NICRE
National Innovation Centre
Rural Enterprise

Rural SMEs and the environment

State of Rural Enterprise Report

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Contents

At the National Innovation Centre for Rural Enterprise (NICRE), we put knowledge to work for an enterprising countryside... combining research with practical innovation to find new ways of unlocking potential and supporting thriving rural businesses and communities.

Executive summary

These research findings are based on an analysis of the NICRE State of Rural Enterprise (SORE) survey. The report concentrates on the **rural business response to the climate crisis.**

Rural firms, their attitudes and their action on the environment was the topic of NICRE's first research report (Wishart, Roper and Kesidou 2021) which found more rural firms, than urban, prioritised both reducing costs and their environmental impact.

In the 2023 SORE survey, we found:

- 41% of rural and 37% of urban firms "always", 45% of rural and 42% of urban firms "sometimes" and 14% of rural and 21% of urban firms "never" consider environmental impact in decision-making.
- Larger firms prioritise the environment more, and 57% of rural and 53% of urban firms took steps to reduce environmental impact in the past year, with the fewest among urban firms in the West Midlands.
- The survey highlights a 'ladder' of environmental action, with "recycling waste, water, or materials" on the lower rungs (90% rural, 87% urban).
- Middle rungs involve "introducing new or improved production processes" (46% rural, 43% urban), "conducting training on environmental matters" (42% rural, 40% urban), "introducing new low-carbon products or services" (38% rural, 43% urban), and "new or improved delivery, transport, or distribution systems" (24% rural, 28% urban).
- Top rungs include documented processes, such as "undertaking environmental reports or audits" (23% rural, 28% urban) and "putting in place environmental certification" (14% rural, 15% urban). The highest rungs include actions enabling businesses to set future targets. The survey shows that only 3% of rural and 5% of urban businesses measure greenhouse gas (GHG) emissions "using an online calculator", and 4% in both measure emissions through "working with consultants or external companies".

A significant proportion of rural businesses (45%) reported barriers such as high costs, a lack of information, and uncertainty in local support and demand, although urban firms reported a greater variety of barriers. This highlights the need for enhanced support systems and resources to help these businesses overcome such hurdles.

The SORE survey illuminated differing emphases between rural and urban businesses when it comes to the outcomes of their environmental initiatives. Urban businesses often cited positive reputational gains, improved employee skills, stronger financial performance, and other employee-related benefits, perhaps reflecting a more competitive urban labour market. Rural businesses emphasised innovation and market-related advantages as the primary outcomes of their environmental actions. More firms in the South West cited reputation as an important benefit. These disparities indicate that tailored strategies may be required to suit the unique characteristics and needs of businesses in both rural and urban contexts.

Overall, this research underscores the importance of continued efforts to promote environmentally-conscious decision-making and support for businesses across different settings. It is not enough to encourage firms to take the first steps; firms need to climb the 'ladder' of environmental actions.

Rural businesses are implementing environmental measures, with 57% reducing their environmental footprint compared to 53% of urban firms. The SORE survey shows a 'ladder' of actions, with recycling and waste reduction being lower rungs. However, challenges such as environmental audits, certification, and GHG emissions measurement remain. Rural businesses often feel restricted in their efforts to reduce carbon emissions, with barriers such as high costs, lack of information, and uncertainty in local support and demand. This highlights the need for enhanced support systems and resources to help these businesses overcome these hurdles.

1. Introduction and background

In this report, the National Innovation Centre for Rural Enterprise (NICRE) presents the findings of its **2023 State of Rural Enterprise (SORE) survey**, focusing on the **rural business response to the climate crisis**. Other SORE reports cover the cost-of-doing-business pressures for non-farming enterprises; rural opportunities; skills/labour availability in rural economies; as well as challenges and opportunities faced by farm businesses.

This report focuses on rural firms and their attitudes and action on the environment. This was the subject of NICRE's first research report based on survey data collected in the midst of the Covid crisis (Wishart et al. 2021). Wishart, Roper and Kesidou (2021) found proportionally more rural firms prioritised both reducing costs and their environmental impact.

Nonetheless, the picture is not static and it is clear that businesses are on a journey in terms of their environmental practices (Ri and Mole 2022). Much of the support for net zero does not consider rural aspects (Baranova 2023). More generally, previous work has suggested important drivers of environmental action such as consumer pressure (Gadenne et al. 2011), levels of competition (Tyler et al. 2020), stakeholder perspectives, including the attitude of senior managers (Gadenne et al. 2009), as

well as external pressures (Scuotto et al. 2020) and legislation (Brammer et al, 2012). Conversely barriers include cost pressures (Brammer et al. 2012). lack of knowledge (Parker at al, 2009) where SMEs rely on tacit knowledge (Valentim et al. 2016) and, in rural areas, transport costs (Tocco and Gorton 2023).

However, the impact of the climate crisis on SMEs is ongoing (Ri and Mole 2022). SMEs are not simply going to adopt an environmental standard and be done with it. The commitment to emissions reduction is one where there will be a continuing constraint that may limit firm growth and development, or at least require firms to navigate how to do business within emissions limits.

In this context, we are interested in the emphasis placed on the environment in business decision-making; the extent to which rural firms are taking steps to reduce their environmental impacts; and the sorts of steps that firms are taking (Ozusaglam et al, 2018). In addition, we are interested in what holds firms back and what benefits they see from reducing their environmental impact. This can lead to a holistic understanding of the role that rural businesses are playing in the move to net zero.

The survey was undertaken between May and August 2023 and included businesses across three English regions – the North East (NE), the South West (SW) and the West Midlands (WM). SORE is first and foremost a rural business survey. Where it is relevant and sample size allows, we aim to bring out the diversity of rural areas using aggregated rural categories based on England's official urban-rural classification (ONS 2013). We also include data from a reference sample of urban businesses in each region which, whilst accepting this is a simplification of complex urban geography, allows us to provide an initial comparison between rural and urban enterprises at different points in the report.

The population of interest in the NICRE Rural Enterprise Survey is private sector for-profit and not-for-profit enterprises employing at least one person. The survey covered 2,602 non-farm businesses in total, made up of 2,001 rural businesses and 601 urban businesses. We surveyed 800 rural firms in the NE, 601 in the SW, and 600 in the WM. Table 1 provides an overview of the samples analysed in this report.

The survey was conducted using Computer Assisted Telephone Interviewing (CATI), which has proven to be a reliable means of reaching the appropriate personnel within a business. As the sample was weighted by firm size, responses are weighted to give regionally representative results for the rural and urban business populations. The weighting process and profile of the sample are set out in Appendix A. Not all the businesses were asked to respond to the section in the survey on the environment therefore reducing the sample size, but in general this was around 1,600 respondents. The next section considers how far the businesses considered the environmental impact of their decisions.

Table 1: Numbers of interviews, rural vs urban, by region

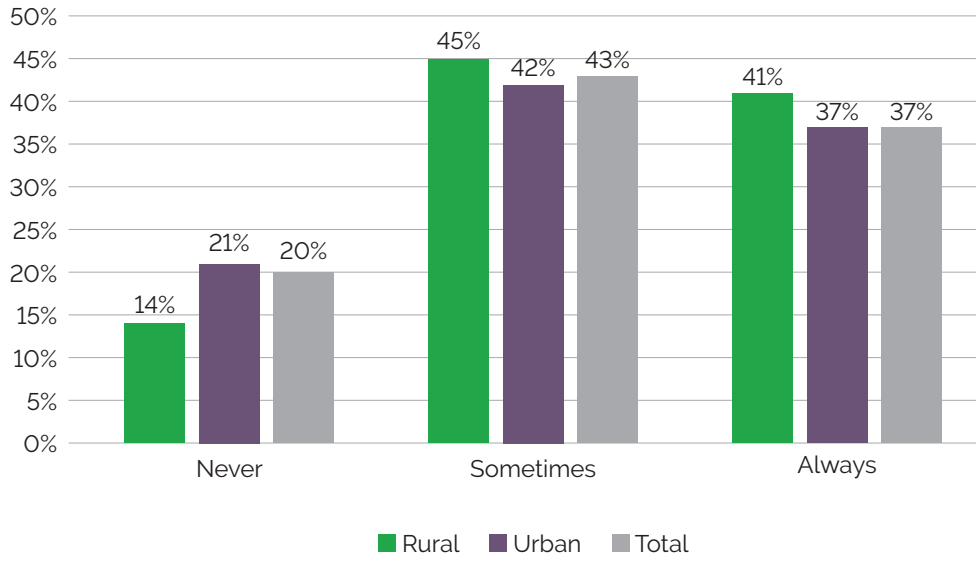
	All regions	North East (NE)	South West (SW)	West Midlands (WM)
Total	2,602	1,000	802	800
Rural	2,001	800	601	600
- Town	840	447	214	179
- Village	644	196	207	241
- Hamlets	517	157	180	180
Urban	601	200	201	200

2. Considering the environmental impact

Previous work has found that most firms now take the **environmental implications** of their decisions into account and are taking action to reduce their firm's **environmental impact**.

