UK Government

RAF057/2324: Evaluation of the Business Energy Advice Service (BEAS) pilot

Process evaluation – Technical annex

Department for Energy Security and Net Zero (2026)

Authors

The evaluation was conducted by Technopolis Ltd, with support from IFF and David Tobin Consulting (DTEC).

Views expressed in this report are those of the authors and not necessarily those of the UK government.

Contents

Annex A: Data Tables

These data tables present the full data used in the Figures in the main Process Evaluation report for reference.

Table 1: Full data for Figure 3 (SME perceptions of the quality of their energy assessment report and post-audit report meetings)

Statement	Strongly disagree	Tend to disagree	Neither agree nor disagree	Tend to agree	Strongly agree	Don't Know
A: The information provided in my energy assessment report was easy to understand	3%	3%	9%	29%	53%	2%
B: The information provided in my energy assessment report was relevant to my business	6%	4%	8%	22%	57%	2%
C: The report provided clear and actionable steps my business could take to improve energy efficiency	6%	4%	11%	23%	55%	1%
D: The post-assessment meeting(s) helped me better understand the findings of the energy assessment report and gave me the opportunity to clarify information directly with the energy assessor	12%	6%	14%	18%	37%	14%

Table 2: Full data for Figure 4 (SME perceptions of BEAS grant application and assessment processes)

Statement	Strongly disagree	Tend to disagree	Neither agree nor disagree	Tend to agree	Strongly agree	Don't Know
A: The grant application process was clear and easy to follow	8%	10%	24%	21%	34%	3%
B: The effort required to prepare and submit a grant application was proportionate to the value of the grant	10%	8%	14%	27%	35%	5%
C: The decision-making process for awarding grants was fair and transparent	6%	6%	14%	25%	38%	9%
D: The communications around the grant decision-making process were timely	9%	12%	11%	21%	42%	5%

Table 3: Full data for Figure 6 (SME perceptions of the value of BEAS communication and energy audit reports)

Statement	Strongly disagree	Tend to disagree	Neither agree nor disagree	Tend to agree	Strongly agree	Don't Know
A: Communication about the Business Energy Advice Service (BEAS) helped me understand the benefits of an energy assessment	4%	4%	13%	27%	50%	2%
B: The energy assessment report increased my understanding of energy efficiency opportunities and their potential payback	9%	5%	15%	28%	42%	2%
C: The energy assessment report helped me to make more informed decisions about implementing energy efficiency measures in my business	9%	4%	13%	26%	45%	2%

Table 4: Full data for Figure 7 (past barriers to implementing energy and carbon reduction measures faced by SMEs)

Statement	Percentage of respondents mentioned (%)
I did not know where to start / who to contact	52%
I was not aware of the energy efficiency measures available	44%
I was not aware of the potential benefits of energy assessments	36%
Financial barrier(s) to getting an energy assessment	37%
Financial barrier(s) to implementing energy efficiency measures	68%
The financial benefits did not seem sufficient	38%
Not a business priority	41%
Have already implemented all possible changes	1%
The carbon savings did not seem sufficient	21%
Previous negative experience	7%
Not suitable for business premises	5%
Other	2%
Don't know/prefer not to say	3%

Table 5: Full data table for Figure 8 (barriers that BEAS has helped to overcome)

Statement	Percentage of respondents (%)
Not knowing where to start/ who to contact	46%
Not being aware of energy efficiency measures available	38%
Not being aware of potential benefits of energy assessments	30%
Financial barriers	45%
Carbon savings not seeming sufficient	11%
Energy demand and carbon reduction measures not being a business priority	22%
Previous negative experience	3%
Other	8%
None of the above	19%
Don't know	0%

Table 6: Full data table for Figure 9 (SMEs reasons for not applying for a BEAS capital grant)

Statement	Percentage of respondents (%)
We had our own funding to implement the recommendations	12%
We accessed alternative funding instead	7%
The application process (including the documentation required) was too burdensome for the level of support offered	20%
Even with the grant, our business could not afford the remaining 50% of the costs of the measures	41%
We did not want to implement the recommendations given in the energy assessment report	25%
Business had / has other priorities	10%
Missed the deadline / funds were unavailable	9%
Business didn't qualify for the grant	6%
Recommendations not suitable for business	13%
Process is ongoing	6%
Other reason	6%
Don't know/prefer not to say	3%

Annex B: Evaluation questions

No.	Evaluation question (EQ)	Section(s) of report in which the EQ is addressed
1)	**Insights on the marketing and application process of the Pilot BEAS.**	**BEAS launch and contracting, Marketing and Promotion of BEAS, Audit registration, assessment and triage**
1.1)	Was marketing and communications activity sufficient to engage a wide range of SMEs with the Pilot BEAS and what marketing activity was most effective in engaging with SMEs?	Marketing and Promotion of BEAS, Effectiveness of marketing activities to engage a wide range of SMEs
1.2)	For SMEs that did not apply, at what point in the user journey from marketing to application did they stop engaging with the scheme and why?	Triage of audit applications
1.3)	How effective was the application process for energy assessments and grants, in terms of time, length, format, and resource demands?	Audit registration, assessment and triage, Capital grant processes
1.4)	What motivated participating SMEs to apply for an energy assessment, and if they applied for a grant, what motivated this? What motivated or stopped participating SMEs applying for a grant?	SME motivations to apply for BEAS
2)	**Evaluating the delivery model and delivery effectiveness of the Pilot BEAS**	**Delivery of Energy Efficiency Audits, Audit Reporting and Quality Assurance, Governance structure and monitoring**
2.1)	How successful was the approach to the allocation of participating SMEs to relevant level of energy assessment?	Triage of audit applications
2.2)	How did the average length and key elements of the whole life cycle of the Pilot BEAS vary across regions and businesses?	Audit delivery timelines
2.3)	How successful was the design and delivery of energy assessments, report and subsequent road mapping and how did this vary by level of energy assessment?	Audit delivery process, Audit Reporting and Quality Assurance

No.	Evaluation question (EQ)	Section(s) of report in which the EQ is addressed
2.4)	Did energy assessors have sufficient knowledge of energy efficiency as well as decarbonisation to feel comfortable making recommendations to reduce onsite energy demand? What skills gaps need addressing for future schemes?	Auditor capabilities
2.5)	Were there enough energy assessors available in the Pilot BEAS to meet demand and complete assessments on time? What strategies were used to address any bottlenecks?	Resource sufficiency
2.6)	How complete was the Pilot BEAS data monitoring and evaluation by delivery partners? To what extent did the monitoring and reporting processes used for Pilot BEAS generate useful insights for continuous improvement and performance tracking?	Governance structure and monitoring
2.7)	Did the methodologies for audit recommendations have a robust basis?	Audit methodologies used
2.8)	Was the process for awarding of grants robust and proportionate?	Capital Grant Processes
3)	**Understanding the energy and carbon reduction behaviour of SMEs, the barriers to improving their energy demand reduction and carbon reduction and the degree to which involvement with the Pilot BEAS has influenced or overcome these**	**Barriers overcome**
3.1)	How did pilot BEAS impact SMEs' understanding of the benefits of energy assessments? How did the energy assessments impact SMEs' understanding of energy efficiency opportunities and best ways to implement energy efficiency measures? To what extent, did the assessments close information gaps?	Engagement with BEAS audits, Information barriers overcome
3.2)	To what extent did grant support reduce financial barriers to implementing improvements, and what other financial obstacles remain?	Financial barriers overcome
3.3)	To what extent did the Pilot BEAS help SMEs overcome barriers to energy demand and carbon reduction, and which barriers (if any) still remain?	Barriers overcome, Additional barriers for implementation of energy efficiency measures

