	○	○	○	○	○
Please specify what other improvements have been implemen...	○	○	○	○	○	○	○	○	○

Were the annual cost savings higher, lower or about the same as you were expecting?

	Higher than expected	About what we expected	Lower than expected
Reduced energy consumption	○	○	○
Reduced water consumption	○	○	○
Reduced raw material use	○	○	○
Reduced waste production	○	○	○
Please specify what other improvements have been implemen...	○	○	○

Please estimate the total cost of implementing the resource efficiency improvements?

We expected to spend approximately:

Capital Costs (£)

Revenue Costs (£)

Our actual spend was:

Capital Costs (£)

Revenue Costs (£)

Did the implemented resource efficiency improvements require capital, revenue or mixed investment?

	Capital	Revenue	Mixed	No capital or revenue cost	I do not know
Reduced energy consumption	○	○	○	○	○
Reduced water consumption	○	○	○	○	○
Reduced raw material use	○	○	○	○	○
Reduced waste production	○	○	○	○	○
Please specify what other improvements have been implemen...	○	○	○	○	○

What do you estimate payback period for resource efficiency improvements to be?

	0 - 1 year	1 year	2 years	3 years	4 years	5 years	5+ years	I do not know
Reduced energy consumption	○	○	○	○	○	○	○	○
Reduced water consumption	○	○	○	○	○	○	○	○
Reduced raw material use	○	○	○	○	○	○	○	○
Reduced waste production	○	○	○	○	○	○	○	○
Please specify what other improvements have been implemen...	○	○	○	○	○	○	○	○

How does the company plan to use the savings from the resource efficiency improvements? [tick as appropriate]

- ☐ Further investment in the company
- ☐ Additional jobs
- ☐ Safeguarding of existing jobs
- ☐ Higher wages for existing staff
- ☐ Taken out as profit / dividend payment
- ☐ Other - please specify

Please specify how your company plans to use the savings made from the resource efficiency improvements:

Have these implemented measures had a positive impact on the following: (please tick all that apply)

Measures	New products/ services	Improved product / service quality	Changes in operating processes	Changes in strategic m anagement or decision making	Changes in sales or marketing processes
Reduced energy consumption	☐	☐	☐	☐	☐
Reduced water consumption	☐	☐	☐	☐	☐
Reduced raw material use	☐	☐	☐	☐	☐
Reduced waste production	☐	☐	☐	☐	☐
Please specify what other improvements have been implemen...	☐	☐	☐	☐	☐

Have you employed any more staff as a result of implementing resource efficiency improvements?

For example, new staff employed due to cost savings made or changes implemented to company operations.

- ○ No
- ○ 1-5 employees
- ○ 5-10 employees
- ○ 10 - 24 employees
- ○ 25 - 49 employees
- ○ 50 - 249 employees
- ○ 250 employees or more
- ○ I do not know

Have you safeguarded any jobs as a result of implementing resource efficiency improvements?

For example, staff retained due to cost savings made or changes implemented to company operations

- ○ No
- ○ 1-5 employees
- ○ 5-10 employees
- ○ 10 - 24 employees
- ○ 25 - 49 employees
- ○ 50 - 249 employees
- ○ 250 employees or more
- ○ I do not know

Please indicate the percentage increase in annual sales as a result of implementing resource efficiency improvements .

For example, developing resource efficient processes enabling you access new supply chains and generate new sales orders.

- 0%
- 1-20%
- 21 - 40%
- 41- 60%
- 61 - 80%
- 81 - 99%
- 100%
- I do not know

Please indicate the percentage of sales that have been safeguarded as a result of implementing resource efficiency improvements .

For example, developing resource efficient processes enabling you to meet the needs of an existing contract that was at risk

- 0%
- 1-20%
- 21 - 40%
- 41- 60%
- 61 - 80%
- 81 - 99%
- 100%
- I do not know

Were there any unexpected outcomes resulting from your receipt of support?

- Yes - please specify
- No

Please specify what unexpected outcomes have been realised:

Would you have made resource efficiency improvements if you had not received support from ENWORKS?

- Yes
- No

How long would it have taken you to make the resource efficiency improvements?

- Longer time period
- About the same time
- I do not know

What would have been the scale of resource efficiency improvements?

- Reduced scale
- Same scale
- I do not know

How would you have identified these savings?

- Used an alternative source of advice - please specify
- Used existing internal information
- Copied steps taken by other companies
- Taken advice from existing literature

Please specify what alternative source of advice you would have used:

Why did you access the ENWORKS support if you could have identified the same savings through other means?