In 2021, Wishart et al (2021) found 45% of rural firms and 37% of urban firms said they always consider the environmental implications of business decisions. Moreover, the implication of net zero is that firms will have to take the environmental impact of their decisions into account in the future.

Figure 1 (for rural and urban): When you are making decisions about the future of your business, how often do you consider the environmental impact?

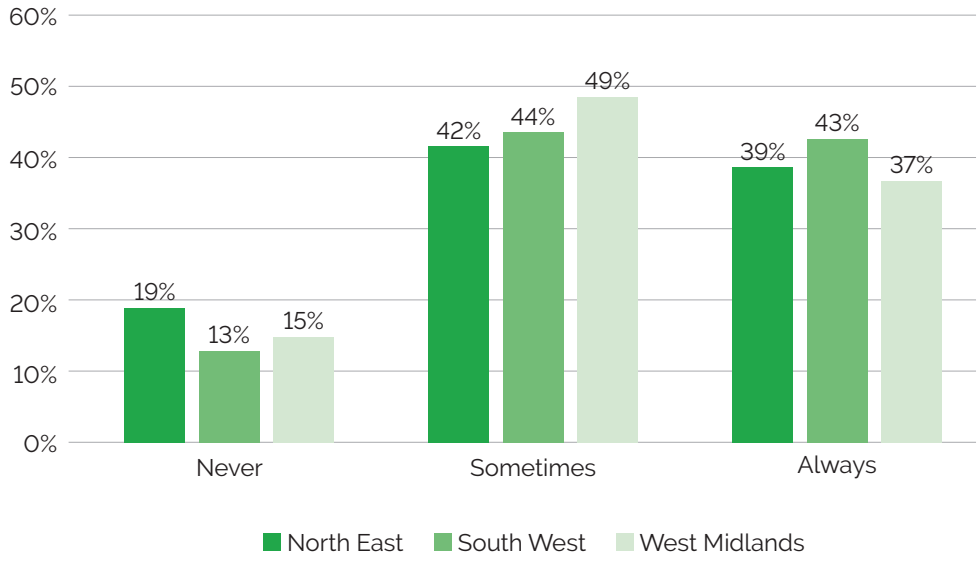


Note: Percentages obtained from weighted sample, (unweighted) total of 1,587 firms, 995 rural firms and 592 urban firms.

Figure 1 presents data on how rural and urban businesses factor in the environment when making decisions about their future. The data is categorised into three levels of consideration: "Never", "Sometimes", and "Always". The general trend indicates that, on average, rural businesses tend to consider the environmental impact of their decisions more than urban businesses.

For instance, 41% of rural businesses always consider the environmental impact, compared to 37% of urban businesses. Similarly, 45% of rural businesses sometimes consider it, while only 42% of urban businesses do. Conversely, 14% of rural businesses never consider the environmental impact, while 21% of urban businesses fall into this category.

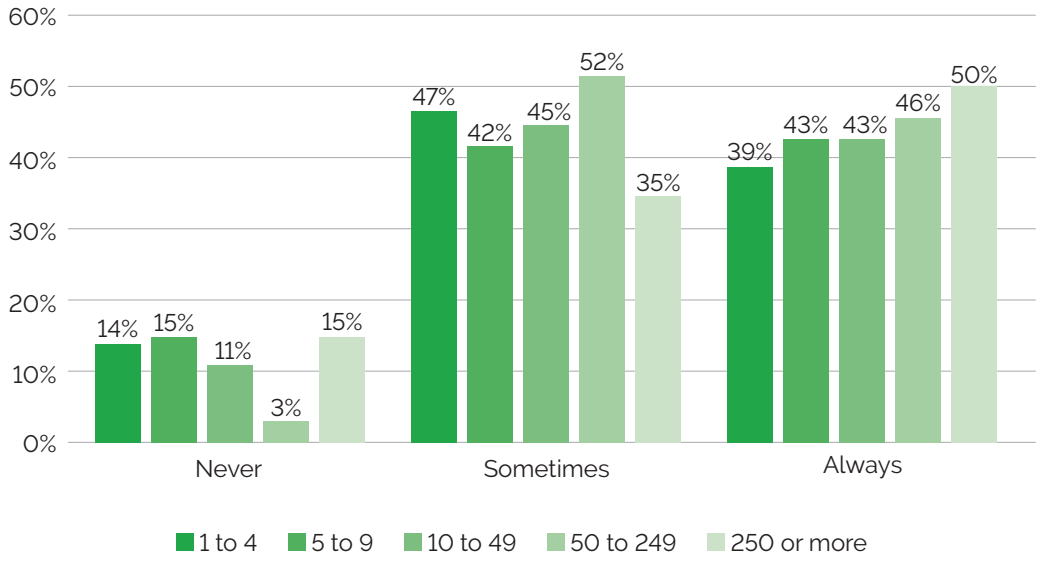
Figure 2 (for rural by region): When you are making decisions about the future of your business, how often do you consider the environmental impact?



Note: Percentages obtained from weighted sample, (unweighted) total of 995 rural firms, 399 in NE, 306 in SW and 290 in WM.

Figure 2 presents data on the environmental considerations of rural businesses in three regions: NE, SW, and WM. It shows that a higher percentage of rural businesses in the NE (19%) "never" consider the environmental impact of their decisions, compared to those in the SW (13%) and the WM (15%). On the other hand, the WM has a higher percentage (49%) of businesses that "sometimes" consider the environmental impact, while the SW has the highest percentage (43%) of businesses that "always" consider it.

Figure 3 (for rural by size): When you are making decisions about the future of your business, how often do you consider the environmental impact?



Note: Percentages obtained from weighted sample, (unweighted) total of 995 rural firms: 459 firms employ 1 to 4 employees; 211 firms employ 5 to 9 employees; 279 firms employ 10 to 49 employees; 43 firms employ 50 to 249 employees; and four firms employ 250 or more employees.

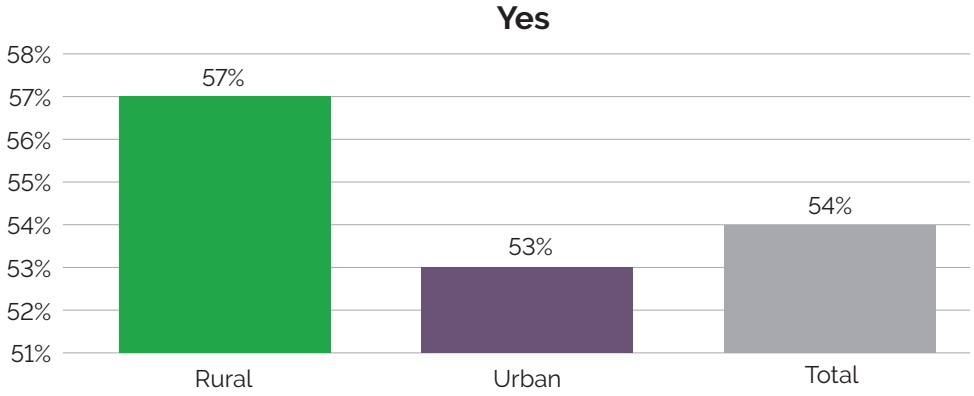
Figure 3 displays the percentages among rural businesses, categorised by their size. There is no clear pattern among rural businesses that "never" or "sometimes" consider the environmental impact. However, businesses in the size band of 50-249 employees appear to be more environmentally conscious. Only 3% of these businesses "never" consider the environmental impact, while 52% "sometimes" do, and 46% "always" consider it. Furthermore, the percentage of rural businesses that "always" consider the environmental impact increases with size. For example, only 39% of rural businesses with 1 to 4 employees "always" consider it, whereas around half of medium and large firms fall into this category.

3. Taking action

Turning from the **consideration** of environmental impact to **taking action**, Figure 4 reveals that, on average, 54% of firms have taken steps to reduce their environmental footprint in the past year. Notably, this percentage is higher in rural areas at 57% compared to 53% in urban areas.