No.	Evaluation question (EQ)	Section(s) of report in which the EQ is addressed
4)	**Establishing evidence to understand the degree of causality (through Theory of Change verification)**	**Assessment of progression against BEAS ToC**
4.1)	To what extent did mechanisms unfold as anticipated by the Theory of Change?	Assessment of progression against BEAS ToC
4.2)	Are there any attributes of the process which seem to inhibit progression through the ToC model?	Assessment of progression against BEAS ToC
5)	**Wider Questions**	
5.1)	What other elements of the whole Pilot BEAS life cycle went well and did not go well and what were the reasons for this?	BEAS launch and contracting
5.2)	How appropriate was the level of support offered and to what extent was it sufficient to help participating SMEs achieve their energy demand and carbon reduction potential?	Barriers overcome
5.3)	Was there a sufficient supply chain of capable engineers and other professions to instal measures recommended by road maps and how were they engaged?	Grant assessment, supply chain capacity
5.4)	How did SMEs experience of the Pilot BEAS compare with their experience of other schemes to reduce energy consumption?	Barriers overcome
5.5)	Other than the Pilot BEAS grant what funding streams did SMEs utilise to match fund/fully fund their energy assessments and improvements?	Barriers overcome, Financial barriers
5.6)	Other than the information provided through the Pilot BEAS assessments, what other sources have SMEs used to support or inform their energy efficiency improvements?	Barriers overcome
5.7)	What additional (new or unexpected) insights have emerged from the Pilot that could shape future programme design or policy?	Throughout the report and Lessons learned and conclusions

Annex C: Process map

The following annex consists of a process map developed at the beginning of the evaluation to provide a clear understanding of the scheme's processes, as well as the roles and responsibilities of the different stakeholders involved. This was used as a reference by the study team throughout the evaluation, including to support with the design of evaluation tools.

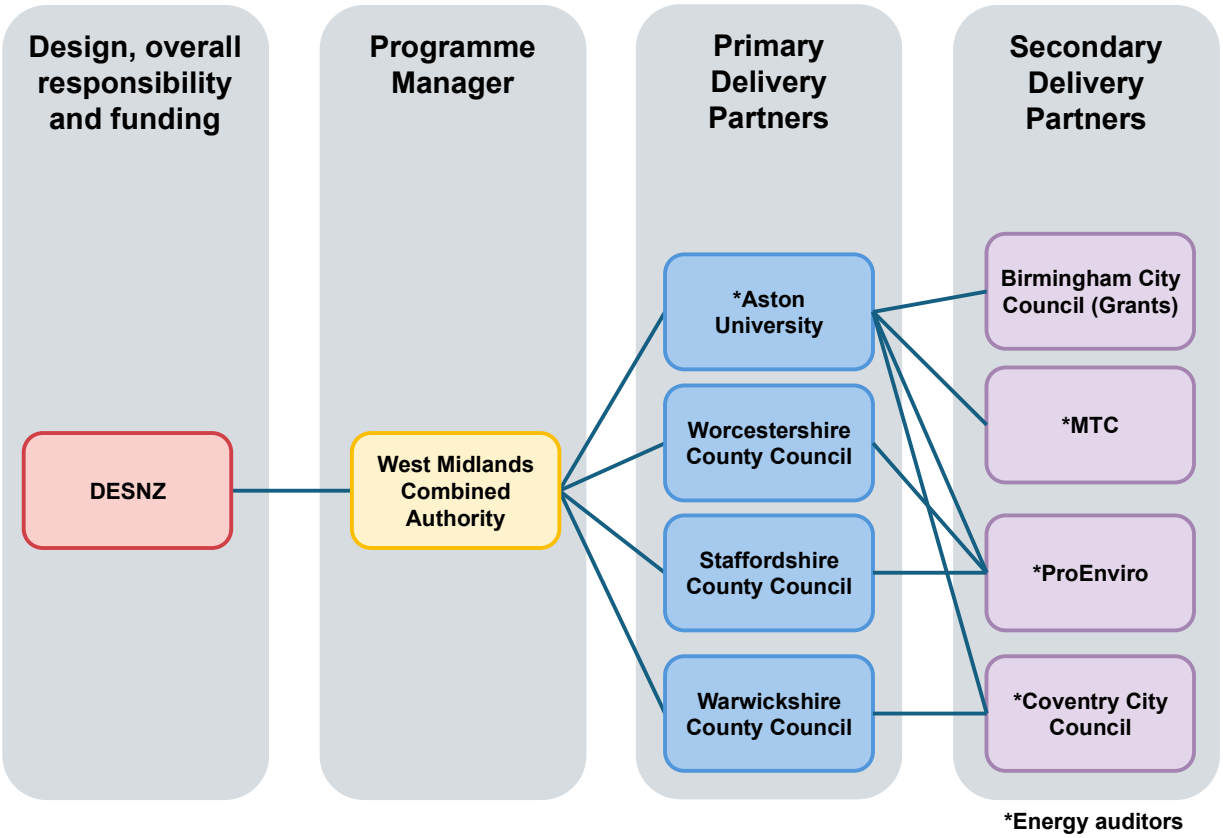
Introduction

The scheme is funded by the Department for Energy Security and Net Zero (DESNZ), with the initial phase also supported by UK Shared Prosperity Fund (UKSPF) funding. It is led by the West Midlands Combined Authority (WMCA) and delivered in partnership with five primary Delivery Partners: Aston University Consortium (Aston University and Birmingham City Council), Staffordshire County Council, Warwickshire County Council, and Worcestershire County Council.

