

**WR1403: Business Waste Prevention  
Evidence Review  
L2m4-5 – Communications**



A report for  
Defra

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## Context of Project WR1403

Waste prevention is at the top of the waste hierarchy. A major priority of the coalition government is to move towards a zero waste economy, and an important element of this will be to encourage and increase waste prevention. This review aims to map and collate the available evidence on business waste prevention. It will help inform the preparation of England's National Waste Prevention Programme as required under the revised EU Waste Framework Directive (2008).

The focus is on aspects of waste prevention that are influenced directly or indirectly by businesses - it complements a previous evidence review, WR1204, which focused on household waste prevention. The definition of the term 'waste prevention' used here is that in the revised Waste Framework Directive:

*'Prevention' means measures taken before a substance, material or product has become waste, that reduce:*

- a) the quantity of waste, including through the re-use of products or the extension of the life span of products;*
- a) the adverse impacts of the generated waste on the environment and human health; or*
- b) the content of harmful substances in materials and products.*

Recycling activities or their promotion are outside the scope of this review.

## Context of this Module

This module is one of a number of Level 2 modules that contain analyses of Approaches, Interventions, Sector Issues and other aspects of the review. This module deals specifically with the aspect of waste prevention using the Intervention mechanism of Communications.

A full map of the modular reporting structure can be found within **L1m2: Report Index**.

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## Glossary

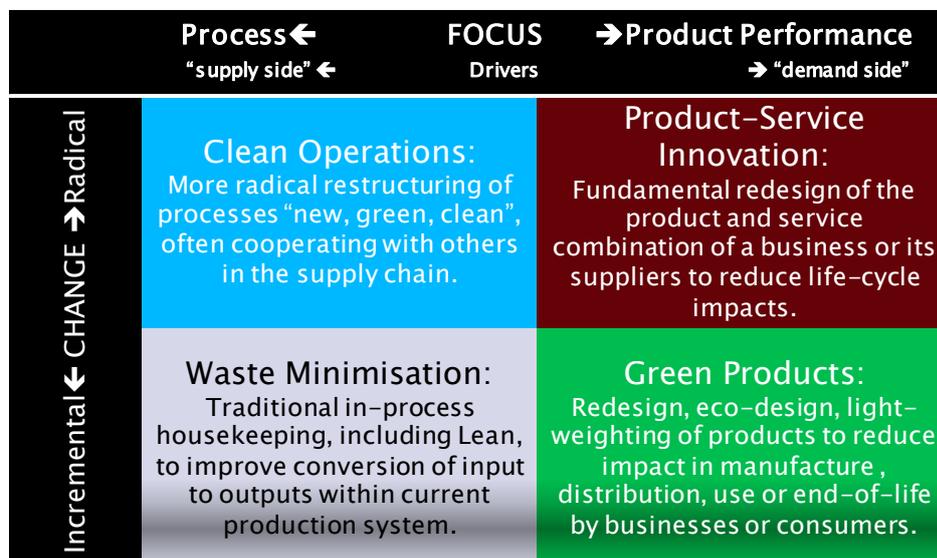
betre	business excellence through resource efficiency	NISP	National Industrial Symbiosis Programme
BRASS	(Centre for) business relationships, accountability, sustainability and society	PR	public relations
BRE	Business Resource Efficiency	SME	small/medium-sized enterprise (EU definition)
MAS	Manufacturing Advisory Service	SW	south west
NGO	non-governmental organisation	WRAP	Waste & Resources Action Programme

Units Conventional SI units and prefixes used throughout: {k, kilo, 1,000} {M, mega, 1,000,000} {G, giga, 10<sup>9</sup>} {kg, kilogramme, unit mass} {t, metric tonne, 1,000 kg}

## Language used in this report

This report has used a framework for evaluating both the actions a business takes to prevent waste (the Approaches), and the mechanisms that have catalysed the actions (the Interventions). The detailed description of Approaches and Interventions may be found within the respective modules **L2m2: Approaches** and **L2m4-0: Interventions Introduction**, but a brief reference outline to the Approaches is given here:

*Positioning of approaches in response to business drivers including waste*



Source: Oakdene Hollins/Brook Lyndhurst

# 1 Communication and How it Addresses Waste Prevention

Waste prevention requires a broad shift in attitudes and behaviours which in turn requires a broad range of interventions. As part of this wider tool box of interventions, communication initiatives:

- encourage initial engagement
- help to reinforce early change
- encourage further change in those already engaged.

Communication initiatives are generally part of wider engagement programmes and linked to projects or programmes through which a level of direct business support is provided (consultancy, site visits, funding and grants etc.) to help companies implement change. The effectiveness of different 'hands-on' business support programmes and initiatives is discussed in module **L2m4-8: Other Business Support**. This paper focuses on the messages and channels used for communication with businesses, whether as part of awareness raising, marketing, information transfer or other activities.

For the purpose of this paper the key objectives of business communication on waste prevention can be summarised as:

- to raise awareness of waste prevention
- to drive uptake of and recruitment to specific support programmes and initiatives
- to support ongoing engagement and long-term behaviour change.

Communication may be delivered by the public sector or its agencies to businesses, or by businesses to its suppliers or customers. The information provided through different communication initiatives can help individuals and enterprises (1) (2) to:

- acknowledge the waste problem
- make the decision to investigate ways to address it
- identify specific actions that could be taken
- encourage others within the organisation to engage, including senior management support
- access relevant information, tools and resources to help implement these measures, including 'hands-on' business support.

## 2 The Nature of the Evidence

Within the time and scope of this research project, limited evidence has been found on communication initiatives targeted exclusively at changing waste prevention behaviour in the business community. There are a number of possible reasons for this.

One reason for the limitation of the evidence is that waste prevention tends to be covered in a basket of environmental or resource efficiency behaviours or, where specifically targeted at waste, covers recycling as well as waste prevention behaviour. For the purpose of this research, these are considered as waste prevention interventions only where the prevention of waste is explicitly mentioned, or can be recognised, as an objective or ‘call to action’ for business.

Furthermore, available evidence lacks robustness because there appear to be few stand-alone campaigns for which evaluation data have been made publicly available.<sup>a</sup> Most business communication on waste prevention is delivered as part of a wider package of business support, and disaggregating impacts of a specific or single communication intervention from the effectiveness of the support overall is difficult, or not possible.

The key types of source used within this research to assess the impacts of business communication on waste prevention behaviour and their limitations are given in Table 1.

*Table 1: Advantages and limitations of different evidence sources*

Source	Advantage	Limitations
<b>Synopsis of campaign evaluation</b>	Information on marketing approach, communication channels, reach and value for money	Only one available source Covers resource efficiency, so difficult to disaggregate waste prevention from other issues
<b>Evaluation reports</b>	Comprehensive information on the success and failure of business support programmes, including communication activities	Difficult to assess impacts on waste prevention behaviour, where communication focuses purely on recruitment to specific initiatives
<b>Academic papers</b>	Comprehensive information on the success and failure of business support programmes, including communication activities	Difficult to assess impacts on waste prevention behaviour, where communication focuses purely on recruitment to specific initiatives
<b>Case studies</b>	Specific examples of successful initiatives from the business community and international arena	Very specific, difficult to generalise Data missing and little information on the barriers and opportunities

Given the limitations of the available evidence, and in order to draw out key messages relevant to the effectiveness of communication initiatives, this chapter draws on the wider literature relevant to communication with businesses, in selected SMEs, on environmental issues. In particular, this includes research conducted during 2010 for Defra by Brook Lyndhurst titled “Improving Communication with SMEs - a review of six sectors” (3). Moreover, a number of surveys have been used to elicit SMEs’ level of awareness, preferences and priorities when it comes to waste prevention communications. The results of these should be used with caution due to potential bias caused by the phrasing of the questions.

