



The Scottish  
Government

# The Impact of Workplace Initiatives on Low Carbon Behaviours – Case Study Report

Environment



**THE IMPACT OF WORKPLACE INITIATIVES ON LOW  
CARBON BEHAVIOURS –  
CASE STUDY REPORT**

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# 1 ABERDEENSHIRE COUNCIL

This case study examines a programme of flexible working options introduced at Aberdeenshire Council. The programme was aimed at reducing staff commuting mileage through allowing staff to change their working patterns and achieving financial savings through a reduction in the number of council offices. The study considers how financial pressures in an organisation can provide a good opportunity to reflect on work organisation and deliver cash savings alongside environmental sustainability.

## Background

- 1.1 Aberdeenshire is a predominately rural area in the north east of Scotland and it is one of the 32 unitary council areas in Scotland. The Aberdeenshire Council area does not include the City of Aberdeen, which is governed by its own City Council, although the headquarters for Aberdeenshire Council is based in Aberdeen. The area borders Angus and Perth and Kinross to the south and Highland and Moray to the west.
- 1.2 Aberdeenshire Council was established in April 1996, replacing three District Councils (Banff and Buchan; Gordon; Kincardine and Deeside) and Grampian Regional Council. The Council's Revenue Budget for 2010/11 totalled £550 million and the council employs 14,500 staff, of which a significant proportion commutes into the area from its bordering regions.

## Low carbon initiatives

- 1.3 Low carbon behaviour is a clear corporate objective for the council and it has adopted a number of activities in order to reduce carbon consumption across its estate. The main focus of this case study, which is the initiative currently having the biggest impact across the council, is the *Worksmart* programme. This is the council's new flexible working programme, which has succeeded in reducing business and commuter mileage. Alongside this initiative, the council is also committed to a programme of office rationalisation, which is being made possible by the savings achieved through the Worksmart programme. This strategy has been termed workSPACE (Smart Provision of Accommodation and the Customer Experience) and will commence in January 2012.

## *Worksmart*

- 1.4 Aberdeenshire covers 2,500 square miles and the council's staff commute from across the region to their places of work. In 2010, some 10 million commuting miles were made by staff. The Worksmart initiative is about supporting staff to work differently and think about the journeys they are making.

### *What is Worksmart?*

- 1.5 Worksmart is a new programme of flexible working options. The scheme aims to improve sustainability by reducing the impact on the environment through reducing travel to work mileage and reducing premises costs for lighting and heating through allowing staff to change their working patterns; mainly through home working or working from council offices closer to home.

### *How does it work?*

- 1.6 The Worksmart programme offers staff four main working pattern 'profiles' to represent different requirements across the council:
- *fixed* working: staff work at a single place with no requirement for working away from their base;
  - *flexible* working: staff work at a single base for more than 50 per cent of their working time, perhaps working at multiple council locations. They have no requirement for a fixed work station and will work from home or remotely one or two days a week;
  - *home* working: staff spend around 90 per cent of their time working at home, with no requirement to work in the field and are provided with the required ICT to achieve this;
  - *mobile* working: staff work at their base for less than 50 per cent of their working time and have no requirement for a fixed work station, working at multiple council locations and working remotely or at home three days a week.
- 1.7 Worksmart provides staff with the opportunity to spend less time travelling and more time delivering council services. Due to the introduction of the flexible working patterns, Worksmart is driving a reduction in the number of workstations required across the council estate to a maximum ratio of seven desks per ten FTE employees.
- 1.8 Staff can voluntarily participate in Worksmart through the completion of an online application form and whilst the scheme is currently voluntary for existing staff; all new vacancies are advertised with a mandatory Worksmart profile.
- 1.9 Staff are supported to work flexibly using technology such as robust electronic diaries and Instant Messenger. In most instances staff are provided with a laptop or net book depending upon individual requirements. In order to finance this change the employees' fixed PC is swapped for the mobile device and the PC is then re-distributed within the council's ICT estate.