The scheme's governance structure (Figure 1) including roles and responsibilities are clearly defined across the four principal scheme stakeholders:

- DESNZ provides overall strategic direction, funding, and oversight, including setting eligibility criteria and managing scheme-level risks
- WMCA is responsible for scheme coordination, communication and outreach, data management, and liaising with Delivery Partners
- Primary Delivery Partners are responsible for assessing applications for both audits and grants. They also administer the grants, other than Aston who deliver audits in the WMCA city region with grants administered by Birmingham City Council (BCC)
- Secondary Delivery Partners deliver the audits on behalf of the Primary Partners. These organisations have audit teams who conduct the audits, which, for practical reasons, will be referred to throughout this document as energy auditors

Figure 1: Pilot BEAS governance structure



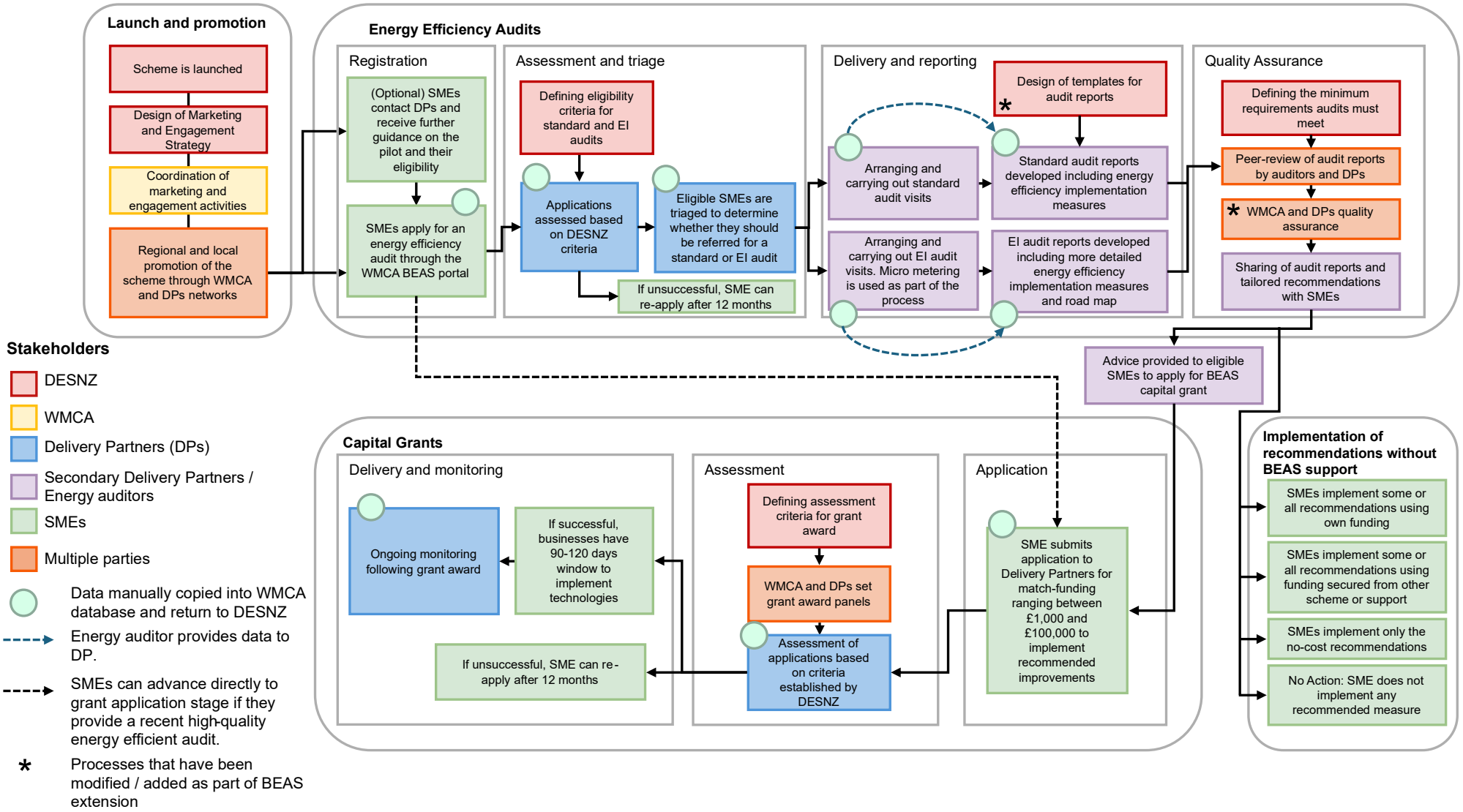
Source: Technopolis, adapted from DESNZ 2024[1]; * = delivered energy audits directly.

Process map

Figure 2 provides an overview of the application journey for the Pilot BEAS scheme. It presents a high-level summary of the study team's understanding of the key steps and processes involved in delivering the scheme. These processes are explored in greater detail in the following sections of this document.

[1] 'BEAS Pilot extension, 2025' (not published)

Figure 2: Pilot BEAS process map diagram



Source: Technopolis, using BEAS programme documentation

Launch and marketing

Since its launch in 2023, the scheme has been promoted at the local and regional levels through WMCA and the Delivery Partners' networks. Each Delivery Partner is responsible for delivering its own marketing and engagement activities to promote the scheme locally. These activities are carried out in line with a shared Marketing and Engagement Strategy agreed with WMCA and DESNZ. WMCA plays a coordinating role to ensure consistent messaging and alignment across all Delivery Partners, supported by regular meetings involving WMCA, Delivery Partners, and DESNZ.

Until now, a range of marketing and engagement activities have supported the promotion of the scheme. These include social media posts, newsletters, case studies, and features on Delivery Partner websites. WMCA and Delivery Partners have also promoted the scheme through webinars and attendance at events. Additionally, WMCA hosts a dedicated webpage that serves as a central hub[2], providing details about the scheme, outlining the scheme's eligibility requirements, and hosting the registration portal for SMEs applying for audits and/or grant support.

SME registration for BEAS business audit

Before submitting a formal registration, SMEs have the option to contact Delivery Partners to discuss the scheme and check their eligibility. Although this step is not part of the official application process, it provides an opportunity to clarify any questions or uncertainties SMEs may have, and encourage participation.

To formally apply for an energy audit, SMEs are invited to complete a short online registration form available on the WMCA BEAS website. The registration process takes approximately 10 minutes and consists of three sections. SMEs from all sectors are eligible to apply, with the exception of those operating in agriculture, forestry, and fishing. To be eligible for either a standard or an EI audit, businesses must meet and submit information that corroborates the following criteria:

- Have fewer than 250 employees and an annual turnover under £50 million or a balance sheet total under £43 million
- Be a commercial or profit-seeking entity, such as a partnership, limited company, or Community Interest Company (CIC)
- Operate from a registered commercial address (not a residential property)
- Have paid their own business energy bills for at least the past 12 months
- Be officially registered and active for at least 12 months, with supporting financial records
- Be located in the West Midlands

[2] WMCA BEAS website

- Not have received more than £315,000 in public aid over the current and two previous fiscal years
- As part of the scheme's extension phase, a new eligibility requirement was introduced: businesses must demonstrate annual energy use of at least 25,000 kWh of electricity and/or gas, (or estimated usage based on energy costs and unit rates)
- For rented buildings, assurance is needed that the remaining lease term is sufficient to allow the applicant to implement any energy assessment recommendations

Applicants are also asked to explain their motivation for applying, describe any previous energy efficiency actions taken, and identify any current barriers preventing implementation.