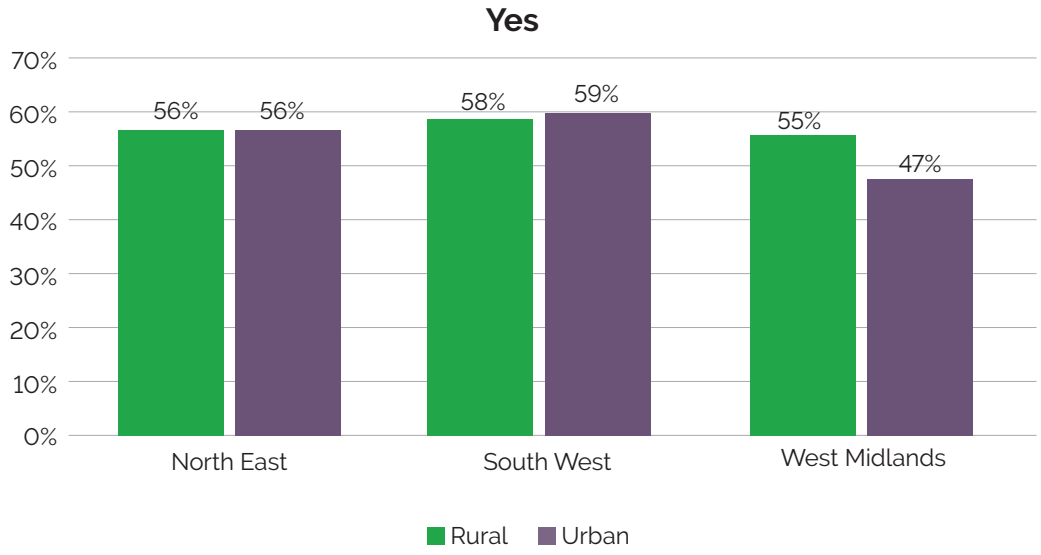
Delving into regional disparities between rural and urban areas, Figure 5 shows that businesses in both NE and SW regions exhibit a similar pattern, with approximately 56% of rural and urban enterprises in the NE and 58%-59% in the SW having taken action over the past 12 months. However, there is a noticeable contrast between rural and urban enterprises in the WM, where roughly 55% of rural and 47% of urban businesses have taken steps to reduce their environmental impact in this region.

Figure 4 (by rural and urban): Have you taken any steps to reduce the environmental impact of your business over the past 12 months?



Note: Unweighted total of 1,593 firms, 998 rural firms and 595 urban firms.

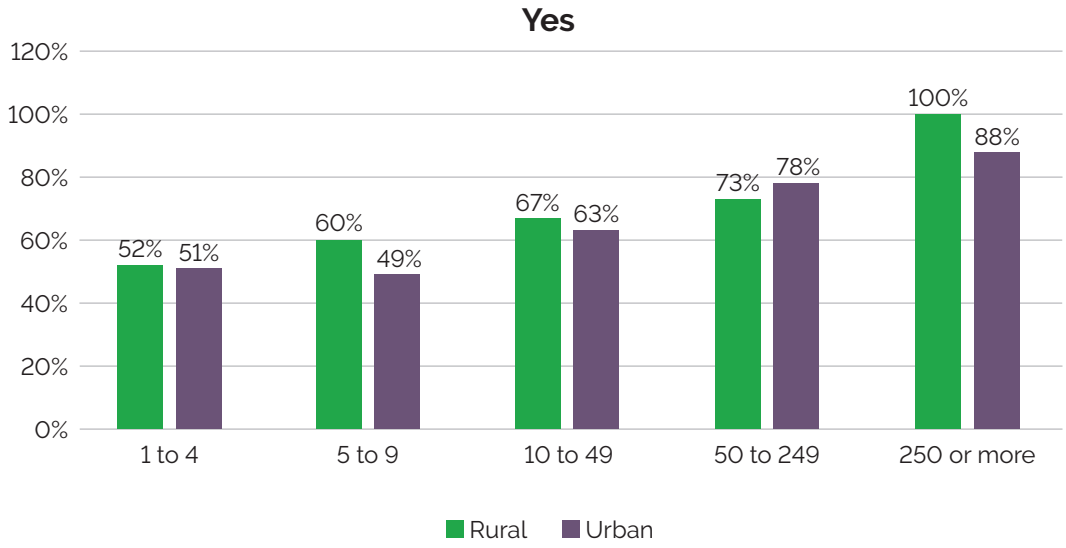
Figure 5 (by rural and urban in each region): Have you taken any steps to reduce the environmental impact of your business over the past 12 months?



Note: Unweighted total 1,593 firms; 998 rural firms, 595 urban firms; 597 NE firms, 505 SW firms, 491 WM firms.

Moving forward, we present the variations between rural and urban areas in relation to firm size. As illustrated in Figure 6, there is a notable increase in the percentage of firms undertaking environmental initiatives as firm size grows. To illustrate, businesses with 1 to 4 employees, both in rural and urban settings, exhibit a lower engagement, with approximately 52% of rural and 51% of urban enterprises having taken action in the past year. Conversely, among medium and large businesses, the commitment to reducing environmental impact is significantly higher. This is encouraging however there are a myriad of actions that could help reduce the environmental impact of businesses, some of which are relatively easier to adopt.

Figure 6 (by rural and urban for each size band): Have you taken any steps to reduce the environmental impact of your business over the past 12 months?



Note: Unweighted total 1,593 firms; 998 rural and 595 urban firms. 605 firms with 1 to 4 employees; 368 firms with 5 to 9 employees; 450 firms with 10 to 49 employees, 153 firms with 50 to 249 employees and 17 firms with 250 or more employees.

Next, we turn to the steps taken to reduce the firm's environmental impact in the last 12 months. In Table 2, we can observe several key findings regarding environmental practices among rural and urban firms. We report the steps taken by rural and urban businesses in order of popularity.

Table 2: The steps taken to reduce the firm's environmental impact (rural and urban)

Steps taken	Rural	Urban	Total
Recycled waste, water, or materials	90%	87%	88%
Introduced new or improved production processes	46%	43%	44%
Conducted training on environmental matters	42%	40%	40%
Introduced new low carbon products or services	38%	43%	42%
Introduced new or improved delivery, transport, or distribution systems	24%	28%	27%
Undertaken environmental reports or audits	23%	28%	27%
Put in place environmental certification	14%	15%	15%
None of these	2%	3%	3%

Unweighted total of 948 firms, 588 rural firms and 360 urban firms.

Accordingly, Table 2 clearly shows that firms take more than one step to reduce their environmental impact. The adoption rates of these steps resemble a 'step ladder' as the 'low-hanging fruits' are picked by the most firms and more complex steps or practices adopted by only a few. For example, "recycling" is the most popular step taken by rural SMEs followed by other more prevalent steps including "introducing new low-carbon products or services", "training on environmental matters" and "improved production process". On the other hand, the most demanding or complex steps such as "putting in place environmental certification", "undertaking environmental reports and audits" and "introducing new or improved delivery, transport, or distribution systems" are adopted by 14%-24% of rural SMEs.

Starting from the fundamental aspect of recycling and progressing towards the more complex challenges, it becomes evident that rural firms are generally more inclined to take actions aimed at reducing their environmental impact. However, when it comes to more complex steps or actions, such as introducing innovative changes to production, delivery systems, products, and services, they tend to exhibit lower engagement.

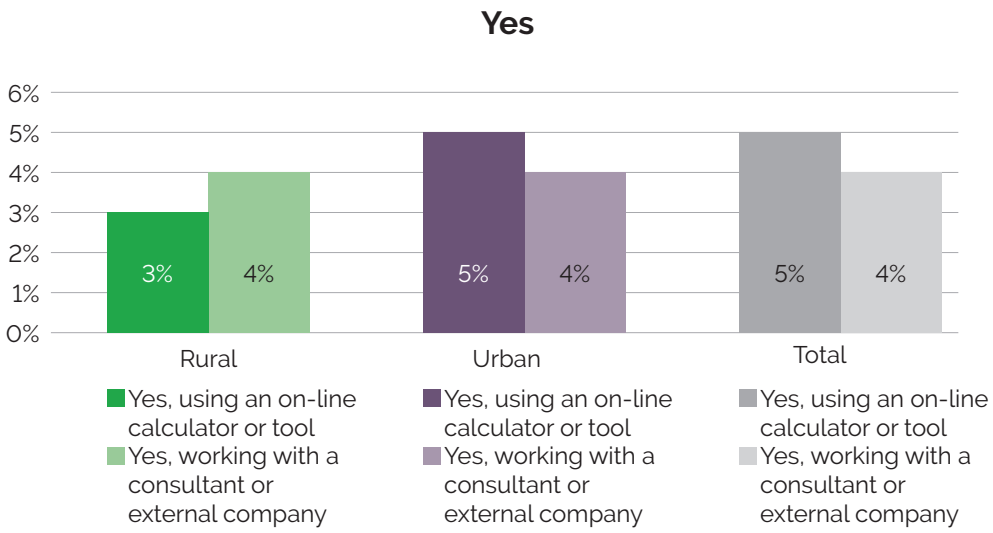
4. Measuring

Measuring GHG emissions can be an **important precursor** to setting emission reduction targets as part of a firm's environmental emissions **reduction strategy**.