How would you have implemented these savings?

- Used an alternative source of advice - please specify
- Used existing internal information
- Copied steps taken by other companies
- Taken advice from existing literature
- I do not know

Please specify what alternative source of advice you would have used:

Why did you access the ENWORKS support if you could have implemented the same savings through other means?

As a result of the improvements made, are you planning to employ more people from inside the North West region?

- Yes
- No
- I do not know

How many more people do you plan to employ in the North West as a result of support received?

How many jobs have been safeguarded as a result of support received?

As a result of the improvements made, are you planning to increase your purchases from suppliers from inside the North West region?

- Yes
- No
- I do not know

By what percentage are you planning to increase your purchases from suppliers inside the North West region?

- 0%
- 1 - 25%
- 26 -50%
- 51 - 75%
- 76 - 100%
- I do not know

As a result of the improvements made, are you planning to employ more people from outside of the North West region?

- Yes
- No
- I do not know

By what percentage do you plan to increase employment outside of the North West Region?

- 0%
- 1 - 25%
- 26 -50%
- 51 - 75%
- 76 - 100%
- I do not know

Approximately how long do you anticipate the benefits of the resource efficiency improvements implemented to last?

- There were no impacts
- Up to 1 year
- Between 1 and 2 years
- Between 2 and 3 years
- Between 3 and 5 years
- Between 5 and 10 years
- Over 10 years
- I do not know

Questions about the impact of the toolkit on your company

All savings identified by advisors are included on the Efficiency Toolkit to allow you and/or your advisor at ENWORKS to implement and track their progress. The following section seeks to gain your views on the toolkit.

Who is primarily responsible for updating the data in the Efficiency Toolkit?

- Our provider advisor
- I update the toolkit
- Another member(s) of the company
- I do not know

How often does your company access the Efficiency Toolkit?

- On a daily basis
- On a weekly basis
- On a fortnightly basis
- On a monthly basis
- Less than once a month
- I do not know

What are your primary reasons for utilising the Efficiency Toolkit?

	Strongly Agree	Agree	Disagree	Strongly disagree	I do not know
We wanted to use the tool to quantify returns from potential actions / investments					
We wanted to monitor progress on implementing identified opportunities					
We find the Toolkit reports a useful resource for communicating information to senior management/board					
We find the Toolkit reports useful for raising awareness amongst other staff members					
Our provider uses the Toolkit on our behalf					
Other - please specify					

Please specify other reasons for using the toolkit:

What would you do in the absence of the Efficiency Toolkit resource?

- We would not monitor our environmental improvements
- We would monitor in less detail and/or less periodically
- Develop internal systems for monitoring our environmental improvements
- Utilise another online system - please specify
- Other - please specify
- I do not know

Please specify which online system you would use:

Please specify what you would do in the absence of the Efficiency Toolkit resource:

Please describe the ease of use of the Efficiency Toolkit:

- Very difficult to use
- Difficult to use
- Easy to use
- Very easy to use
- I do not know

What are the main benefits to your company of the Efficiency Toolkit resource?

If there had been no resource efficiency audit available through ENWORKS, would you have been willing to pay for the advice?

- Yes
- No

How much would you have been willing to pay for advice? - £ per hour.

What payment terms would be most favourable?

- One-off upfront fee
- Payment on results
- Membership fee
- Other
- I do not know

Please specify what payment terms would be favourable:

Quality of Service

For each service received, please indicate how satisfied you were with the quality of service you received:

	Highly Satisfied	Satisfied	Unsatisfied	Very unsatisfied	I do not know
On-site resource efficiency audit to identify savings	○	○	○	○	○
Ongoing support to help implement savings identified	○	○	○	○	○
Support to understand and manage environmental risk	○	○	○	○	○
Training provided by ENWORKS	○	○	○	○	○

Please use the space below for any further comments you wish to make:

Which of the following services would you recommend?

- ☐ On-site resource efficiency audit to identify savings
- ☐ Ongoing support to help implement savings identified
- ☐ Training delivered by ENWORKS
- ☐ Support to understand and manage environmental risk
- ☐ None
- ☐ I do not know

Do you think any improvements need to be made in relation to the services you received?

On-site resource efficiency audit to identify savings

Ongoing support to help implement savings identified

Training delivered by ENWORKS

Support to understand and manage environmental risk

If you have any further comments about the support received through ENWORKS, please use the space below:

Thank you for your time - please click the 'submit' button below to send your responses to GHK.