After submitting their registration, businesses typically wait between two to three weeks to receive the outcome of the assessment of their audit application.

Assessment of audit applications

The assessment of applications is conducted by Delivery Partners using established criteria set by DESNZ. The assessment process is designed to ensure only eligible companies receive support, while also minimising the administrative burden on businesses.

Delivery Partners are encouraged to achieve a balanced representation of commercial and industrial firms, with a diverse mix of micro, small, and medium-sized enterprises from a range of sectors. To support this objective, DPs conduct regular analysis, either weekly or monthly, to review data such as registrations and applications to assess whether current engagement reflects the desired spread across geographic areas, business sizes, and industry sectors. The findings are then discussed in joint meetings with WMCA and the marketing team to explore potential adjustments to outreach strategies and better target underrepresented groups.

Once an application is approved, Delivery Partners carry out a triage process to determine whether the SME should receive a standard or EI audit. To qualify for an EI audit, in addition to meeting the general eligibility criteria mentioned above, businesses must either have annual energy costs (including gas and electricity) that exceed 10 percent of their turnover[3], or a total annual energy consumption greater than 0.75 GWh.

If a business is deemed ineligible for an audit (i.e. has not met one or more of the eligibility criteria), it will be required to wait for a minimum of 12 months before submitting a new application.

SMEs that provide a recent energy efficiency audit of sufficient quality may move directly to the grant application stage. This process is designed to prevent SMEs seeking audits through the pilot which may duplicate recent energy efficiency audits that may have been undertaken.

[3] As a matter of practical judgement, very small businesses for whom an Energy Intensive (EI) audit would not represent a proportionate or effective use of resources may instead be allocated a standard audit

With oversight from WMCA and DESNZ, each Delivery Partner is responsible for sourcing and contracting energy auditors to conduct the audits, often drawing on their existing networks. Auditors must have the appropriate knowledge (which may differ for commercial and industrial SMEs) and qualifications (e.g. ISO/ ESOS accreditation) to conduct the audits.

Energy efficiency audit delivery and reporting

Once SMEs are confirmed as eligible for a free energy audit, Delivery Partners contact them to introduce the designated energy auditor. The auditors arrange an initial meeting, which marks the start of the audit process. This is followed by data collection, development of a measurement plan, site visits, and detailed analysis of the gathered information.

There are a series of minimum requirements that each energy audit must meet:

- Cover both energy and resource efficiency. In the case of resource efficiency, audits focus on areas where measures would deliver on site energy demand reduction
- Meet high-quality standards, such as ISO 50002 or PAS 51215 (or equivalent). Audits should be conducted primarily in person and on a per-site basis, unless a strong justification can be provided for an alternative approach (e.g. due to proportionality)
- Cover a full range of options, including behavioural, operational, maintenance, and technological interventions, as well as resource efficiency improvements
- The report must include an action plan with recommendations. Where appropriate, the uptake of smart meters should be recommended, along with observations on the building fabric
- Provide standardised data for each recommendation, including estimated annual energy savings (in kWh), projected carbon savings, payback periods, and identification of the responsible party (e.g. building owner). The report should also indicate the auditor's level of confidence in these estimates, particularly for bespoke technologies
- Clearly outline the methodology used to calculate both carbon savings and payback periods, ensuring transparency and consistency across all reports

Energy Intensive (EI) audits should follow the same minimum requirements set out above, but analysis and recommendations are expected to be more in-depth. They must also include a roadmap that sets out how to implement the recommendations provided.

Following the completion of data collection and analysis, energy auditors prepare either a Standard or EI audit report. Once the audit is complete, the audit report and accompanying data undergo a peer review process, carried out by Delivery Partners and energy auditors. Following this internal review, the report is shared with the SME. This is typically followed by one or more follow-up conversations, during which SMEs can ask questions or request clarification. The approach to sharing the report and the number and nature of follow-up conversations varies by Delivery Partner. The full audit process, from application to report delivery, typically takes between one to two months for a standard audit and between six to twelve months for an EI audit.

In the initial phase of the scheme, audit templates and quality assurance processes were designed and managed independently by each Delivery Partner, allowing for flexibility in adapting to local delivery contexts. While this approach supported early implementation, it also resulted in some variation in audit format and quality. Recognising the need for greater consistency, the extension phase of the scheme introduced a standardised audit template developed by DESNZ. This template is now mandatory for all Delivery Partners and energy auditors to ensure consistency in reporting and alignment with DESNZ standards. Additionally, quality assurance processes have been strengthened. This includes periodic reviews of audits by WMCA and DESNZ, as well as DESNZ colleagues attending selected audits to gather insights and support continuous improvement. Each audit report must also be accompanied by a quality assurance log, completed by a peer reviewer.

Options for implementation of recommendations

Following an audit, if a business meets the eligibility they can apply for a BEAS capital grant to support the implementation of specific energy efficiency recommendations. The eligibility criteria for a grant include the following:

- Businesses need to have been running for at least 12 months
- Grants must support the energy-efficient replacement or upgrade of existing industrial processes or buildings. This excludes relocation or new premises but includes retrofitting for the purpose of installing a heat pump
- Assurance must be provided that the project would not proceed without this financial support, and that the business is not seeking funding to comply with existing legal obligations or regulatory standards
- All projects must demonstrate a minimum payback period of two years
- Businesses that qualify for Boiler Upgrade Scheme (BUS) funding for the purpose of installing a heat pump will not be eligible to apply for heat pump funding under BEAS. Delivery Partners must confirm BUS eligibility before approving any BEAS grant application
- For Solar PV projects, businesses may apply for no more than £50,000 of BEAS funding per site
- For rented buildings, assurance is needed that the remaining lease term is sufficient to ensure the assets will be retained for at least 3 years; or that the lease is being renegotiated (where it is about to run out) to allow for this; or that the equipment being invested in is such that it could be moved were the business to move premises

There are four possible pathways for businesses that receive an energy audit but do not take up a BEAS grant as they are either i) not eligible for a BEAS grant or ii) choose not to apply despite being eligible:

- The SME implements some or all the recommended measures using its own funding
- The SME implements some or all the recommendations using funding obtained from another scheme or source of support
- The SME proceeds to implement only the no-cost measures identified in the audit
- The SME does not implement any of the recommended measures

Grant application process

Eligible businesses are then invited to apply for match-funding ranging between £1,000 and £100,000 to implement recommended improvements[4]. This funding can cover up to 50% of the cost of installing energy efficiency measures.

As part of the application process, SMEs must contact their assigned Delivery Partner, who will provide detailed guidance on the requirements and documentation needed. SMEs are required to complete an application form, provide three quotes for the proposed energy efficiency installations, and submit bank statements. Once submitted, applications are sent to the Grant Award Panels.