The effectiveness of direct business support is covered in more detail in Module **L2m4-8: Other Business Support**. While some initiatives will appear in both papers, this paper focuses on the factors for success and failure which need to be considered when designing communication approaches to encourage businesses (in particular SMEs) to engage in waste prevention and resource efficiency behaviours.

<sup>a</sup> The reviewed evidence includes some internal evaluation documents provided by WRAP and Defra for the purpose of this research project.

## 3 Communication as a Tool for Change

### 3.1 Introduction

In order to present evidence on the impacts and effectiveness of communication initiatives, in an ideal world we would want to have information on:

- who the communication should be targeted at (i.e. the audience)
- what the 'call to action' and specific messages should be
- who the messenger should be
- which channels are most effective at reaching and engaging business
- when and how often messages should be communicated
- its impact on raising awareness, engagement in programmes and initiatives, and changing behaviour
- value for money of different communication initiatives.

However, the evidence that was found within the time and scope of this research project is too weak to allow a robust assessment of the above issues, with specific reference to waste prevention. This section sets out the most useful examples identified from the evidence in terms of the approach taken and their impacts. Section 4 draws on this, as well as the wider literature on communication with businesses on environmental issues and waste prevention, to identify the key barriers and success factors for communication with businesses.

The communication initiatives found as part of this evidence review cannot be easily mapped against specific waste prevention approaches, as set out in this review (see **L2m2: Approaches**). This should not be taken as evidence that communication initiatives do not cover specific waste prevention approaches, but that the evidence does not allow disaggregation of impacts by waste prevention approach. The evidence is consequently discussed under the heading 'mixed approaches'.

### 3.2 Mixed Approaches

Key sources of evidence used for the purpose of this research include:

- a high-level synopsis of an evaluation of Defra's business resource efficiency campaign activity
- evidence on the effectiveness of marketing strategies to recruit companies to four business support projects: betre, Aylesbury Vale Waste Minimisation in Industry, Bedfordshire Waste Minimisation in Industry Project, and Milton Keynes Waste Minimisation Project
- evaluation of information and advice programmes: the national Envirowise Programme and the South West Envision Programme (Envision SW)
- international examples of awareness campaigns
- evidence on business communication initiatives.

The full list of sources can be found in **Appendix L2m5-5-A: Campaign List**.

#### Communications to raise awareness

##### ***Business Resource Efficiency Campaign (2009)***

The government's national Business Resource Efficiency (BRE) campaign (see Box 1) was launched during 2009 with the objective to "raise awareness of 'top ten tips' of how SMEs can improve their resource efficiency and save money in doing so" (4). The campaign ran in two phases, with Defra as the lead Department. The first phase was part of the wider cross-government *Real Help* campaign, while the

second phase ran as part of Defra's *Act On CO<sub>2</sub>* activity. The campaign focused wider than just waste prevention to include energy and water issues, with each tip signposting to further information through the Business Link web page.

The first phase targeted all micro-SMEs (fewer than 10 employees). Traffic was driven to the campaign website (hosted on Business Link) through a variety of communication channels, including press advertising, radio and online display and search. The Business Link website saw 33,000 unique visitors; however no information on how long visitors spent is given. Advertising in national and trade press represented a circulation of 5 million and 900,000 respectively, while reach through radio advertising was estimated at 5.3 million. These figures have to be taken with caution as they do not tell us the actual number of micro-businesses engaged through the campaign. Online display advertising proved expensive at £14.90 per click<sup>a</sup> (i.e. number of people opening the link against the cost of placing the ad). The key word search cost £0.43 per click.

The second phase focused particularly on micro-SMEs in the retail, manufacturing and hospitality/ catering sectors. The web page was revamped to make it more sector-specific and traffic was driven through PR, trade press, email trial and online advertising. The web site saw 4,680 unique visitors, although there was little interest in the sector-specific pages (the highest proportion was in hospitality). Trade press advertising represented a circulation of 330,000. Eco-design expert Rob Holdway was used as a spokesperson to generate editorial coverage and radio interviews, which was considered particularly successful. The email trial cost £4.73 per email opened<sup>b</sup> (the hospitality sector were least likely to open the email). Overall, different subject lines did not lead to significantly different opening rates. Online advertising was again expensive with a cost of £10.18 per click for display and £2.99 per click search.

Based on a high-level synopsis of campaign activities, key findings of a pre- and post-evaluation of the second phase of the BRE campaign based on interviews with 500 micro-SMEs concluded:

- Resource efficiency is a noisy market place making it difficult to attribute any changes to a specific campaign.
- Awareness of ways of improving resource efficiency is generally quite high.
- The second phase resulted in little change. The campaign is more likely to have reinforced the resource efficiency message amongst businesses and acted as a reminder of good practice.
- A quarter of micro-SME respondents read free Local Authority papers and a quarter of hospitality and catering companies read the Sun. Most frequently visited websites are Facebook, MSN and the Times Online.
- Trade press advertising was more successful than online advertising in terms of spend versus recognition.
- The campaign achieved relatively low post campaign recall (no % figure is provided), although interviewees that recognised the advertising found the tips interesting and easy to understand. However for most part the campaign did not provide any new information.
- The report authors conclude that a more in-depth advertorial approach would be more suitable than straightforward tip-based adverts, unless there is new and additional information.

### **Other campaigns**

The research team is aware of other UK campaigns, such as Envirowise/WRAP's *One Bin Day* and *Rethink Waste* campaigns, as well as other regionally and locally delivered initiatives, which also target specific business waste prevention behaviours. However, no evaluation evidence could be sourced within the time and scope of this research project. WRAP's *Recycle At Work* campaign was not included due to its focus on recycling, which is outside the scope of this review.

<sup>a</sup> 26 million impressions, 12,560 clicks at a click through rate of 0.05%

<sup>b</sup> The opening rate was 10.26%, click through rate 12.36%

### **Box 1: Business resource efficiency (BRE) campaign**

Launched in 2009, BRE was a Defra-led nationwide initiative aimed at effecting long term behaviour change in businesses with fewer than ten employees (micro SMEs). Other Government departments involved were Business, Innovation & Skills and the Department of Energy and Climate Change. The BRE campaign consisted of 'top ten tips' on waste, water and energy efficiency, each signposting to further information on the Business Link web page. The first phase of the intervention was part of an existing cross-Government campaign called 'Real Help' aimed at all businesses. The second phase, an element of Defra's 'Act On CO<sub>2</sub>' activity, focused on the retail, manufacturing & hospitality sectors.

#### **Communications Channels**

- A one-page website [www.businesslink.gov.uk/savingmoney](http://www.businesslink.gov.uk/savingmoney) integrated with the 'Real Help' campaign – redesigned to be more sector-specific for the second phase.
- A combination of national and trade press advertising.
- A 30-second radio ad played on regional stations for a 2-week period.
- Various PR activity using a spokesperson to generate editorial coverage and radio interviews.
- A short email sent to about 40,000 SMEs with snippets of case studies and a link to the campaign page.
- Online – display and search advertising.