Figure 7 shows that few firms measure their GHG emissions. Just 3% of rural and 5% of urban businesses measured their GHG emissions "using an online calculator". In addition, 4% of both rural and urban businesses measured GHG emissions through "work with a consultant or external company".

Measuring the GHG emissions appears to be particularly difficult for SMEs, both urban and rural. It does require awareness of, and ability to access and use, an online calculator.

Figure 7 (by rural and urban): Have you taken any steps to measure the greenhouse gas emissions from your business?



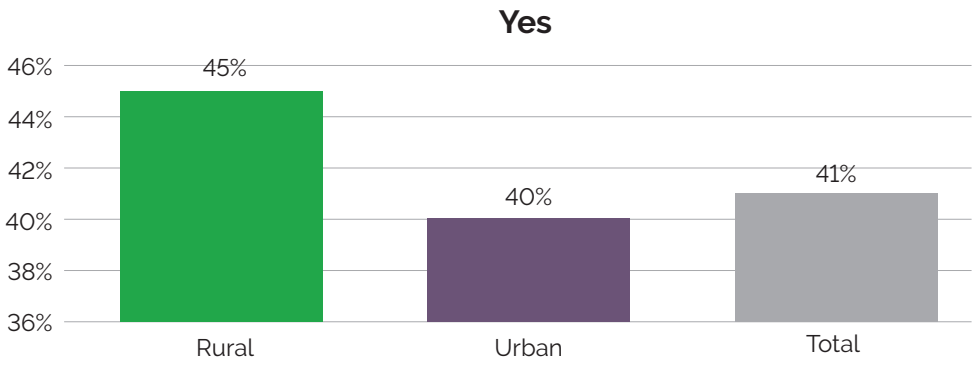
Note: Unweighted total of 1,578 firms, 987 rural firms and 591 urban firms.

5. Barriers

Having seen firms' activity to **reduce** environmental emissions, we turn to those elements that **hamper** firms in their environmental journey.

Much of the discussion of net zero in SMEs has been couched in terms of barriers and affordances for net zero (Blundel and Hampton 2021, Wishart et al. 2021). According to Figure 8, on average, 41% of businesses perceive constraints in their efforts to reduce carbon emissions. In a more detailed breakdown, approximately 45% of rural businesses and 40% of urban businesses report feeling constrained.

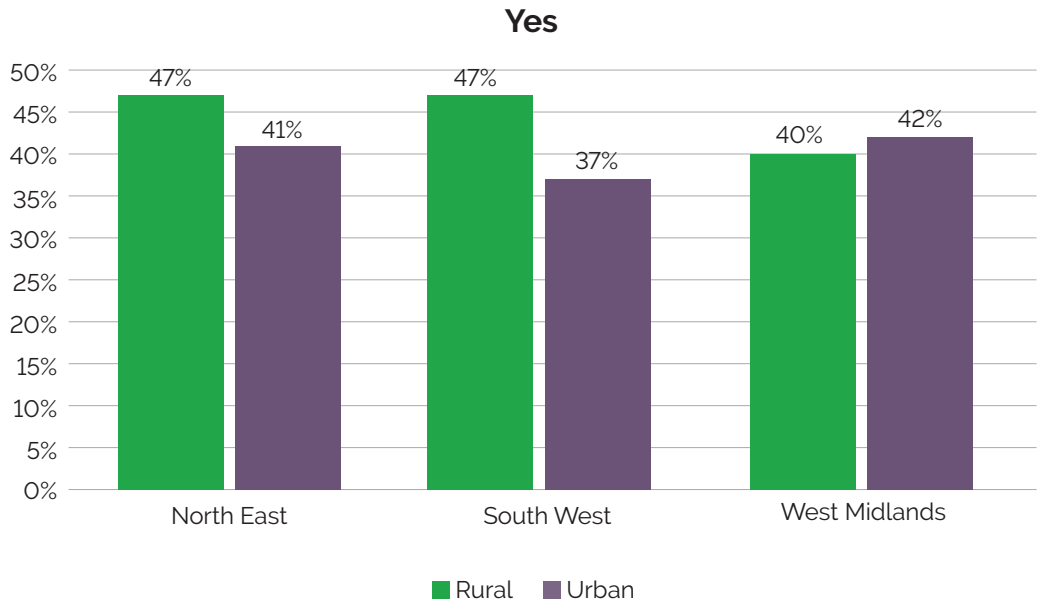
Figure 8 (by rural and urban): Do you feel the business is restricted in its efforts to reduce carbon emissions?



Note: Unweighted total of 1,514 firms, 953 rural firms and 561 urban firms.

Exploring regional disparities between rural and urban areas, Figure 9 illustrates a consistent trend among rural businesses in both the NE and SW regions. Approximately 47% of rural businesses in these areas express a sense of constraint in their efforts to reduce carbon emissions. In contrast, urban businesses in the same regions report comparatively lower levels of restriction, with about 41% of urban businesses in the NE and 37% in the SW acknowledging similar challenges. Notably, WM stands out as the exception, where around 40% of rural businesses and 42% of urban businesses experience these constraints. This suggests that while rural businesses in the NE and SW feel more restricted than their urban counterparts, in the WM, both rural and urban businesses share similar perceptions of limitation.

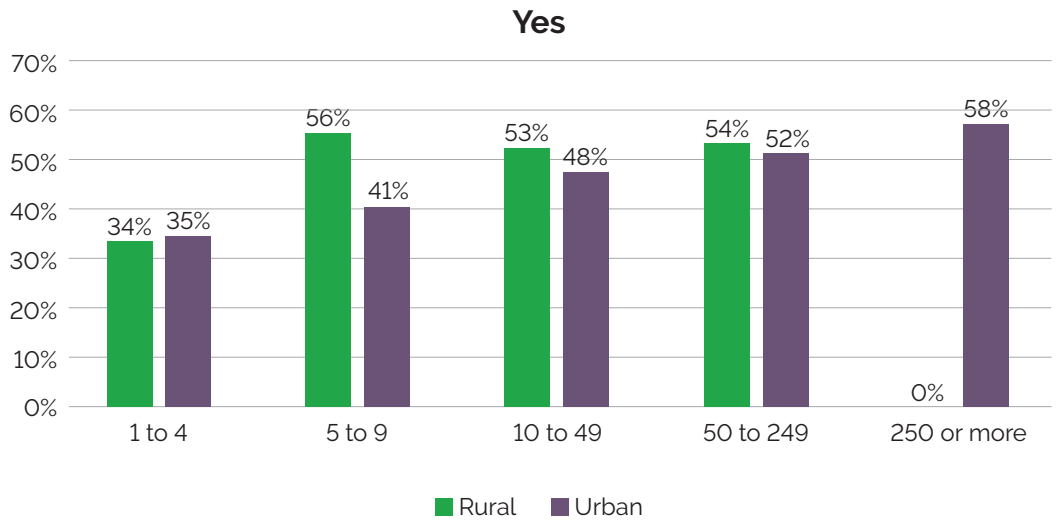
Figure 9 (by rural and urban for each region): Do you feel the business is restricted in its efforts to reduce carbon emissions?



Note: Unweighted total of 1,514 firms, 953 rural firms and 561 urban firms, 573 NE firms, 486 SW firms, 455 WM firms.

Moving forward, we present the variations between rural and urban areas in relation to firm size. As presented in Figure 10, a higher percentage of rural firms tend to acknowledge being restricted more than their urban counterparts. Notably, this propensity seems to increase as businesses expand their workforce. For instance, among businesses with 1 to 4 employees, approximately 34%-35% of rural and urban enterprises report feeling restricted. However, as we move to larger size categories, rural businesses display an increasing trend in perceiving limitations. Consequently, approximately 53%-56% of rural businesses express feelings of restriction in their efforts to reduce carbon emissions across larger size bands.