Assessment of grant applications

The assessment of grant applications is carried out by Grant Award Panels established by the Delivery Partners. Panel members are selected for their relevant expertise, local knowledge, and understanding of the scheme's objectives to ensure that funding is awarded to the most suitable projects. Each application is reviewed against the following criteria:

- **Energy and resource efficiency impact:** Evidence on the estimated payback period for the project with a minimum payback period of 2 years.
- **Additionality:** Clear justification that the project would not proceed, or would be significantly delayed, without support from the scheme.
- **Deliverability:** Assessment of whether the proposed project can be completed within the required timeframe.

[4] Technology eligible for support includes the following: ventilation (fans, distribution, destratification fans), heating (replacement boilers, burners, heat pumps), solar PV (where applicable), lighting (LED, controls, sensors), retrofitting for the purpose of installing a heat pump, refrigeration, compressors, insulation, recycling and waste (compactors, balers, and crushers), water management, other building measures (e.g., glazing), cooling, controls, equipment upgrades, hot water efficiency measures, humidification, small appliances and submetering where there is an energy consuming process where monitoring it could drive reductions in consumption (due to behaviour change) and a recommendation to this effect is included in an energy assessment; or for high value projects specifically to wrap around another funded intervention to calculate the effectiveness for monitoring.

- **Risk management:** Identification of potential risks and demonstration of appropriate mitigation strategies.
- **Applicant capability:** Evidence that the SME has the necessary expertise, capacity, and resources to successfully manage and deliver the project.

Each criterion, except for energy and resource efficiency impact, is scored on a scale from 1 (not satisfactory) to 5 (excellent), with a minimum passing score of 3. Projects should also be approved for funding based on one key metric (the payback period) which should be the main factor in determining whether funding is awarded.

Similar to audit assessment, efforts should be made to ensure a balanced mix of supported businesses, representing both commercial and industrial sectors, and a range of sizes and industries.

Implementation of recommendations using BEAS grant support

Once a grant is awarded, SMEs are given a window of 90 to 120 days[5] to implement the recommended measures. SMEs are responsible for sourcing and contracting their own suppliers for the implementation of measures. Support during this stage is generally informal, with auditors tailoring their approach depending on the area and needs. Many businesses already have preferred suppliers, but those that do not, can receive support from auditors or Delivery Partners.

To receive grant payments, SMEs must provide proof of purchase or installation to the relevant Grant Delivery Partner. All grant-funded activities, including those approved during both the initial phase and the extension period of the scheme, must be completed by 31 April 2026.

Monitoring

The WMCA is responsible for overseeing the implementation of due diligence and monitoring processes to ensure compliance with relevant subsidy control regulations and grant conditions. This includes ensuring that Delivery Partners adhere to agreed standards throughout the scheme's lifecycle.

Delivery Partners play a key role in the ongoing monitoring process. They are required to upload data regularly to the WMCA's centralised Data Portal, which serves as the primary mechanism for tracking scheme activities. This information is subsequently shared with DESNZ to support oversight and coordination. For grants, Delivery Partners are accountable for monitoring the implementation of all funded projects through to completion. This includes verifying that energy-saving technologies meet the required UK Conformity Assessed (UKCA) safety standards and that installation is carried out professionally and in accordance with best practices.

[5] In the initial phase of the scheme, the implementation window was set at 90 days. However, during the extension phase, this period was extended to 120 days for certain measures.

Monitoring activities are further supported by monthly scheme meetings and ongoing reporting of management information. Key Performance Indicators (KPIs) are established collaboratively by WMCA, DESNZ, and the Delivery Partners to assess scheme delivery. These indicators focus primarily on operational metrics such as SME engagement levels, audit completion, dropout rates, grant allocation, and data collection for evaluation.

Annex D: Methodology

Introduction

The evaluation was framed around a set of evaluation questions (Annex A) aimed at understanding the scheme's processes, stakeholder experiences and the scheme Theory of Change (ToC). The Theory of Change describes the processes by which the scheme's inputs and activities translate through to overcoming barriers and achieving their intended outputs, outcomes and impacts.

Two evaluation frameworks were developed for the study. The first mapped the evaluation questions with the most relevant evidence sources and data collection tools. This guided the design of the data collection undertaken during the evaluation. A mixed methods approach was used to collect and triangulate evidence. Full details of data collection are given below.

The second evaluation framework was a Contribution Analysis Process Tracing (CAPT) framework designed to assess progress against the scheme's ToC. This is available in the separate Excel document and is explained further below. Early parts of the ToC have been assessed within this framework for the process evaluation. The remaining elements of the ToC will be assessed in the separate BEAS impact report.

Contribution Analysis process tracing framework

Contribution Analysis (CA) has been used to address the methodological challenge of understanding to what extent outcomes and impacts can be attributed to the BEAS scheme. CA involves describing and testing the linkages in causal pathways between scheme inputs and activities and their intended outcomes and impacts as shown in the Theory of Change (ToC). A key feature is that CA also investigates the role of external influencing factors (e.g. other support available to SMEs) in driving change in outcomes. The aim is to provide an evidence-based account of what role the scheme, or certain features of it, have played alongside external factors in contributing to outcomes. As well as being used to determine contribution to intended benefits, the approach also unpicks the role of contextual factors to assess how and why the BEAS scheme has made a difference, or not.

For key barriers, outputs, outcomes and impacts in the scheme's ToC, a contribution claim (hypotheses on scheme achievements) was developed. Alongside this a set of alternative explanations was developed on other external factors that could contribute to the observed outcomes. A set of related PT tests were then developed for each contribution claim and alternative hypothesis.

There are four kinds of PT test applied within this analysis:

- 'straw in the wind', which lends support for an explanation without definitively ruling it in or out
- 'hoop', is necessary for a causal claim to be true, failing a hoop test may rule out a particular causal chain entirely. Passing a hoop test, does not necessarily lend further support to causal claim
- 'smoking gun', is a test that is a sufficient to satisfy a causal claim, however failing it does not necessarily rule out this explanation
- 'double decisive' test, is a condition that if passed definitely proves a claim, and weakens alternative explanations/competing causal claims

PT tests are assessed as 'passed', 'failed', or 'inconclusive'. To translate these tests into judgements of the overall strength of evidence in support of the contribution claim, a set of criteria was followed, as outlined in Table 7 below. This was then visualised with boxes and arrows within the ToC diagram highlighted with a solid green/amber/red outline in the main report.