#### **Outcomes**

- Resource efficiency “is a noisy market place” so the direct impact of the BRE campaign was hard to quantify. It seems that the second phase resulted in little behaviour change although it may have bolstered the resource efficiency message amongst businesses, reminding them of good practice.

#### **Key Elements for Success**

- The involvement of 'eco-design expert' Rob Holdway as a spokesperson to generate editorial coverage and radio interviews was a successful element of the BRE campaign.
- Targeting trade press was more successful than online advertising in terms of spend versus recognition. A more in-depth advertorial approach might have been more suitable than straight-forward tip-based adverts.

*\*NB. 'BRE' in this context should not be confused with Buildings Research Establishment – formerly a government agency but now an independent organisation rebranded as 'BRE'.*

### **Communications to drive recruitment to programmes**

In addition to raising awareness of waste prevention opportunities, campaigns are used to elicit interest from and recruit companies to participate in specific business support initiatives. The following sources of evidence were reviewed as part of this research:

#### **Aylesbury Vale Waste Minimisation in Industry Project**

The Aylesbury Vale Waste Minimisation in Industry Project, which was funded through the landfill tax credit scheme and delivered by consultancy Oakdene Hollins (5), targeted 70 companies, primarily SMEs, in the manufacturing sector. Existing marketing channels through Business Link and the local authorities were used to distribute leaflets which were then followed up by phone calls and further supported by radio interviews and articles in the local press. 24 companies showed initial interest and 4 companies received in-depth support. Key findings related to communication were:

- Phone calls were found to be most successful in selling the project to prospective participants “since the concerns and questions of each company could be discussed”.

- There was considerable confusion over the meaning of waste minimisation as opposed to waste management (associated with landfill diversion). This meant that manufacturing companies misunderstood the terminology as focusing on the modest costs of waste disposal.
- The absence of an existing green business network increased the time needed to market the project.
- Generally, companies most in need of waste reduction advice are less likely to take up assistance. This is explained by poor manufacturing systems being closely linked to weak and defensive management.

#### ***Milton Keynes Waste Minimisation Project***

A follow up to the Aylesbury project, the Milton Keynes Waste Reduction in Industry Project (6), again delivered by Oakdene Hollins, targeted 141 manufacturers, primarily SMEs, in the local area. A leaflet and cover letter was sent out to the target businesses, which was then followed up by a telephone call. Of 13 companies voicing interest, 8 agreed to participate in on-site projects. Key findings in relation to communication are:

- The marketing costs to start a project should not be underestimated.
- Targeting the right person in the company can prove difficult.
- 'Word of mouth' referrals created by previous projects significantly reduced the time spent on marketing.
- The decision whether to participate was driven by senior management, which highlights the need for industry-specific information in order to be convincing.

#### ***Bedfordshire Waste Minimisation in Industry Project***

A further follow up to Aylesbury and Milton Keynes was the Bedfordshire Waste Minimisation in Industry Project (7), again delivered by Oakdene Hollins. 101 manufacturing companies from a variety of sectors were contacted with the aim to visit 18 companies and carry out individual waste minimisation projects with at least 5 of these. In fact, 38 companies received initial appraisal visits after expressing interest, and 11 received on site support. Key findings in relation to communication are:

- The existence of successful environmental business support networks significantly increased interest as companies were already well informed.
- Focusing on the terminology 'resource utilisation' rather than waste minimisation and using industry experts can increase engagement.
- 'Word of mouth' recommendations from participants in previous projects had grown in importance.
- Companies that least needed assistance showed the greatest interest. This is explained by the fact that these companies seem to be managed in a way that actively seek out even small improvements and welcome external advice.
- Companies that initially turned down the opportunity to participate should be contacted again in six months as business priorities may have changed.

#### ***Business excellence through resource efficiency (betre) programme***

The business excellence through resource efficiency (betre) programme (8) aimed to raise awareness of waste minimisation amongst SMEs in West Sussex and achieve environment improvements for at least 40 businesses. The programme was run by West Sussex Sustainable Business partnership, a collaborative venture between West Sussex Local Authorities, the Environment Agency and consultancy Ecofys. It was funded primarily via the Landfill Tax Credit Scheme. An extensive marketing programme was initiated covering presentations at business events, presentations and follow up mailings, direct mailing and follow up calls, personal contacts/referrals and press releases. Once companies had signed up to the programme, SMEs had access to a range of free support, including workshops, newsletters, audits grants and a technical helpline. The key findings of relevance to communication are:

- betre was considered successful in attracting members, with 308 companies joining the project – over four times more than initially planned.
- Consistent and ongoing marketing was important to increase recruitment; however it was also very resource intensive.
- Mailings plus follow up calls, and presentations at events plus follow-up mailing, were found to be the most successful recruitment methods.
- Companies that were already ‘warm’, i.e. aware of the project and interested, were more likely to engage.
- Engagement through business organisations, especially sector specific, was a good route for both recruitment and converting initial company interest into action.

### **Communication programmes**

The following reports also provided evidence on the impacts and effectiveness of the provision of information and advice to SMEs through a programme of information and engagement.

#### ***Envision SW***

The Envision SW project was a £3.9 million project funded through European funding, the South West Regional Development Agency and Devon County Council. The project was designed to provide SMEs in the South West with information and support on resource efficiency (see Box 2). There were two types of services provided. 2,206 businesses received information, guidance and up to two hours of free advice, while 766 companies were offered intensive support (3-10 days of on-site consultancy support). Key findings relevant to communication were:

- The success of the marketing element of Envision was mixed, working well at the local level to engage businesses through the use of mentors, but regionally the lack of a strategy in relation to marketing limited its overall effectiveness.
- The use of case studies was perceived to be beneficial and useful, although some concerns were raised that they were not used as effectively as they could have been in demonstrating the case to businesses.
- An online survey of 164 businesses<sup>a</sup> that had received information, guidance and advice found that 82% considered it useful or very useful and 76% were prompted to take action in response. 82% took actions on landfill diversion, 52% took action on raw material usage. Of those that did not act, 20% felt that the advice was not useful. 53% stated they already did everything they can.
- An online and telephone survey of 55 intensively supported businesses<sup>b</sup> found that 78% of businesses that had received intensive support agreed that Envision had helped them. 63% took action on landfill diversion, while 27% took actions to reduce raw material usage. Those companies that did not find the support useful stated poor or inaccurate advice, lack of specific advice and insufficient information as reasons for their dissatisfaction.

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<sup>a</sup> The survey achieved a response rate of 164 from a valid sample of 2358 businesses, giving a 95% confidence level of 7.4%

<sup>b</sup> The survey achieved a response rate of 55 from a total sample of 580, giving a 95% confidence level of plus or minus 12.6%

### **Box 2: Envision**

The Envision project, a £3.82m project financed by European Union structural funds, the South West Regional Development Agency and Devon County Council ran between 2005 and 2009. The aim was to improve resource efficiency, increase productivity and competitiveness and reduce CO<sub>2</sub> emissions from small and medium-sized enterprises in South West England. Information, guidance and up to two hours of free advice was offered to 2,206 businesses, of which 766 received more intensive support. The latter consisted of 3 to 10 days of on-site consultancy support.