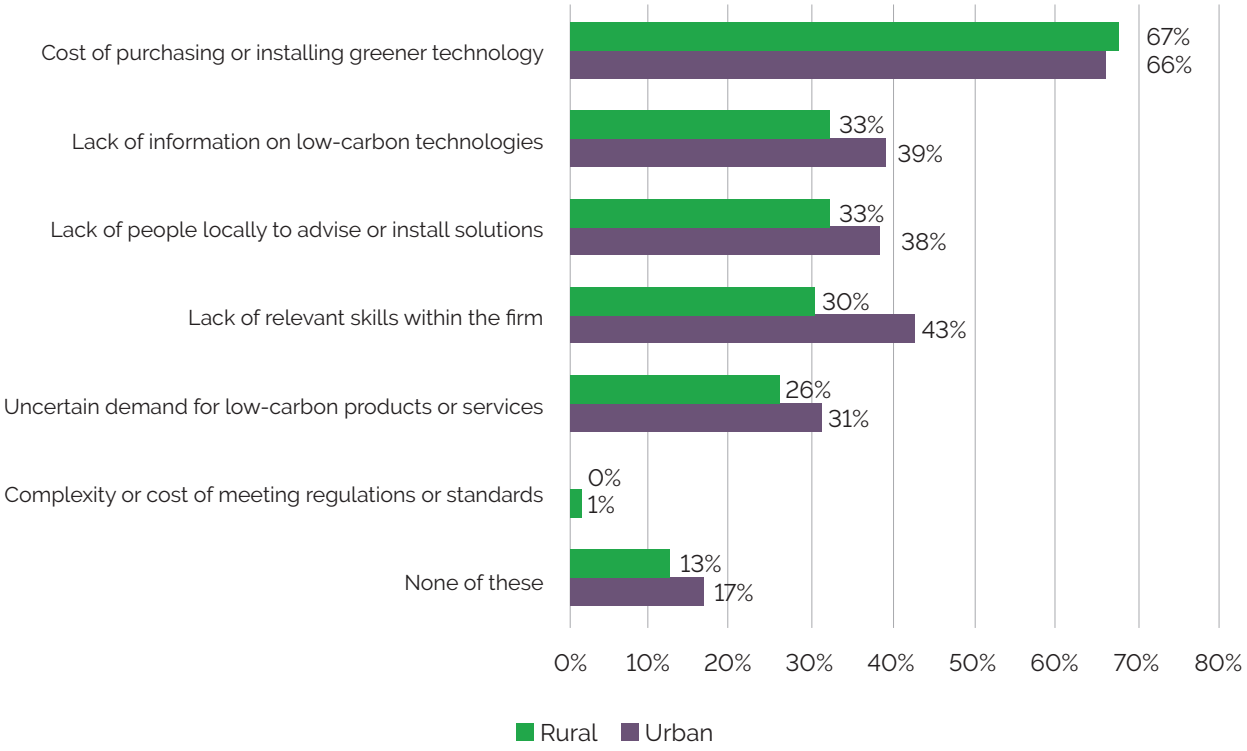
Figure 10 (by rural and urban for each size band): Do you feel the business is restricted in its efforts to reduce carbon emissions?



Note: Unweighted total of 1,514 firms, 953 rural firms and 561 urban firms, 585 '1 to 4' firms; 338 '5 to 9' firms; 431 '10 to 49' firms, 144 '50 to 249' firms; 16 '250 or more' firms.

Next, we turn to the major obstacles restricting businesses` efforts to reduce their carbon emissions. Figure 11 reports the obstacles perceived by rural and urban businesses in order of prominence (as percentages of those who feel restricted in their efforts). Notably, 67% of rural and 66% of urban businesses identify the "cost of purchasing or installing greener technology" as one of the major obstacles. Furthermore, an average of 33% of rural and 39% of urban businesses point to challenges associated with the "lack of information on low carbon technologies" and the "lack of people locally to advise or install solutions" as major hindrances, followed by concerns about "lack of relevant skills within the firm". Interestingly, the perception of "lack of relevant skills within the firm" is notably lower in rural areas (30%) compared to urban areas (43%). Likewise, 26% of rural and 31% of urban firms cite "uncertain demand for low carbon products or services" as a major hurdle. Notably, few firms report the "complexity or cost of complying with regulations or standards" as a substantial obstacle to their carbon reduction efforts. Finally, 13% of rural and 17% of urban firms mention "other" unlisted challenges as their primary concerns in this context.

Figure 11 (by rural and urban): Which of the following, if any, have been major obstacles?



Note: Unweighted total of 726 firms, 462 rural firms and 264 urban firms.

Overall, the data indicates both rural and urban businesses face challenges in purchasing and installing greener technology, including the cost and lack of information on low-carbon technologies. Access to information and people, and skills development are important challenges, especially in urban areas, while regulatory complexity is not a major concern.

However, rural businesses focus less on skills and uncertainty in demand for low-carbon products or services. The lack of people locally to advise on net zero indicates a perceived lack of support.

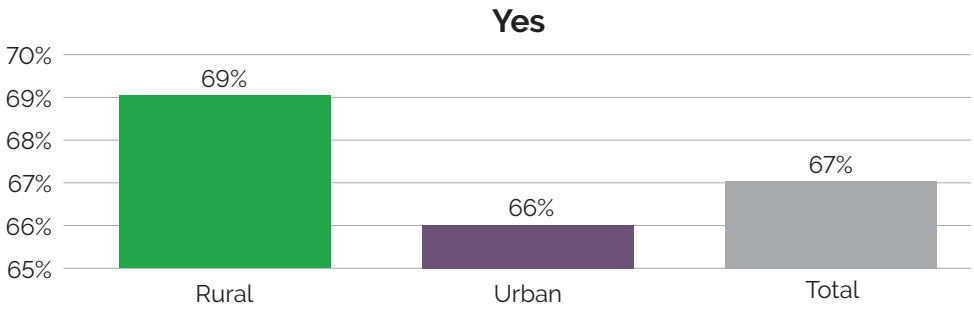
5. Reliable information

Previous work has shown that firms' ability to identify reliable information is **important for action on net zero** (Mole and Ri 2023).

Figure 12 reveals that, on average 67% of firms "know where to find reliable information when looking to implement environmental solutions in their business". In addition, the percentage of businesses that know where to find reliable information is slightly higher in rural (69%) compared to urban areas (66%), which is encouraging.

However, there are marked differences between the rural and urban businesses across the three regions in this critical aspect.

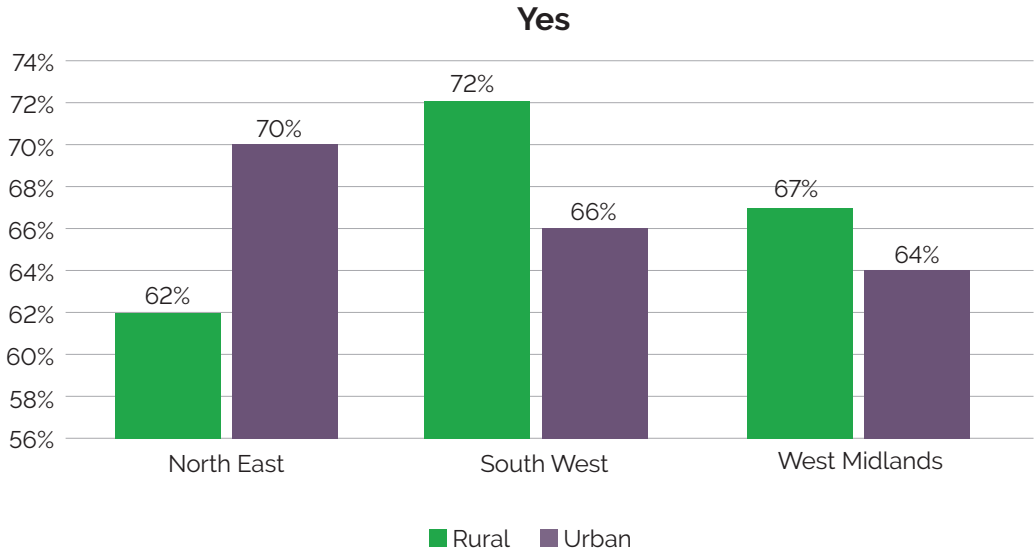
Figure 12 (by rural and urban): When looking to implement environmental solutions in your business, do you know where to find reliable information to help?



Note: Unweighted total of 1,589 firms, 997 rural firms and 592 urban firms.

As shown in Figure 13, the percentage of rural firms which "know where to find reliable information when looking to implement environmental solutions in their business" is higher in the SW (72%) compared to the NE (62%) and WM (67%). Rural firms in the NE are far less likely than urban firms to know where to find reliable information, with the reverse situation in the SW and WM.

Figure 13 (by rural and urban in each region): When looking to implement environmental solutions in your business, do you know where to find reliable information to help?