Table 7: Judgement for assessing contribution

Strength of evidence in support of contribution claim	Criteria for passing tests
Strong support for the hypothesis (green rating on the ToC)	All or vast majority of PT tests are passed, and no Hoop tests Fail **OR** All Smoking Gun and Double Decisive tests are passed in support of Programme Hypotheses (PH) **AND** Smoking Gun and Double Decisive tests fail for the Alternative Hypotheses (AH). Some Straw-in-the-wind tests in support of PH may fail and pass in favour of AH.
Moderate support for the hypothesis (amber rating on the ToC)	No Hoop tests fail. Evidence in support of some PH Smoking Gun or Double decisive tests may not have been found or are inconclusive. Most Straw-in-Wind tests pass. Evidence for Straw-in-wind test is Triangulated with other sources (for example, interviews with different group of stakeholders support the same PH). **AND** Following criteria above, more PH tests pass than AH tests. Evidence is stronger in favour of the hypotheses

Strength of evidence in support of contribution claim	Criteria for passing tests
Mixed or weak support for the hypothesis (amber rating on the ToC)	Some conflicting evidence in favour of PH e.g. some Smoking Gun evidence found but Hoop tests were failed (suggesting ToC itself or the types of tests used need revised). **OR** On balance, most evidence tests are in favour of PH, however, these are based on Straw-in-the-Wind tests
No support for the hypothesis (red rating on the ToC)	Fundamental tests in favour of PH are failed (e.g. Hoop tests). No Smoking Gun or double decisive tests are passed. **OR** Evidence in favour of the AH is found that follows criteria for 'Strong support', but not for the PH.

The accompanying Excel framework consists of the following sections, from left to right in the CA PT tab:

- 'Theory of Change Elements' listing the individual boxes/elements within the Theory of Change diagram.
- 'Causal Pathways' explain how individual elements of the ToC cause or lead to subsequent elements of the ToC, for example, how a particular activity enables a specific barrier to be overcome. This also includes Contribution Claims and Alternative Explanations where these were set up for testing specific causal pathways in this evaluation.
- 'Indicators' showing the metrics and evidence used to assess whether a ToC element has been implemented in practice.
- 'Process Tracing Evidence Tests' created as part of the evaluation scoping to test if the causal pathways of the ToC occurred in practice.
- 'Results of Process Tracing Evidence Tests' showing the findings of these through assessment of the evidence collected through the evaluation.

Primary data collection

Primary data collection took place between August and October 2025 and included:

- **SME survey:** All SMEs who received BEAS support (an audit and/or grant) during Phase 1 were invited to participate in a survey.
- **Qualitative interviews:** Six interviews were conducted with energy auditors, alongside 25 follow-up interviews with surveyed SMEs.
- **Focus groups:** Three focus groups were held separately with the three types of scheme delivery representatives: DESNZ; WMCA; and Primary and Secondary Delivery Partners.

Details of the approach taken for each are described in turn.

SME survey

Sample source and sampling approach

SMEs who received an energy audit between October 2023 and February 2025[6] (BEAS Phase 1) were deemed eligible for the quantitative survey. The initial BEAS MI database contained the contact details of these SMEs (including main contact name, email addresses, telephone numbers) plus the details of each recommended measure, grant information and associated energy and cost savings data. The MI database was supplied by DESNZ to Technopolis, who carried out initial cleaning of the sample data (e.g. flagging SMEs who received multiple audits for different sites and SMEs who had incomplete recommendation and/or savings data). It was then shared with IFF Research for additional processing.

The initial sample file contained 2,133 businesses: 2,080 businesses who received an energy audit at one site, and 53 businesses who received energy audits across more than one site. For those businesses that Technopolis had identified as having received audits at multiple sites, it was decided that they would be initially invited to take part in the survey to answer about the site with the greatest energy-saving potential, and once they had completed that, they would be given the option to respond about other sites if they wished.

During sample processing, IFF identified 106 records who had duplicate contact details but distinct company names. As with the multi-site businesses, it was decided that the named contact would be asked to initially complete the survey based on the business with the greatest energy saving potential, then given the option to complete the survey again about other sites for which they were the named contact. Two records were also found to have no recommendation data or energy usage and cost savings data, so were subsequently removed from the database. This left the final total BEAS population eligible for the survey at 2,131.

[6] BEAS Phase 1 continued until the end of March 2025. However, the end of February 2025 was used as the cut off for the survey sample. This was to allow at least six months' time to have passed between the date of the BEAS audit and the survey so that SMEs had had a reasonable period of time in which to implement BEAS audit recommendations.

Minimum target quotas were proposed based on the pilot BEAS audit population covering SME sector and size, delivery partner, grant status and audit type (standard/energy intensive).

Survey questionnaire design

The questionnaire design process was informed by the quantitative impact methodology and evaluation question and CAPT frameworks to ensure the questionnaire aligned with the evaluation objectives. A 'unimode' approach was used for the questionnaire design to ensure that questions were suitable for both online and aural administration. Timing checks were also carried out to ensure that the questionnaire met the proposed length of 15 minutes. The majority of questions were business focussed, but several were measure focussed. These were generally asked about all measures that were recommended to businesses in the energy audits, or all measures businesses reported having fully or partially implemented where relevant.[7]

The questionnaire explored the following areas:

- Implementation status of BEAS recommended measures – including whether implemented measures were implemented across other sites
- Overall experience with the Business Energy Advice Service – including ease of understanding and relevancy of energy assessment reports, awareness of BEAS grants, experience of the grant application process, previous barriers to implementing energy efficiency measures and the impact of BEAS on these, other sources of information and funding used to inform energy efficiency improvements
- Benefits of participating in the Business Energy Advice Service – including the impact of the energy assessment report, reasons for choosing to implement energy efficiency measures, measure implementation status without participation in the BEAS, accuracy of estimated energy usage and cost savings from the energy assessment report, actual change in energy usage and cost following implementation of BEAS-recommended measures

Survey fieldwork design

Prior to the start of fieldwork, an advance notice email was drafted to ensure that the SMEs were aware of the survey and upcoming attempts to contact them. The advance notice was distributed to SMEs by their BEAS delivery partners.

Before fieldwork started, telephone interviewers were provided with an in-depth briefing and briefing notes, providing them with background and additional context about the research.

[7] For one question, D3, this was asked as follows to limit the time spent on this: Please tell us why you chose to install specific measures. We'll ask you about two measures maximum. So, if you've installed more than two measures, we'll pick two at random.

A mixed mode approach (telephone and online) was used for the quantitative fieldwork, to better suit the preferences of the SMEs. Online fieldwork began on 12 September 2025 and CATI fieldwork began on 17 September 2025. Fieldwork closed on 17 October 2025 across both modes.

The survey sample was split into three batches. The first batch of 1,934 records consisted of businesses who had obtained individual energy audits or were the sites with the greatest energy saving potential from businesses who had sites with several audits or duplicate named contacts. These records were all initially invited to take part in the survey via email, and were followed up via telephone by the interviewing team several days later. The second batch were the remaining multi-site audit records, equating to 91 records, and the third batch of records were those who had duplicate named contacts, equating to 106 records. Three reminders were distributed across the fieldwork period for those yet to take part. In order to try to boost response from key sub-groups, multi-site businesses, businesses with the greatest energy saving potential (more than 0.5% of total audit energy savings) and those businesses who had an energy intensive (EI) audit were also sent targeted reminders, with email text revised to reflect their status. The average length of time taken to complete the questionnaire across both survey modes was 20 minutes.

Profile of achieved survey sample

In total, the survey achieved 436 responses, representing a 20% response rate, and slightly lower than the target of 570. The principal reason for a lower response rate was the lack of engagement among SMEs with the online survey. 47 online responses in total were received. Budget was therefore re-allocated to allow more telephone interviews to be completed than anticipated, to maximise the achieved sample size. 389 telephone interviews were completed in total.