#### **Business Benefits**

- Estimates range from £18m to £24m for the total savings to date through resource efficiencies (water, energy and waste) achieved by businesses as part of Envision. Ultimately, businesses are expected to benefit by between £65m and £105m.
- 78% of businesses receiving intensive support agreed that Envision helped them achieve savings, new market opportunities or staff cultural change. The most popular actions taken were reducing energy use and reducing the volume of waste going to landfill.

#### **Drivers**

- SMEs with a strong customer focus such as hotels and restaurants especially welcomed advice on how to implement environmental management systems as these were thought to attract customers and reduce the costs of resources.
- Envision focused on energy, greenhouse gas reduction and landfill diversion; waste prevention did not seem to be important to the organisers.

#### **Key Elements for Success**

- The use of mentors to engage businesses worked well at local level, but a lack of a region-wide marketing strategy limited Envision's overall effectiveness.
- The use of case studies was beneficial although critics were concerned that they might have been used more effectively to demonstrate the business case for resource efficiency.
- Businesses made a financial contribution towards the support which may have meant they were more likely to value the intervention.

### **Envirowise Programme**

The biggest national information programme in the UK is Envirowise, now sponsored and delivered through the Waste & Resources Action Programme (WRAP). Despite its size, reported awareness of the programme has been limited. According to a survey of 751 SMEs from a number of sectors, conducted by Ipsos MORI for Envirowise in 2006, only 4% of respondents from ten sectors said they would turn to Envirowise for information on waste prevention (see Section 4 for further discussion on preferred channels of engagement).

A 2007 impact assessment of the Programme reported in Databuild Research Solutions (9) established savings of £1.4bn achieved by users. This figure primarily picks up on savings attributed to the help provided for implementing specific actions (rather than communications alone). A follow up review in 2009 (by Databuild Research Solutions for Envirowise) identified a further £1.2bn of savings that had been achieved through the provision of help with wider areas, such as helping companies to generate ideas, motivate users to act, increasing users' confidence that they are doing the right thing, and help gaining senior management support and commitment.

Overall, 94% of Envirowise users (sample size not given) said that they use the programme in at least one of the wider areas mentioned above. 88% said they use Envirowise to get ideas on action they could take, 88% use it to gain confidence that they are doing the right thing, while only 57% use Envirowise to win support from others in their organisation. 99% of users that attributed their savings to help provided by Envirowise felt that it had helped in at least one of these ways (9 pp. 2-3).

Of those organisations that did not find Envirowise helpful 33% said they felt the programme was not telling them anything new (27% manufacturing, 65% retail, 29% commercial and 39% construction). 37% of businesses felt that the information was too general (36% in manufacturing and 48% in construction). When respondents that did not find Envirowise useful were asked how beneficial they would find four different types of support (online diagnostic tools, events or workshops, face to face from a consultant with general knowledge, face to face support from a sector specialist), respondents stated that they preferred face-to-face contact over workshops and online diagnostic tools (9 p. 6).

Key recommendations for improving communication with users included:

- Communicate that reducing waste is more than complying with regulations and recycling and clearly linked with business performance.
- Provide networks – online or at events – to keep organisations engaged and promote information sharing.
- Better navigation and signposting of material.
- Tailoring support to how advanced companies are in waste prevention – i.e. general advice for those in the early stages and more in-depth advice for those in later stages.
- Targeting senior managers with cost information and strategic advice, while targeting operational or environment managers with technical information.

### **International examples**

International examples of awareness raising campaigns include the *No Disposables* campaign in South Korea which led to the introduction of new legislation and a levy on disposable cups used in restaurants; the *Sustainable Concordia* initiative targeting campus waste in Canada; and *Menu Dose Certa* a Portuguese regionally focused campaign to raise awareness of food waste in restaurants. While impact data for these initiatives is limited, or not available, an interesting point to note here is that these initiatives were not centrally delivered but initiated by the private sector in the case of *Menu Dose Certa*, and *Sustainable Concordia*, and NGOs in the case of *No Disposables*. Further research would be required to ascertain the impacts and success factors for these initiatives, why organisations were motivated to lead them, and how they were funded (see **Appendix L2m5-5-A: Campaign List**).

### **Business to business communication**

Some limited evidence on communication between businesses was found:

Waste information can be considered as sensitive by organisations and lack of trust can lead to limited information sharing (10) (11). However, a number of case studies from the food and drink sector (reviewed in Mena and Whitehead 2008) (10) showed that some retailers are open to sharing information with their suppliers and in some cases they have employees from the suppliers working on site, so that they can be in close communication. According to the authors, this has proved to be effective in reducing forecasting error and hence waste, however, it can also be expensive since it demands considerable resources from both suppliers and retailers (10 p. 88).

According to a brief case study, Sainsbury's encourages over 1,100 suppliers to complete self-assessment questionnaires regarding their environmental and waste initiatives and provides guidance to help drive initiatives within a supplier's company (12 p. 15). It is not clear from the evidence what drove Sainsbury's to do this, or what waste impacts this has led to.

The benefit of improved communication between companies within the construction sector was mentioned in research commissioned by Envirowise and carried out by Oakdene Hollins Ltd and Taylor Woodrow Technology in 2006. It was found that communication between different parts of the supply chain was insular, and that communication of (for example) good practice, opportunities for designing

out waste, methods for delivery on site etc, would be more effective in shifting the whole industry from a common low baseline, compared to the development of new techniques and technologies. According to the authors, key to this is the development of a continual improvement mindset driven by the main contractors and involving all supply chain partners. However, the success of such an approach is not evaluated within the report (11).

The power of effective communication between companies can also be illustrated through the following case study. When Kingspan Insulation found that one of its suppliers refused to change its behaviour, as Kingspan had little apparent power in the market, Kingspan solved the problem by “changing its language”. This was done by couching it in terms that the supplier would understand. “The ‘bottom line’ was that if suppliers weren’t willing to change, this could lose Kingspan continuity of business and therefore the suppliers would also lose out” (13).

### **Business to consumer communication**

We found one example of government working with business to communicate with end-consumers:

During the first phase of the Courtauld Commitment (see **L2m4-4 Commitments & Voluntary Agreements**) WRAP worked with signatories (including local authorities, community groups and retailers) to manage an integrated consumer-facing *Love Food Hate Waste* campaign, to help householders reduce their food waste and save money. As part of this national campaign, retailers ran their own large scale campaigns, such as Sainsbury’s *Love Your Leftovers* and Morrisons’ *Great Taste Less Waste*, in addition to activities on better labelling, pack sizes and promotions (e.g. Tesco’s *Buy One Get One Free Later*).

In 2009, the scheme is estimated to have prevented 155,000 tonnes of food waste, with an estimated value of £610 million (14). This was partly achieved through direct consumer engagement and education by WRAP and through support from retailers for the *Love Food Hate Waste* campaign. There was a drop in the amount of waste disposed of during the campaign’s lifetime, although it is not possible to attribute the effect of the retailer element of the campaign versus other activities as no detailed evaluation was conducted. Also, as is the case with most campaigns, there is some question over the agency of such measures (i.e. who is responsible for the savings, the consumer or the retailer / manufacturer) but it is clear that communication activity using businesses as a channel for consumer communication and engagement has a positive impact on waste prevention (14).

## **3.3 Summary of Key Findings**

Table 2 provides a summary of the key findings related to the main initiatives reviewed for this project. These are discussed in more detail in Section 4 in terms of their influence on the success or failure of communication initiatives.