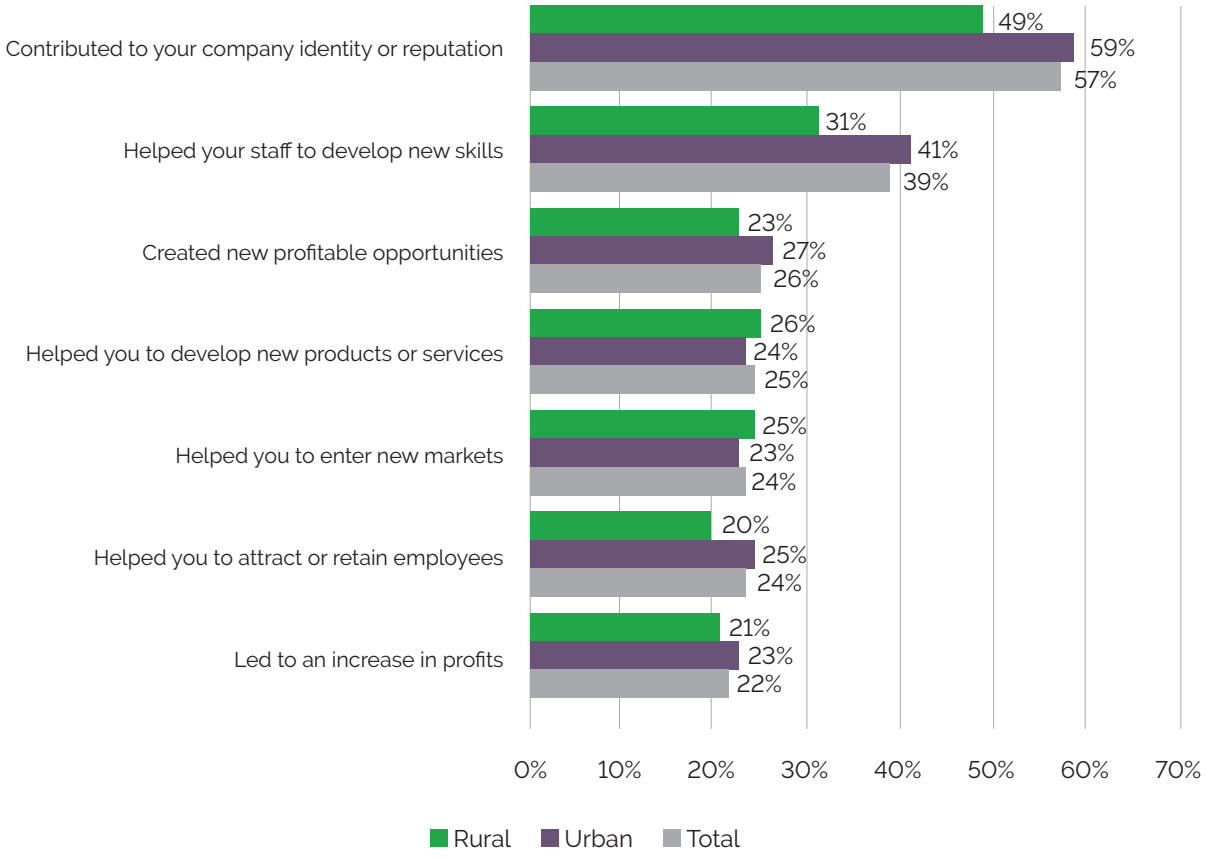


Note: Unweighted total of 1,589 firms, 997 rural firms and 592 urban firms, 298 NE, 501 SW, 490 WM firms.

6. Benefits

Next, we turn our attention to the **benefits of various steps** that businesses have taken to **reduce** their environmental impact. Figure 14 reports these benefits perceived by rural and urban businesses in order of prominence.

Figure 14 (by rural and urban): What are the benefits of the steps that businesses have taken to reduce their environmental impact?



Note: Unweighted total of 944 firms; 587 rural firms and 357 urban firms.

Figure 14 reveals several noteworthy trends regarding the impacts of their environmental sustainability initiatives. Averaging across all businesses, a significant 57% report that the steps they have taken to reduce their environmental impact "contributed to their company's identity and reputation". However, it's worth noting that rural businesses, at 49%, report this contribution less frequently compared to their urban counterparts, which stand at 59%.

Similarly, 39% of businesses, on average, indicate that these steps have "helped their staff develop new skills". Yet, rural businesses, at 31%, report this outcome less frequently than urban businesses, at 41%. The findings indicate that 26% of businesses, on average, have "experienced the creation of new profitable opportunities" through their sustainability initiatives, with rural businesses again less likely to report this benefit. Moreover, approximately 25% of businesses have seen the "development of new products or services" due to these initiatives, with rural and urban businesses reporting similar percentages of 26% and 24%, respectively.

The data also indicates that 24% of businesses, on average, find these initiatives "helping them to enter new markets", and again, rural and urban businesses report comparable percentages of 25% and 23%, respectively. Furthermore, 24% of businesses, on average, express that these steps have "helped them in attracting or retaining employees", with rural businesses slightly less at 20% compared to urban businesses at 25%. Lastly, the analysis shows that 22% of businesses, on average, attribute "an increase in profits" to their sustainability initiatives, with 21% of rural and 23% of urban businesses reporting such an impact, signifying a relatively similar impact in both settings.

Figure 14 suggests that rural businesses are less likely to perceive the positive benefits stemming from environmental impact reduction efforts compared to urban businesses. The percentage of urban businesses that report benefits is larger than rural businesses with two exceptions. We see that urban businesses are more likely to report positive reputation, skills, profitability and employee-related outcomes, while rural

businesses more likely to emphasise innovation and market-related outcomes resulting from these initiatives.

The strongest outcome concerns the company's identity, especially among urban businesses, highlighting the growing importance of corporate social responsibility and sustainability in modern business. More urban businesses believe environmental sustainability helped them attract or retain employees as a competitive advantage in job markets. One in four businesses reported that environmental efforts helped develop new products or services suggesting innovation and adaptation were key strategies enabling firms to thrive whilst pursuing sustainability initiatives.

Next, we delve into regional disparities in rural areas regarding the benefits of the steps that businesses have taken to reduce their environmental impact. Figure 15 provides a breakdown of the results in the three regions.

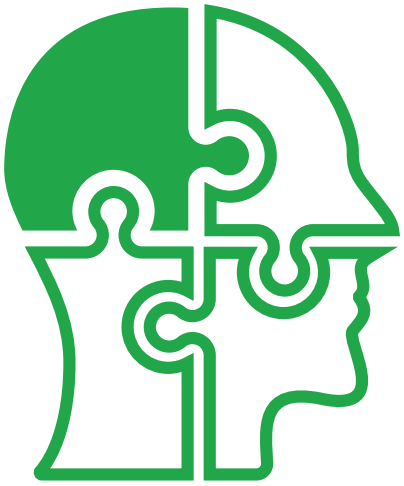
Figure 15 (by rural in each region): What are the benefits of the steps that businesses have taken to reduce their environmental impact?

Note: Unweighted total of 587 rural firms, 222 NE, 194 SW and 171 WM.

The comparison of net zero benefits across three English regions reveals distinct patterns in the perceived advantages for rural businesses. In the SE, a notable 57% of businesses emphasise that their environmental efforts have bolstered their company identity or reputation, showcasing a strong focus on corporate image. This region also demonstrates a multi-faceted impact, with significant percentages citing skill development (29%) and market entry facilitation (29%).

On the other hand, the WM exhibits a more conservative response, where 36% highlight an enhanced company identity or reputation and 33% emphasise skill development. This region appears to place less emphasis on market expansion and employee attraction, or retention compared to the other regions. Overall, these findings underscore regional variations in the perceived benefits of net zero efforts, reflecting diverse priorities and outcomes for rural businesses across the NE, SW, and WM.

7. Conclusions



In conclusion, the SORE survey shows the **critical role** that environmental considerations play in **business decision-making** in both rural and urban settings. A **substantial proportion** of businesses in both rural and urban areas now take the environment into account when making decisions, with only 14% of rural businesses and 21% of urban businesses ignoring sustainability. These percentages are encouraging.

Furthermore, most rural businesses (57%, compared to 53% of urban firms) have acted to reduce their environmental footprint. Our evidence demonstrates a 'ladder' of environmental action with recycling and waste reduction on the lower rungs. The middle rungs show 26% implementing process changes to reduce their carbon emissions (46% of the 57% which had made a change). Additionally, 21% (38% of the 57% who had made a change) have introduced new products and services aimed at sustainability, indicating a growing trend towards environmentally-responsible innovation. However, climate change is not without its challenges. Environmental audits, certification, and GHG emissions measurement have proven to be more complex endeavours for many businesses, particularly in rural areas.

Despite being more likely to take the environmental implications of their decisions into account and to be taking steps to reduce their environmental impacts, rural business are overall more likely to feel restricted in their efforts to reduce carbon emissions.

A significant proportion of them report barriers such as high costs, a lack of information, and uncertainty in local support and demand. This highlights the need for enhanced support systems and resources to help these businesses overcome such hurdles.