Table 8 shows the achieved survey sample by sector, delivery partner, business size, audit type, grant status and business type.

Table 8: BEAS full population profile vs. Achieved survey completes profile

Sector	BEAS full population (including EI audits)	Survey completes
Manufacturing	28%	29%
Wholesale & retail trade	12%	11%
Accommodation & food services	10%	7%
Other	50%	53%

Delivery Partner	BEAS full population (including EI audits)	Survey completes
Aston (inc. MTC)	60%	56%
Worcs & the Marches	19%	19%
Stoke & Staffordshire	13%	14%
Warwickshire	8%	11%

Audit type	BEAS full population (including EI audits)	Survey completes
Standard	95%	95%
Energy intensive (EI)	5%	5%

Business size	BEAS full population (including EI audits)	Survey completes
0-1	5%	7%
2-9	37%	37%
10-49	42%	43%
50-99	10%	10%
100-249	6%	3%
Unknown	1%	0%

Grant status	BEAS full population (including EI audits)	Survey completes
Received grant (from sample)	5%	10%
Received grant[8] (C3=2 in survey)	n/a	13%
Did not receive grant	n/a	77%

[8] These survey respondents self-reported receiving a BEAS grant, despite not being indicated on the database as having done so. This may be because they received a BEAS grant after the end of Phase 1 or they may have misidentified another grant they received as a BEAS grant.

Number of sites	BEAS full population (including EI audits)	Survey completes
Multi-site business	4%	2%
Single site business	96%	98%

Survey data processing and weighting

Survey data was processed using IBM SPSS, from which a raw Excel data file was created, which showed individual survey responses, and Excel data tables showing weighted aggregated responses broken down by key sub-groups of interest.

The survey data was weighted using Random Iterative Method (RIM) weighting by sector, delivery partner, audit type and business size. This ensured that the final survey data was representative of the original pilot BEAS population in relation to these characteristics. However, it is still possible there was some other unknown bias to the profile of SMEs who chose to participate (for example, in the extent to which positive outcomes are attributed to BEAS rather than other scheme or sources of funding) which will influence the findings presented in the report.

A coding specification was created to detail how open-ended questions or answer options should be coded. Coding was added once all other data edits had been made. Frequencies of coded variables were then checked against the final agreed codeframe.

Survey limitations

Some limitations were encountered:

- An error in the question routing for Question D1 ([Below are/I will read out] some statements about your energy assessment report and the recommendations within it. Please tell us the extent to which you agree or disagree with these statements.) meant that instead of being asked to all respondents, this question was only asked to those who had fully or partially implemented at least one of their recommended measures. Following the closure of fieldwork, the study team carried out a recontact exercise to obtain the answers from those who were originally missed, resulting in 78% of the final sample submitting an answer to D1
- The desired target of 570 total interviews was not met due to a lack of response to the online survey link that was shared with SMEs. At 95 per cent confidence level, a base of 570 carries a maximum margin of error of ±3.5%, while the achieved base of 436 carries a maximum margin of error of ±4.2% (a difference of ±0.7 percentage points)

- Relatedly, the minimum targets were not achieved for the following subgroups of interest: SMEs who had total estimated energy savings of 0.5% or more of the total standard audit savings, SMEs who had energy intensive audits and multi-site businesses. This was in part due to low incidence within the BEAS population, plus reluctance of multi-site business respondents agreeing to take part in the survey more than once

SME qualitative interviews

Sampling approach

Businesses that participated in the quantitative survey and gave consent to being recontacted for more in-depth research were included in the sample for qualitative fieldwork (161 businesses, 37%). From this pool, businesses were recruited to ensure a spread across delivery partner, sector, business size, energy audit type and whether they had implemented any measures following their energy audit.

Topic guide design

The topic guide design process was informed by the evaluation question and CAPT frameworks to ensure the questionnaire aligned with the evaluation objectives. The topic guide included some topics not covered in the SME survey, but was also used to explore some survey topics in more depth.

The topic guide explored the following areas:

- Experiences and views of BEAS scheme processes including marketing, audit registration, audit delivery, audit reports, and grant applications
- How BEAS and other support/motivations helped (or did not) overcome any barriers to installation of energy efficiency measures
- Subsequent benefits including savings in energy and energy costs arising from the installation of energy efficiency measures and how any other factors also influenced these

Fieldwork approach and achieved sample

Qualitative follow-up research encompassed 25 qualitative semi-structured interviews with a range of businesses, which took place throughout October 2025. These interviews were conducted remotely, either by telephone or video call (via Microsoft Teams). Each interview took between 30 minutes and 1 hour to complete. The profile of completed qualitative interviews is detailed in Table 9 below.

Table 9: Profile of qualitative interviews

Delivery partner	Number of completed interviews
Stoke and Staffordshire	2
Aston Consortium	11
MTC	5
Warwickshire	1
Worcestershire and the Marches	6

Sector	Number of completed interviews
Manufacturing	11
Wholesale & Retail Trade	3
Accommodation & Food Services	2
Other	9

Business size	Number of completed interviews
Sole trader	1
1-9 employees	7
10-49 employees	10
50-99 employees	3
100-249 employees	4

Audit type	Number of completed interviews
Energy Intensive (EI) audit	7
Standard audit	18

Business type	Number of completed interviews
Multi-site business	0
Single site business	25

Grant status	Number of completed interviews
Received grant (sample or C3=2)	6
Did not receive grant	19

Measure implementation status	Number of completed interviews
Have not implemented any measures	8
Implemented at least one measure	17

The minimum targets for some key subgroups of interest were not achieved, including SMEs who had energy intensive audits, multi-site businesses and businesses that received a grant. This was in part due to low incidence within the BEAS population, plus a small population of the relevant subgroups who chose to participate in the qualitative research. We also faced a number of cancelled interviews from businesses who no longer wanted to participate in the qualitative research.

Qualitative interviews with auditors

Sampling approach

All four secondary Delivery Partners directly delivering audits provided contact details for auditors. This provided a population of 51 auditors. A sample was then selected to include auditors working for each Delivery Partner. Auditors were also prioritised for recruitment where they had conducted a relatively large number of audits, including some who had undertaken Energy Intensive as well as Standard audits.

Topic guide design

The topic guide design process was informed by the evaluation question and CAPT frameworks to ensure the questionnaire aligned with the evaluation objectives.

The topic guide explored the following areas:

- The auditor's prior experience of and accreditations in energy efficiency audit delivery and the nature of their role in BEAS
- Experiences and views of BEAS scheme processes including triage of SMEs to different types of audit, audit methodology and delivery, audit reporting including peer review, and post-audit follow up support to SMEs in engaging suppliers and financing measures. This included views about what worked well, challenges and areas for improvement
- SME motivations and awareness of energy efficiency measures prior to BEAS and the role of BEAS and other support in enabling SMEs to implement energy efficiency measures
- Experiences and views of the BEAS governance structure

Fieldwork approach and achieved sample

Six qualitative semi-structured interviews were undertaken with energy auditors working on the BEAS scheme throughout September 2025. These interviews were conducted remotely, either by telephone or video call (via Microsoft Teams). Each interview took up to 1 hour to complete.