*Table 2: Summary of key findings*

The evidence on the impacts of different waste prevention communication activities is very weak.

The decision whether to participate in waste prevention projects is likely to be driven by senior management.

Companies in least need of assistance may often be the first to respond to waste prevention messages- it appears that those with 'open' mindsets rather than 'defensive' management are more receptive to waste prevention communications.

Business's receptiveness to different waste prevention messages can change in line with changing business priorities- this indicates the need for on-going communication activity.

The language and terminology used in waste prevention communication affects how businesses interpret the call to action, with 'waste prevention' associated with modest 'end-of-pipe' rather than efficiency savings.

Businesses may respond better to communication that is directly targeted (face to face, telephone etc) and specific to their industry (e.g. use of case studies)

Using existing business environment/'green' networks and 'word of mouth' significantly enhances the effectiveness of communications activities aimed at driving recruitment to programmes.

Using businesses as a channel to communicate with other businesses or end-consumers may be an effective way to increase engagement in waste prevention.

## 4 Behavioural Aspects

Drawing on the evidence above, as well as the wider literature on communication with businesses on environmental issues, the following section sets out the barriers to the effectiveness of, and the success factors for, effective waste prevention communications.

The barriers and motivations for businesses to engage in waste prevention are discussed in more detail in module **L2m3: Attitudes & Behaviours**, which should be read in conjunction.

It is important that waste prevention communication reflects the interests and priorities of businesses in terms of what is communicated (i.e. the messages), how it is communicated (i.e. the channels) as well as who communicates the messages (i.e. the messenger). Who the communication is specifically targeted at is also crucial (i.e. understanding the audience).

### 4.1 *Barriers to Effective Communication*

For communication to be effective it first needs to ‘hook’ a business (get them interested), and then ‘convert’ them (encourage some form of behaviour change).

Effective waste prevention communication relies on a positive cognitive resonance with targeted businesses. The primary problem for this is that companies may not recognise waste prevention messages as relevant to their business or are not actively seeking such information, or even if they have the information, they may not know what to do with the information. This could be influenced by a number of factors, including:

- waste is considered a low priority
- they think they already do everything that they can
- scepticism that waste prevention can lead to cost savings
- information search and screening habits
- the level of information is not right
- lack of a ‘change manager’.

#### **Waste is a low priority**

Evidence on business attitudes towards waste is inconsistent, with some reports suggesting that waste is a low priority for businesses (11), while others suggest that businesses consider waste issues to be important, whether as an issue in itself or for financial reasons (15) (16) (17) (18). However, it is rarely at the top of the agenda for most businesses. A 2006 survey of 751 SMEs conducted by Ipsos MORI for Envirowise found that 72% of respondents considered waste minimisation as an important issue for their company, but only 11% knew a “great deal” about it. Those that knew little about waste minimisation also attributed less importance to the issues. The level of awareness and perception of importance became lower the fewer employees the SME had (18).

#### **They think they already do everything that they can**

Another reason for businesses not considering waste prevention as important is linked to the language and terminology of waste prevention. As discussed in the previous section, waste prevention may be misunderstood as relating to ‘landfill diversion’ or ‘recycling’ by businesses and hence focus their minds on the end-of-pipe phase of waste management, rather than opportunities to reduce costs. This was supported by Databuild Research Solutions (9) who found that those companies that claimed that they

were doing everything that they can to minimise their environmental impact through waste minimisation, usually backed up this claim by stating that they are already recycling all that they can or already fully complied with regulations.

According to Isusi businesses can find it difficult to think about waste from the perspective of wasting valuable raw materials, because accounting systems tend not to recognise that the cost of waste disposal represents only a fraction of the total loss of value to the business (19).

### **Scepticism about cost saving opportunities**

Linked to the previous point, despite some waste prevention communication highlighting cost saving opportunities, a general lack of understanding within SMEs of the “true cost of waste” may lead to a lower level of response from businesses. Some companies may doubt that there were savings to be had from waste prevention over and above some modest reduction in waste disposal costs (8) (20). For example, 39% of SMEs (sample size 751) questioned by Ipsos MORI for Envirowise in 2005 thought that waste minimisation initiatives were of little benefit to their organisation (51% said it was) and 48% felt that dealing with environmental matters was a significant cost to their firm (39% didn't).

### **Information search and screening habits**

In research for Defra, Brook Lyndhurst (3) found that, given their time and resource constraints, SMEs may be less likely to pro-actively search for environmental information, highlighting the need for effective dissemination of information. According to this research there are four scenarios in which environmental information may reach SMEs:

- it may be directly sought by SMEs (e.g. information on regulatory duties)
- it may be sent to SMEs on an unsolicited basis (e.g. through a mass mail out)
- it may be included in information that the SME was looking for (e.g. on how to reduce business costs)
- it may be included in other information the SME is receiving (e.g. trade press).

Moreover, SMEs can be faced by a general information overload. Brook Lyndhurst (3) found that some SME managers had developed their own screening mechanism to determine whether something was worth reading in detail or if it should be discarded. The basis on which these decisions are made will differ between individuals based on their own attitudes, motivations and barriers when it comes to waste prevention (e.g. a person with a negative attitude towards the environment may ‘switch off’ when the communication appears to be framed in ‘environmental’ terms). Similarly, information coming from unknown or un-trusted sources is also more likely to be ignored.

Lack of clarity and inconsistency in messages coming from different sources was mentioned as a major barrier for SMEs engaging in environmental behaviour (21).

### **The level of information is not right**

A survey of 357 businesses in Wales by Cardiff University's BRASS Centre found that 67% of respondents reported “flaws” in the advice they were given through environmental business support organisation. This included advice being “unclear” or “too general” (22). The quality of advice and information was also a key criticism of those businesses that did not find the Envision SW project useful (23). As presented in Section 3, recent evaluations of Defra's BRE campaign (4) and Envirowise Programme (9) also found that a number of organisations felt that the information provided was not telling them anything new or was too general. According to Brook Lyndhurst information that suggests too great a change may be alienating, especially to SMEs, while something that was too basic may be considered patronising (3).

Similarly, the communication may not reflect the particular needs of the person searching for or receiving the information. Information that is too technical may not be suitable to senior managers, while information that is too strategic may not speak to operational managers (9).

### **Lack of a 'change manager'**

Related to the previous point, Stone (24) found that programmes often assume that the information is picked up by a 'change manager' - a person within the organisation who is willing, skilled and able to turn advice into action involving a number of different people. The issue of employees feeling a "lack of agency" when it comes to driving change within organisations was also found by Reason (25) in relation to adoption of cleaner technologies. Stone (24) found that while the importance of ongoing improvement was stressed in cleaner production guides, the advice on how to achieve internal change was commonly left until last. Stone concludes that the advice provided in these guides was too mechanistic, and failed to place sufficient emphasis on the activities and needs of the organisation, its structure, human relations, external environment, as well as politics and culture.

This was supported by Databuild (9) who found that Envirowise's target audience of environmental managers may not have the power to implement waste prevention measures. The reason for this may be two-fold. First the environmental manager's remit may be constrained to dealing with waste once it has been produced and may feel unable to convince others (e.g. engineers, designers etc) to act. Second, environmental managers may fail to get senior management on board by failing to communicate cost saving opportunities effectively. The authors conclude that different information should therefore be targeted at different people within the same organisation in a joined-up way.