Lastly, this research has illuminated the differing emphases between rural and urban businesses when it comes to the outcomes of their environmental initiatives. Urban businesses often cite positive reputational gains, improved employee skills, stronger financial performance, and other employee-related benefits, perhaps reflecting a more competitive urban labour market. Conversely, rural businesses emphasised innovation and market-related advantages as the primary outcomes of their environmental endeavours. These disparities indicate that tailored strategies may be required to suit the unique characteristics and needs of businesses in both rural and urban contexts. Overall, this research underscores the importance of continued efforts to promote environmentally-conscious decision-making and support for businesses across different settings.

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Appendix A: Weighting procedure and profiling respondent firms

Weighting procedure

We derive the weights for non-farm businesses based on the enterprise population from the Business Structure Database. Within each region, firms are weighted by size-band (three size-bands), sectors (six sectors), and urban-rural types (two types). As this report considers the non-farm rural economy, farms were excluded from the weighting process. Weights were derived for both the non-farm rural economy and the non-farm urban comparison group.

Across the three regions surveyed samples were structured by firm size band, sector and between urban and rural areas. This structured sample requires sampling weights to be developed to allow representative results to be obtained for urban and rural areas within each region. Tables A1 and A2 provide the achieved sample divided by region and urban/rural. Tables A3 and A4 provide the business population in terms of the count of business units in each cell derived from the Business Structure Database (BSD) 2022 (ONS 2023). The BSD is the annual abstract from the Inter-departmental Business Register and is itself based on VAT and PAYE data. This was accessed through the UK Secure Data Service.

Tables A5 and A6 provide the sampling weights derived as the ratio of the business population relative to the number of respondents. Note that in a small number of cases where the numbers of respondents in a particular industry/size band cell is small, cells have been amalgamated to avoid extreme weighting numbers.

Table A1: Respondent numbers – rural firms

Respondents	Rural firms by number of employees			
North East	**Less than 10**	**10 to 49**	**50+**	**Total**
Production	66	17	6	89
Construction	54	14	3	71
Wholesale and retail, transport	141	24	4	169
Hospitality	80	26	3	109
Business services	129	15	4	148
Other services	163	43	8	214
Total	**633**	**139**	**28**	**800**

South West	**Less than 10**	**10 to 49**	**50+**	**Total**
Production	42	38	7	87
Construction	24	23	2	49
Wholesale and retail, transport	88	57	8	153
Hospitality	34	45	3	82
Business services	51	26	2	79
Other services	72	62	16	150
Total	**311**	**251**	**38**	**600**

West Midlands	**Less than 10**	**10 to 49**	**50+**	**Total**
Production	55	27	2	84
Construction	39	16	2	57
Wholesale and retail, transport	108	38	7	153
Hospitality	33	29	2	64
Business services	81	20	3	104
Other services	84	45	8	137
Total	**400**	**175**	**24**	**599**

Table A2: Respondent numbers – urban firms

Respondents	Urban firms by number of employees			
North East	**Less than 10**	**10 to 49**	**50+**	**Total**
Production	14	9	14	37
Construction	11	2	3	16
Wholesale and retail, transport	20	12	5	37
Hospitality	7	10	5	22
Business services	22	8	4	34
Other services	22	16	16	54
Total	**96**	**57**	**47**	**200**

South West	**Less than 10**	**10 to 49**	**50+**	**Total**
Production	17	12	9	38
Construction	12	6	4	22
Wholesale and retail, transport	26	12	8	46
Hospitality	5	10	5	20
Business services	17	6	2	25
Other services	24	13	13	50
Total	**101**	**59**	**41**	**201**

West Midlands	**Less than 10**	**10 to 49**	**50+**	**Total**
Production	12	11	8	31
Construction	10	5	3	18
Wholesale and retail, transport	30	12	7	49
Hospitality	5	9	2	16
Business services	23	5	3	31
Other services	24	17	14	55
Total	**104**	**59**	**37**	**200**

Table A3: Population numbers – rural firms

Respondents	Rural firms by number of employees			
North East	**Less than 10**	**10 to 49**	**50+**	**Total**
Production	3,070	286	94	3,450
Construction	1,537	183	32	1,752
Wholesale and retail, transport	2,052	317	40	2,409
Hospitality	1,226	384	39	1,649
Business services	1,834	190	50	2,074
Other services	2,404	461	95	2,960
Total	**12,123**	**1821**	**350**	**14,294**

South West	**Less than 10**	**10 to 49**	**50+**	**Total**
Production	18,054	1523	304	19,881
Construction	8,522	783	63	9,368
Wholesale and retail, transport	9,603	1756	252	11,611
Hospitality	4,613	2167	158	6,938
Business services	12,073	1006	131	13,210
Other services	11,843	2152	537	14,532
Total	**64,708**	**9387**	**1,445**	**75,540**

West Midlands	**Less than 10**	**10 to 49**	**50+**	**Total**
Production	9,304	881	253	10,438
Construction	4,146	366	39	4,551
Wholesale and retail, transport	5,885	990	162	7,037
Hospitality	2,155	827	77	3,059
Business services	6,770	595	83	7,448
Other services	6,207	1256	323	7,786
Total	**34,467**	**4915**	**937**	**40,319**

Table A4: Population numbers – urban firms

Respondents	Urban firms by number of employees			
North East	**Less than 10**	**10 to 49**	**50+**	**Total**
Production	2,091	714	262	3,067
Construction	4,113	563	85	4,761
Wholesale and retail, transport	6,728	1189	186	8,103
Hospitality	4,604	1136	98	5,838
Business services	6,178	941	200	7,319
Other services	8,504	1807	668	10,979
Total	**32,218**	**6350**	**1,499**	**40,067**

South West	**Less than 10**	**10 to 49**	**50+**	**Total**
Production	4,676	1294	420	6,390
Construction	11,314	1163	158	12,635
Wholesale and retail, transport	13,844	2461	406	16,711
Hospitality	7,702	2366	218	10,286
Business services	17,121	2552	566	20,239
Other services	17,610	4211	1,426	23,247
Total	**72,267**	**14047**	**3,194**	**89,508**

West Midlands	**Less than 10**	**10 to 49**	**50+**	**Total**
Production	6,778	2587	857	10,222
Construction	11,236	1281	166	12,683
Wholesale and retail, transport	25,451	3903	631	29,985
Hospitality	9,640	1905	177	11,722
Business services	17,754	2485	498	20,737
Other services	27,558	5232	1,615	34,405
Total	**98,417**	**17393**	**3,944**	**119,754**

Table A5: Sampling weights – rural firms

Respondents	Rural firms by number of employees			
North East	**Less than 10**	**10 to 49**	**50+**	**Total**
Production	46.5	16.8	15.7	38.8
Construction	28.5	13.1	10.7	24.7
Wholesale and retail, transport	14.6	13.2	10.0	14.3
Hospitality	15.3	14.8	13.0	15.1
Business services	14.2	12.7	12.5	14.0
Other services	14.7	10.7	11.9	13.8
Total	**19.2**	**13.1**	**12.5**	**17.9**

South West	**Less than 10**	**10 to 49**	**50+**	**Total**
Production	429.9	40.1	43.4	228.5
Construction	355.1	34.0	31.5	191.2
Wholesale and retail, transport	109.1	30.8	31.5	75.9
Hospitality	135.7	48.2	52.7	84.6
Business services	236.7	38.7	65.5	167.2
Other services	164.5	34.7	33.6	96.9
Total	**208.1**	**37.4**	**38.0**	**125.9**

West Midlands	**Less than 10**	**10 to 49**	**50+**	**Total**
Production	169.2	32.6	126.5	124.3
Construction	106.3	22.9	19.5	79.8
Wholesale and retail, transport	54.5	26.1	23.1	46.0
Hospitality	65.3	28.5	62.5	47.8
Business services	83.6	29.8	27.7	71.6
Other services	73.9	27.9	40.4	56.8
Total	**86.2**	**28.1**	**39.0**	**67.3**

Table A6: Sampling weights – urban firms

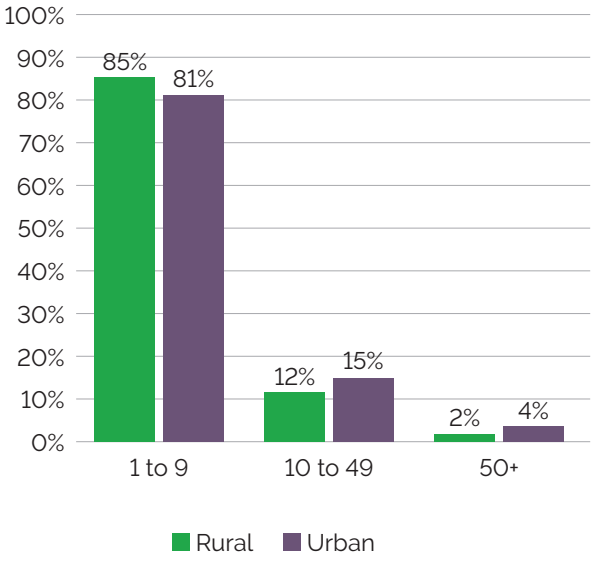
Respondents	Urban firms by number of employees			
North East	**Less than 10**	**10 to 49**	**50+**	**Total**
Production	149.4	79.3	18.7	82.9
Construction	373.9	281.5	28.3	297.6
Wholesale and retail, transport	336.4	99.1	37.2	219.0
Hospitality	657.7	113.6	19.6	265.4
Business services	280.8	117.6	50.0	215.3
Other services	386.5	112.9	41.8	203.3
Total	**335.6**	**111.4**	**31.9**	**200.3**