Three interviews were undertaken with auditors from the secondary DP which conducted the largest number of audits. One or two interviews were undertaken with auditors from each of the other three secondary DPs. Five of the six interviewed auditors had delivered at least fifty audits each. The sample was therefore diverse and had good coverage of audits. However, it was still limited in size and hence representativeness. Most auditors interviewed lacked insight into the barriers SMEs have faced in implementing EE measures, as well as the extent to which BEAS has helped overcome these barriers. As a result, auditors' views on these topics were not included in the report.

Focus groups with scheme delivery representatives

Sampling approach

Three focus groups were held separately with the three types of scheme delivery representatives, DESNZ, WMCA, Primary and Secondary Delivery Partners. Individuals with key roles and responsibilities in relation to the BEAS scheme pilot were invited to participate in the groups. DESNZ provided contact details.

Topic guide design

The topic guide design process was informed by the evaluation question and CAPT frameworks to ensure the questionnaire aligned with the evaluation objectives. A separate topic guide was tailored for each group taking account of their specific role in the scheme, but with considerable overlap in the questions asked.

The topic guides all explored BEAS scheme processes, including:

- the governance structure
- marketing
- applications, triage, delivery, reporting and QA of audits
- grant's applications, award, delivery and implementation
- and monitoring

This included views about what worked well, challenges and areas for improvement. Each group concluded with a discussion about lessons learned for future policy and programmes.

Fieldwork approach and achieved sample

The focus groups took place throughout September 2025, via video call (via Microsoft Teams). Each group took up to 90 minutes to complete. For each group, the following representatives participated.

- DESNZ – three representatives attended with policy and scheme management roles
- WMCA – three representatives attended with policy and scheme management roles
- Primary and Secondary Delivery Partners – seven representatives attended, one representing each primary or secondary delivery partner, with the exception of MTC (who were interviewed separately instead)

Analysis of qualitative data

The data from each interview and focus group was detailed in an Excel analysis framework. This included separate tabs for each type of respondent (SME, auditor, and the three types of scheme delivery representative). The analysis framework was structured around the topic guide content, with each row corresponding to an interview participant or group.

For the SME analysis, key survey and sample information was also appended to the framework to aid analysis including region, sector, business size, delivery partner, audit type, measures implemented, grant status and business type. Analysis was first undertaken for four sub-samples of SME: those who had standard audits who did and did not receive a grant; and those who had energy intensive audits who did and did not receive a grant. Any differences by other key characteristics, for example, sector were also reviewed. Data for each topic was analysed thematically for each respondent type and findings summarised.

Scheme documentation and MI data

Scheme documentation and MI data has also been used for some specific, limited purposes in this process evaluation as listed in Table 10 below. In some cases, this has been used to triangulate data from primary sources.

Table 10: Evaluation use of scheme documentation and MI data

Source	Use
Pilot BEAS business case	Contextual information including target number of audits and grants
BEAS marketing analysis report	Insight on marketing activities undertaken
BEAS MI database	Number and profile of SMEs receiving a BEAS audit and grant.
DESNZ internal information	Value of funding allocated to BEAS.
BEAS internal lessons learned report	Context to inform the design of the evaluation frameworks and process map

Annex E: Audit methodology assessment

DPs 3 and 4 conducted a substantial proportion of the audits. DPs 1 and 2 undertook a minority of the audits between them.

Table 11: Assessment of robustness of audit recommendations methodologies

Review Requirements	Audit Delivery Partner 1	Audit Delivery Partner 2	Audit Delivery Partner 3	Audit Delivery Partner 4
1. Use of recognised standards (ISO 50002, CIBSE, etc.)	**No:** The audit does not reference ISO 50002, CIBSE guides, or any formal national standards.	**No:** No evidence of ISO/CIBSE guidance or national methodology references.	**Yes:** Methodology explicitly states use of ISO 50002 for audits and references ISO 13612-2.	**No:** The report contains no mention of ISO, CIBSE, or sector audit standards.
2. Alignment with recognised best practice	**Broadly consistent -** Mirroring typical walkthrough audit structure, but without explicit linkage to defined frameworks or structured audit protocols.	**Broadly consistent -** Using common industry approaches but lacks formal mapping to recognised standards or energy-audit methodologies.	**Strong alignment -** Structured baselining, Significant Energy Use (SEU) identification, technology-specific assessment and traceability to ISO-style steps.	**Partially -** Follows a standard walkthrough format but does not demonstrate alignment with recognised best practice frameworks or structured audit models.
3. Rigour of data analysis & reporting	**Broadly -** Demonstrates structured data review and practical analysis, but excludes formal model validation, boundary definition or Monitoring & Verification procedures typical of higher-rigour audits.	**Broadly -** Presents utility summaries and simple savings calculations; analysis is clear but relies on high-level assumptions rather than detailed engineering assessment.	**Yes -** Audit output aligns reasonably well with the methodology's structured intent, though report implementation is more practical than fully ISO-depth; still demonstrates good analytical discipline.	**Basic level -** Report provides clear savings estimates and rationale but analysis remains high-level, relying on assumed loads and runtime factors rather than detailed measurement or modelling.

Review Requirements	Audit Delivery Partner 1	Audit Delivery Partner 2	Audit Delivery Partner 3	Audit Delivery Partner 4
4. Replicability of methodology	**Partially -** Overall audit process can be followed, but methodology is not documented as a standalone procedure; implicit assumptions may lead to variation between assessors.	**Partially -** The approach is understandable, but calculation logic in the Excel sheets is not fully documented, meaning assessors may interpret or apply assumptions differently.	**Yes -** Methodology is clearly defined, with documented steps, assumptions, and formulas; another competent assessor could replicate the audit and derive similar conclusions.	**Partially -** Without a dedicated methodology, replication depends on interpretation of the report narrative and may produce inconsistent outputs.
5. Weaknesses / deviations from standard practice	Absence of standards references; simplified engineering assumptions; limited transparency on data validation; methodology embedded within report; no structured uncertainty or M&V approach.	No standards referenced; savings based on generic assumptions; incomplete methodological documentation; limited structure around boundaries, baselining, or data validity checks.	Limited uncertainty analysis across measures; some reliance on default or experience-based inputs; reporting not fully aligned to ISO-required templates although methodology is well structured.	Lack of formal methodology; no reference to audit standards; reliance on simplified assumptions; limited analytical depth; report does not follow recognised audit templates or structured frameworks.

Annex F: Updated ToC & CA PT Indicator Framework

This is presented in a separate Excel document.

This publication is available from: www.gov.uk/desnz

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