## **4.2 Success Factors**

No comprehensive evaluation of the success factors for businesses waste prevention communications has been found within the scope and timing of this review. However, the evidence reviewed here as well in module **L2m3: Attitudes & Behaviours** for waste prevention, suggests the following factors should be considered when communicating with businesses on waste prevention in relation to raising awareness, facilitating engagement, or changing behaviour:

- the language and concepts used in messages
- the content of messages
- targeting the right person in the organisation
- using effective channels of engagement
- trusted sources of information
- the importance of follow-up.

### **The language and concepts used in messages**

The evidence presented above is not conclusive, but suggests that different types of businesses are likely to respond more effectively to different types of messages based on the current level of awareness and involvement in waste prevention, as well as the motivations and barriers for further action on waste prevention. The evidence does not tell us which terminology on waste prevention would work best for businesses.

However, what comes through the evidence quite clearly is that the terminology of waste prevention may lead to some companies interpreting this as focusing at the 'end-of-pipe' where it may be too late for action on waste prevention.

Some authors therefore suggest terms such as ‘resource efficiency’ or ‘material efficiency’ as being more familiar and therefore more appealing to businesses than ‘waste prevention’ (7) (26).

In the Aylesbury Vale project it was found that ‘waste minimisation’ was not a helpful term when speaking to manufacturing companies, whereas ‘resource efficiency’ was a more familiar concept. However, given its wide scope to include other resources, from energy and water to staff, the exact meaning of the term may need to be further clarified to ensure that desired waste prevention behaviour is understood. Respondents to a survey of 2,001 businesses in the North West found that only 26% of businesses were familiar with term ‘resource efficiency’, but after being read a definition, 82% stated that it was “very important” or “of some importance” (27). Similarly, one author from Australia also found that cleaner production concepts needed to be clarified and simplified in order to successfully engage businesses (28).

A recent review of waste policy in Finland found that businesses find it easier to visualise actions that improve material efficiency than actions that prevent waste, because the term ‘material efficiency’ directs attention to the decision-making phases – whereas the term ‘waste prevention’ directs attention to the waste phase, where it is too late to take action. However, the authors note that ‘material efficiency’ would need to be complemented by a separate concept to address the hazardousness of waste (26).

Using a qualitative research method, Brook Lyndhurst tested a group of SMEs’ responses to a number of ‘green’ terms through an e-survey of 82 businesses and workshops with 124 businesses (3). ‘Waste management’ and ‘waste prevention’ were considered meaningful terms by participants; however no further probing of how SMEs define these terms was undertaken as part of this research project. Overall, the exercise found that terms which are associated with cost-efficiencies, and improving the running of a business, had greater resonance with SMEs than those that were seen as purely ‘environmental’.

Bleischwitz et al. (29) argue that for resource efficiency to become attractive to all businesses, the principle should be linked to established concepts and recognised values in business, such as efficiency, creativeness or innovation. Similarly, Van Berkel (28) describes cleaner production as “a business improvement opportunity to [...] enhance efficiency, productivity and profitability” (28). Comparing it to now established concepts like Lean production, total quality management and process re-engineering, the authors believe that once organisations acknowledge the financial benefits of resource efficiency, the concept should become just as mainstream (29).

### **The content of messages**

Brook Lyndhurst notes that effective communications are based on messages that chime with companies’ motivations for waste prevention behaviour, which provide the ‘hook’ for messaging (3).

Cost savings and opportunities to increase competitiveness are key influencers of business behaviour. The evidence confirms that that messages that put cost savings or ‘win win’ messages at the forefront of communication material increase the success in engaging businesses (30) (31 p. 23) (32). Bleischwitz et al. (29) suggest that in order for the concept of resource efficiency to become mainstream “implementation should promise enormous improvements even when they present a challenge”. On the contrary, Brook Lyndhurst’s research with SMEs in 2010 found that messages needed to be realistic and not overstate potential gains to avoid alienating SMEs. It may not be enough to simply promise cost savings or increased profits if companies are sceptical about the efforts required to implement the change or achievable rates of return, with SMEs in particular looking for short pay-back periods (9).

Information and guidance targeted at SMEs needs to be delivered in a manner that allows the company to easily apply it to their business (21). If messages do not ring true, or relate to another type of business, it less likely to generate a positive response, and may even cause frustration. Messages may

not just need to be tailored to the sector- or even specific company - but also to the individual audience within organisations (i.e. senior managers versus operational staff) (9).

Brook Lyndhurst (3) and Databuild Research Solutions (9) stressed the need for messages on the 'why' to be supported by messages on the 'how' action can be embedded within business priorities. In response to the question about what type of support they would like from Envirowise, participants<sup>a</sup> mentioned the following areas of interest: Help get senior managers on board; help raise awareness among other members of staff, a way of sharing and discussing ideas with others, an overall check that they are doing all they can, help to carry out own audits, and information on new opportunities and technologies (9).

The importance of using case studies was mentioned in the Envision and betre examples and also supported by Brook Lyndhurst, Databuild Research Solutions (9) and Bleischwitz et al. (29).

### **Targeting the right people within the organisation**

Similarly, targeting communication at different parts of the same business can increase the effectiveness of communication with businesses. Databuild Research Solutions found that Envirowise's target audience of production managers and environment managers have a fairly narrow remit and so are often unable to influence others to change. The authors suggest that communication with senior management focuses on cost reduction and demonstrates that measures can deliver meaningful savings, while communication with operational staff focuses on the more practical element of what can be done to reduce waste and achieve cost savings (9).

### **Effective channels**

The evidence is not clear as to how many businesses actively search for waste prevention information, or which channels are most effective in engaging businesses in waste prevention.

When presented with a list of possible communication techniques, 74% (sample size 7,000) of SMEs surveyed for a 2009 Netregs report, stated that they used the internet to find environmental information, 22% used trade magazines or journals and 14% used the local press (33). While the Netregs survey suggests preferences for one source over another, respondents were given a choice of sources and the survey did not establish a baseline by which to assess whether businesses pro-actively search for waste prevention information per se or are interested in receiving information in the future. These figures should therefore be treated with caution.

42% of SME respondents to a 2006 Envirowise survey (sample size 751) also chose the internet as their preferred source of waste minimisation information (although only 25% currently used it), 12% preferred trade magazines, and a similar proportion used local authorities. However, 31% of SMEs stated "nowhere / not interested" in response to where they currently look for information on waste minimisation / Envirowise. When asked from where they would prefer to receive information, 16% maintained that they were not interested in any communication (18).

The relatively low click through rates (and consequent high cost per click or email opened) which was achieved during BRE campaign suggests that online and email communication may not be effective channels to achieve behaviour change. However, further research may be needed to support this suggestion.

The evidence suggests that direct marketing tools may be more effective in engaging businesses in specific initiatives. In the betre and Aylesbury Vale projects direct contact through telephone - using industry experts - or direct mailings were found to be most successful in recruiting companies. The

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<sup>a</sup> Over 1100 qualitative interviews were conducted however no details are given as to how often which issue was mentioned

presence of business networks and a legacy of successfully run projects within the same area also proved successful in terms of increasing 'word of mouth' recommendations in the Bedfordshire and Milton Keynes projects (7) (6). The evidence also suggests that the existence of green business networks within a given may positively influence the conversion rate of contacts to participants.