South West	**Less than 10**	**10 to 49**	**50+**	**Total**
Production	275.1	107.8	46.7	168.2
Construction	942.8	193.8	39.5	574.3
Wholesale and retail, transport	532.5	205.1	50.8	363.3
Hospitality	1,540.4	236.6	43.6	514.3
Business services	1,007.1	425.3	283.0	809.6
Other services	733.8	323.9	109.7	464.9
Total	**715.5**	**238.1**	**77.9**	**445.3**

West Midlands	**Less than 10**	**10 to 49**	**50+**	**Total**
Production	564.8	235.2	107.1	329.7
Construction	1,123.6	256.2	55.3	704.6
Wholesale and retail, transport	848.4	325.3	90.1	611.9
Hospitality	1,928.0	211.7	263.0	732.6
Business services	771.9	497.0	166.0	668.9
Other services	1,148.3	307.8	115.4	625.5
Total	**946.3**	**294.8**	**106.6**	**598.8**

Sample profile

Figure A1: Size & industry



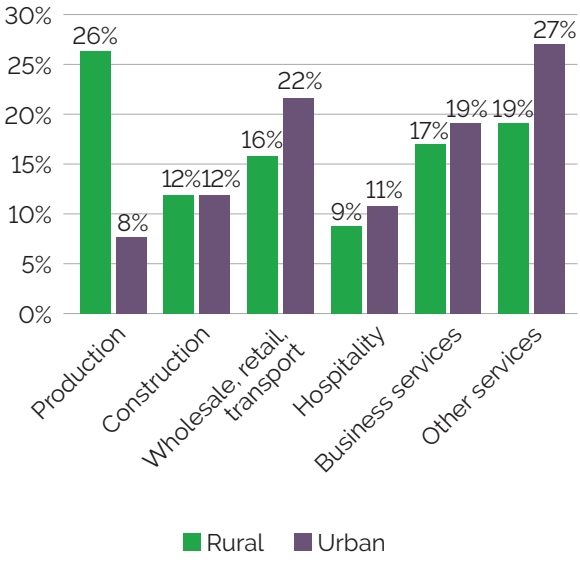
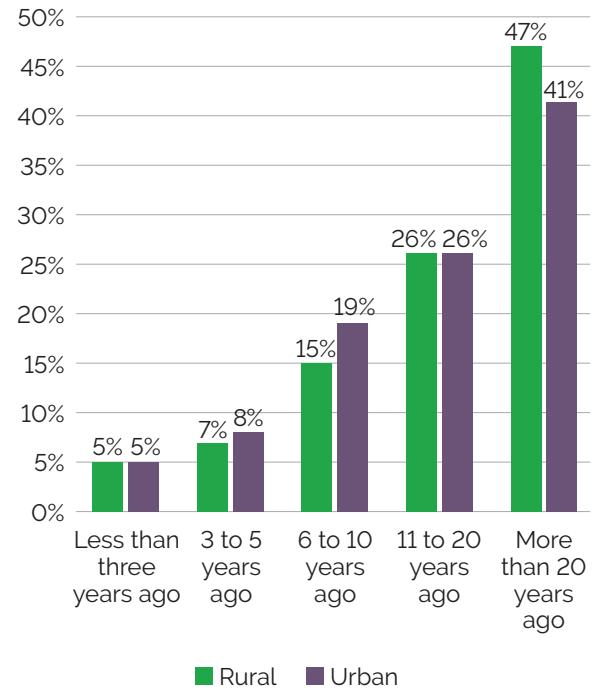


Figure A2: Age (left) & turnover (right)



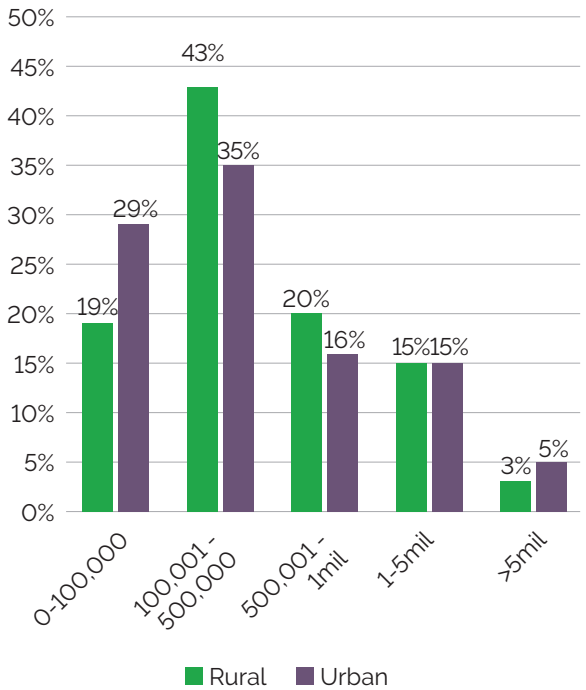
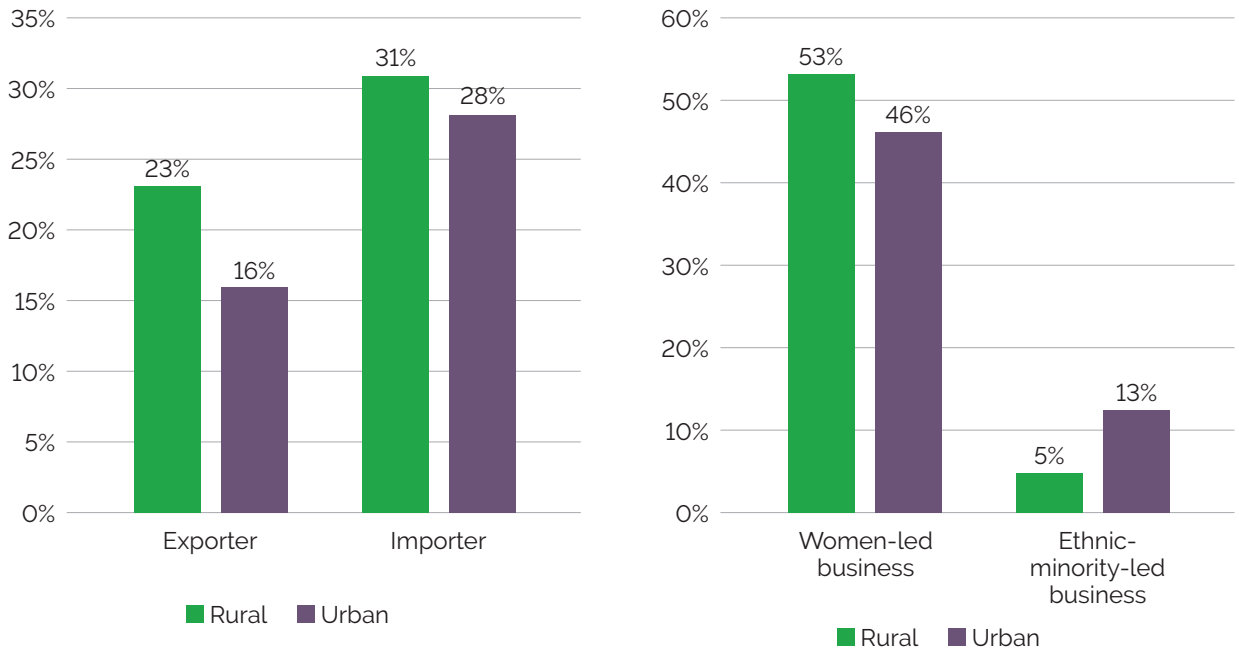


Figure A5: Exporter and Importer (left) & Women-led business and Ethnic-minority-led business (right)



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Contact:
Enquiries about the contact of, or issues raised by the report, should be addressed in the first instance to **nicre@newcastle.ac.uk**

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For further information about NICRE:

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National Innovation Centre for Rural Enterprise
Newcastle University
The Catalyst
3 Science Square
Newcastle Helix
Newcastle, NE4 5TG

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