Bleischwitz et al. (29) also argue that industry pioneers should be supported in disseminating best practice to others, while Oakdene Hollins (11) also highlight the potential for business-to-business communication to encourage continual improvement. We found no hard evidence on the effectiveness raising awareness of waste prevention and changing behaviour within the wider business community within the time and scope of this project.

### **Trusted sources of information**

The importance of who delivers the messages was also mentioned. SMEs in particular are believed to be reached more effectively by organisations that are trusted (34). When it comes to who businesses preferred to learn about environmental issues from, SMEs responding to the 2009 NetRegs survey said that the most trusted source of external advice were local authorities, followed by waste management companies and the Environment Agency. Fewer than 5% of respondents had used business support organisations or NetRegs to discuss environmental issues. Overall 66% of respondents were happy with the information they received from government sources, while 33% were not (33).

Respondents to the 2006 Envirowise survey conducted by Ipsos MORI (sample size 751) also found that local authorities (19%), the Environment Agency (14%) and waste management contractors (16%) were the preferred sources of information when it comes to resource efficiency, while only 4% of respondents would turn to Envirowise in the first place to help. 17% state they don't know who they would turn to for advice, suggesting a gap in the market (18). It should be noted that both surveys provided a closed list of organisations, meaning that other organisation that work in the waste prevention market (e.g. NISP, WRAP and MAS) or other sources of business information (e.g. professional services) are not included.

The use of industry experts who can interpret the individual needs of a small firm and communicate this information in a manner that is understandable by the business can increase the effectiveness of communication. Brook Lyndhurst suggest that trade associations and professional advisors, as well as other businesses within supply chains, may be best placed to disseminate environmental communication given those organisations are generally known and trusted by SMEs (3). However, no evidence on the effectiveness of different types of messengers was found within the time and scope of this review.

### **The importance of follow up**

Some authors stressed the need for continued efforts in marketing the concept of waste prevention to businesses. This is in part to increase the chance of a message 'getting through' (3). For example, it was found that re-contacting businesses that had previously turned down the offer of support increased recruitment, as business priorities may have changed.

Similarly, the particular information needs of a business will change in line with their knowledge and experience of waste prevention (12). For example, a company in the early stages of waste prevention behaviour may respond well to simple messages of cost savings and tips on housekeeping, however once these opportunities have been realised the level of interest in more innovative approaches may increase.

Some authors suggested that that wider social norms around waste need to change as well if businesses are to be engaged effectively. Phillips et al. (32) suggest that waste prevention is best encouraged as part of a holistic campaign targeting householders and businesses at the same time. Similarly, Bleischwitz et al. (29) argue that for the concept of resource efficiency to achieve traction it must become the 'subject of public discussions'.

*Table 3: Summary of barriers and success factors for effective communication*

<p><b>Barriers</b></p>	<p>Waste may be considered a low priority by the business.</p> <p>Companies may think they already do everything that they can on waste prevention through recycling and compliance with waste legislation.</p> <p>Companies may be unaware of or sceptical about the cost saving opportunities to be had from waste prevention.</p> <p>Prevailing information search and screening behaviours and habits may mean that waste prevention behaviour does not reach or is discarded as irrelevant by businesses, especially in SMEs.</p> <p>The level of information is not in line with the information needs of the target audience or key decision makers and opinion formers within the target audience.</p> <p>The target audience does not have agency to influence others within the organization required to implement change.</p>
<p><b>Success factors</b></p>	<p>Clarify the concept of waste prevention and frame it in a way that speaks to different business audiences.</p> <p>Use cost messages linked to other business priorities as communication ‘hooks’.</p> <p>Use a multitude of communication channels. Distant, mass communication (online/email communication) may not be enough to change behaviours.</p> <p>Use trusted sources of information, such as industry experts, professional bodies, business networks and supply chain partnerships, to push waste minimisation messages.</p> <p>Make waste prevention communications part of a longer-term engagement programme that supports companies along their waste prevention journey, while also being linked to wider public awareness campaigns.</p>

## 5 Conclusions

### 5.1 Learning

- The literature search revealed highly fragmented and limited evidence of communication initiatives that directly addressed waste prevention behaviour in businesses.
- **There is strong evidence that communication can be used effectively to drive recruitment to business support initiatives** but the evidence is not robust enough to make conclusions on the impact of specific waste prevention communications on awareness raising or long-term behaviour change. There is sparse evidence of any effects on driving voluntary action.
- **'Cost' is an effective 'hook' in communications** but the effectiveness of this approach is heavily influenced by a lack of understanding and scepticism towards cost saving opportunities from waste prevention, especially in SMEs. Waste prevention messages that purely focus on cost messages may not be enough to engage businesses if the audience does not understand how to apply this to their own business.
- **Communications need to be supported by messages on 'how' to implement change** within specific business processes, not only technical information but also advice on 'human' dimensions of change processes. They need to target the specific needs of different types of businesses, as well as senior management and operational staff in a joined-up way. This is likely to be more effective as part of a long-term engagement programme. Waste prevention needs to be clearly framed so as to speak to different business audiences. Information needs to be more than mechanistic
- **Even where waste prevention is a key objective of communications, businesses may not recognise that waste prevention goes beyond recycling or compliance with legislation.** This perception may lead some businesses – especially SMEs – to consider they are already doing everything that they can to minimise waste. The evidence does not tell us how prevalent this barrier is amongst businesses though it is commonly reported.
- **Distant, mass communications (e.g. email, online) alone seem to have limited traction or influence on changing behaviours;** businesses generally appear to respond better to some form of direct (e.g. face-to-face, telephone) contact or support, in particular SMEs. 'Word of mouth' networks appear to enhance the effectiveness of information. Existing business advisors and trade associations can be important sources of information for SMEs.
- **Communications can be costly.** No comprehensive evidence on return on investment and value for money with regards to waste prevention communications has been found within the scope and timing of this project. It is not clear whether this is because it is not widely measured, or because this information is not made public.

### 5.2 Insights

Businesses, and in particular SMEs, exhibit a range of behaviours when it comes to dealing with waste prevention information. Some may never actively be looking for it, while others use a range of sources for information. In this context, it is difficult to predict which channels will be most relevant or how businesses will respond to unsolicited information, which indicates using an overarching multi-channel, multi-media approach to communicating with business about waste prevention. A strategic approach would include not only formal marketing and communications but also supply chain collaboration, peer dissemination and support for 'word of mouth' networks and channels.

Since there will be businesses of different size, capability and competence in all sectors, as well as managers with different motivations, it may not be enough simply to tailor messages to specific sectors. A better differentiation of target audiences is needed to understand which waste prevention (and resource efficiency) messages will work best for which audience, including different segments within the SME sector. Further insight will come from current Defra research on SME segmentation which was not completed at the time of this review<sup>a</sup>.

Clarifying the concept of waste prevention to businesses and framing messages around business performance concepts – such as profitability, efficiency, productivity, and innovation – may help to increase traction. For example, initial qualitative research with a small sample of SMEs for Defra indicated that the terms “waste minimisation” or “reduction” were rated for relevance below terms associated with business performance or regulation (3). It may be useful to build on this research to investigate on a larger scale the issues around language and calls to action in order to establish which terms are most meaningful and relevant for different types and size of businesses.

### 5.3 Research Gaps

- **A better understanding of the motivations and barriers for true waste prevention and their relative weight for different types of businesses is needed to effectively target communication.** Communications initiatives to promote business waste prevention are rarely run in isolation from other engagement or support programmes and it is therefore difficult to isolate the specific impact of these campaigns on business behaviour or which elements of them were effective (e.g. messages, channels etc.). Current evidence relates mainly to awareness of providers or information and rating of the usefulness of different kinds of information.
- **There is currently a lack of published evidence from publicly supported business waste communication initiatives** on the detailed aspects of how communication has worked to address audience motivations and barriers, its impact on behaviours or take-up of measures, or return on investment.
- A few international examples of communication initiatives have been identified; however the **case studies lacked detailed information on how these initiatives were set up and what made them successful or not.** This may be an area of further research in the future, although different cultures, values and norms within different countries may mean that direct application to the UK context may be limited.
- **More needs to be known about specific communications aspects,** such as audience reach and penetration, how messages were received, meaningful language and terms, and appropriate messengers and channels.
- The existing evidence is skewed towards communications provided through public programmes directly to businesses (e.g. Envirowise). We are not aware of guidance documents targeting other stakeholders or intermediaries beyond business support organisations that want to, or could, communicate with businesses on waste prevention (e.g. local authorities, professional services etc).

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<sup>a</sup> Defra has a well-established environmental segmentation model for individuals and has conducted initial research to investigate segmentation of SME businesses. The latter was not published at the time of this review.

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## Appendix L2m5-5-A: Campaign List

Initiative	Supported?	Target	Description (objective, messages, channels etc)	Outcomes (reach, engagement, behaviour change, waste and cost savings)	Ref ID
<b>Business Resource Efficiency campaign (UK)</b>	Y	micro-SMEs, particularly retail, manufacturing & hospitality/ catering	Publicly funded national campaign run in two phases and using a range of communication channels (website, advertising (print, radio and online), PR, email). The objective was to raise awareness of “top ten tips of resource efficiency” and sign-posting to further information	The campaign was considered successful in reinforcing the resource efficiency message and act as a reminder of good practice.	(4)
<b>‘Corby Waste Not’ Campaign (UK)</b>	Y	Householders, schools & SMEs	A local campaign which aimed to target waste prevention behaviour by householders, schools and industry in a holistic way. Focus was on providing information to change motivations and attitudes and increase normative pressure for waste prevention behaviour.	Increase of MSW recycling by 50%, although this cannot be directly attributed to campaign alone.  12,000t of solid waste	(32)
<b>Betre (UK)</b>	Y	SMEs	The business excellence through resource efficiency (betre) programme targeted 70 West Sussex through presentations at business events, direct mailing, follow up calls, personal contacts/referrals and press releases.	308 companies joined the project, 65 participated in resource efficiency projects.  £215k; solid waste reductions of 1,437t	(8)
<b>Aylesbury Vale (UK)</b>	Y	Manufacturing	The Aylesbury Vale Waste Reduction in Industry Project targeted 70 local manufacturing companies, primarily SMEs for intensive business support	24 companies showed initial interest, 4 participated  £127k/y resource savings	(5)
<b>Bedfordshire (UK)</b>	Y	Manufacturing	The Bedfordshire Waste Reduction in Industry Project’s marketing activities targeted 101 companies to raise awareness of the project and recruit 18 members for intensive support	38 companies showed interest, 11 agreed to participate  £339.7k/y resource savings	(7)
<b>Milton Keynes (UK)</b>	Y	Manufacturing	The Milton Keynes Waste Reduction in Industry Project targeted 141 local manufacturing companies, primarily SMEs for intensive business support	13 companies showed initial interest, 8 agreed to participate  £197k/y resource savings; 185t of waste, including 7t of hazardous waste.	(6)
<b>Envision (UK)</b>	Y	SMEs	The Programme provides businesses with advice and support on efficiency savings, culture change and new business opportunities in the South West of England between 2005 and 2009.	The project saved businesses £18m-£24m through resource efficiency (water, energy and waste).	(23)

<b>Enviowise (UK)</b>	Y	All businesses	A free, government-funded programme which gives confidential advice to businesses on waste prevention and resource efficiency through its website, publications, on-line toolkits, telephone helpline and events.	£1,394m of savings achieved by users in 2007.	(9)
<b>'No disposables' campaign (South Korea)</b>	NO	Fast Food Restaurants	Following successful campaign targeting plastic bags in grocery stores, reusable cups in the workplace, this national campaigns run by a group of NGOs in 1997, aimed to encourage fast food restaurants to not use non-disposable tableware.	Introduction of legislation to restrict use of disposables and a small levy on disposable cups.  Waste impact not specified.	<sup>a</sup>
<b>'Menu Dose Certa' (Porto, Portugal)</b>	-	Consumers and restaurants	A 2008 regionally-based consumer campaign initiated by a waste management company (LIPOR) in partnership with local councils, the association of nutritionist and local restaurants to raise awareness of food waste and reduce the amount of waste in restaurants	Not specified	<sup>b</sup>
<b>'Sustainable Concordia' Campaign (Canada)</b>	NO	Students	As part of a wider set of initiatives campaigns to reduce campus paper consumption and the use of disposable drinking cups was set up in 2002.	All measures together saved the campus \$72k and reduced per capita waste generation by nearly 7% between 2005 and 2006. Campaign specific impact data not specified.	<sup>c</sup>
<b>Waste Prevention World (USA)</b>	Y	Households, businesses and local authorities	The Waste Prevention World Website provides detailed informational resources, including information exchange, guidelines for developing and implementing waste reduction plans at work, promotional material for businesses (e.g. posters for waste prevention in offices).	All measures together diverted 52% of waste (2005 figure)	<sup>d</sup>
<b>Waste Prevention Kit (Finland)</b>	Y	Businesses (offices, groceries)	Helsinki Metropolitan Council offers a number of informational resources and tools to help businesses reduce their waste including: 'Smart Ways of Action', a website which communicates best practice ; and Waste Prevention Kit 'Petra', a free online waste benchmarking service.	~ 500 enterprises used Petra. 3% reduction in waste 2003-06. Offices by 70kg and grocery stores by 180kg per employee.	<sup>e</sup>

<sup>a</sup> [http://ec.europa.eu/environment/waste/prevention/pdf/No%20Disposables%20Korea\\_Factsheet.pdf](http://ec.europa.eu/environment/waste/prevention/pdf/No%20Disposables%20Korea_Factsheet.pdf)

<sup>b</sup> [http://ec.europa.eu/environment/waste/prevention/pdf/MenuDoseCerta\\_Factsheet.pdf](http://ec.europa.eu/environment/waste/prevention/pdf/MenuDoseCerta_Factsheet.pdf)

<sup>c</sup> [http://ec.europa.eu/environment/waste/prevention/pdf/Sustainable%20Concordia\\_Factsheet.pdf](http://ec.europa.eu/environment/waste/prevention/pdf/Sustainable%20Concordia_Factsheet.pdf)

<sup>d</sup> [http://ec.europa.eu/environment/waste/prevention/pdf/California%20Waste%20Prevention%20World\\_Factsheet.pdf](http://ec.europa.eu/environment/waste/prevention/pdf/California%20Waste%20Prevention%20World_Factsheet.pdf)

<sup>e</sup> [http://ec.europa.eu/environment/waste/prevention/pdf/Helsinki\\_Factsheet.pdf](http://ec.europa.eu/environment/waste/prevention/pdf/Helsinki_Factsheet.pdf)

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