### **workSPACE**

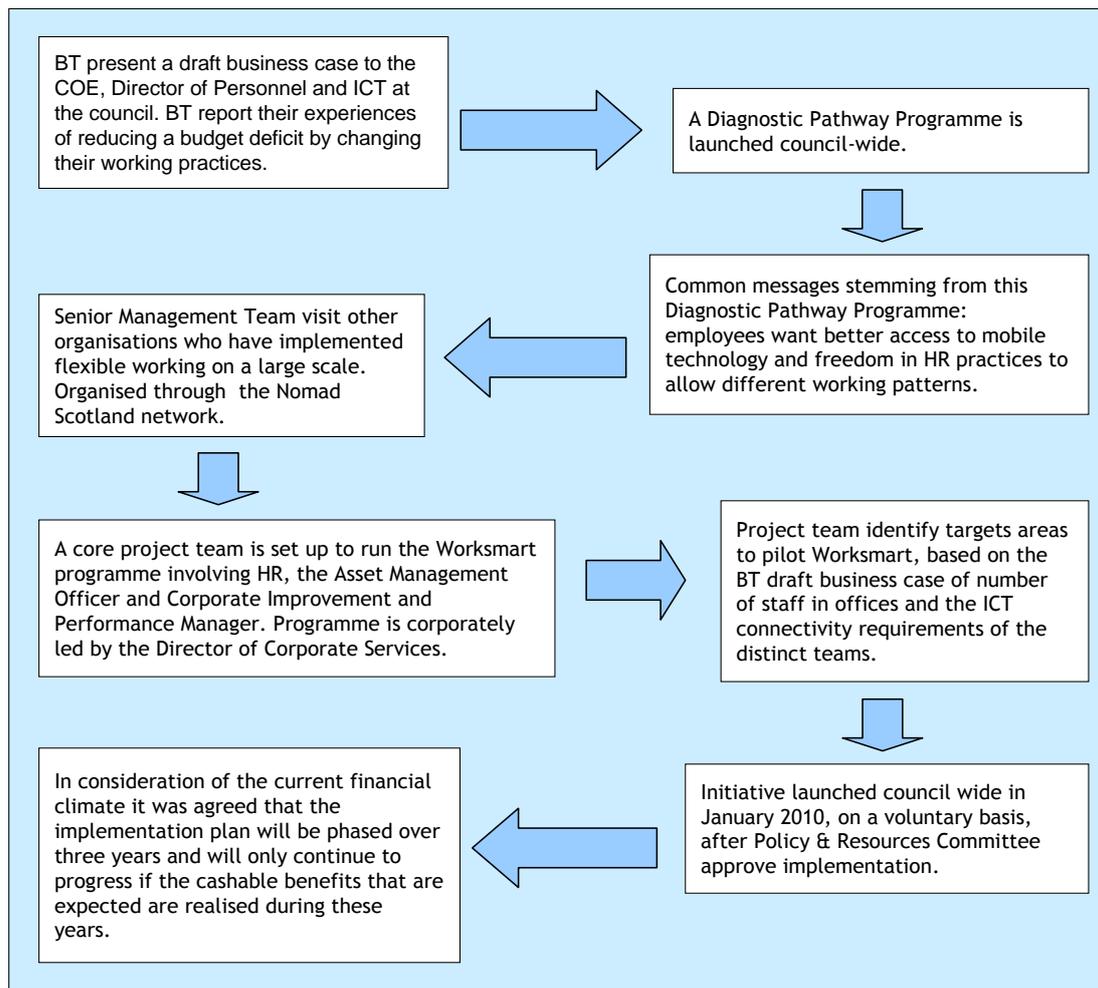
- 1.10 Key to reducing the council's carbon footprint is the rationalisation of the council's property portfolio and subsequent reductions in energy consumption

and business/commuting mileage. The council's workSPACE strategy is driven by the need for a modern, flexible office portfolio to support service delivery and customer service. It encompasses a reduction in the number of smaller council offices which are not fit for purpose, expensive to run or are currently leased by the council. The Council has 98 offices/facilities with running costs of approximately £6 million. WorkSPACE recommends an overall reduction in the portfolio to 53, realising annual savings of £0.92 million across two phases. The council's adoption of Worksmart has made this rationalisation possible as staff in these smaller offices can now work more flexibly, from home or in alternative office premises, perhaps closer to home. The first phase of this change will begin in January 2012.

## **Process of implementation**

- 1.11 The flowchart below illustrates the process of implementation of the Worksmart programme at Aberdeenshire Council. As the flowchart illustrates, the council received initial guidance on changing working practices from the telecommunications company BT. BT's involvement originated from discussions with the former Director of Personnel & ICT at a conference, which subsequently led to an invitation to present BT's approach to agile working at the Council; a presentation which had the support of the Chief Executive of Aberdeenshire Council. The role of BT was described by the Corporate Improvement and Performance Manager as *'helpful at the outset to provide information for the proof of concept'*, but it was always thought that Aberdeenshire would need to adapt the lessons learnt from BT to suit their own working environment.
- 1.12 Over 620 staff took part in Worksmart in the first year and the council is looking to engage 3,500 staff over three years due to the parallel office rationalisation strategy (workSPACE). The programme is now no longer considered optional as it affects all staff. Even if an employee is still a fixed desk worker their colleagues will be working differently so this affects them; it is an inclusive programme.

**Figure 1: Process of implementation of the Worksmart programme**



### ***workSPACE implementation***

1.13 Changes to employee work profiles through the adoption of Worksmart requires the reconfiguration of the material context within which staff operate. The workSPACE programme will enable efficiencies from Worksmart to be maximised whilst also creating the flexible working environments which are capable of meeting the requirements of the various work profiles. Condition and suitability assessments were carried out in 2007 which identified scope for reduction in the office portfolio. Utilisation reviews were also conducted in November 2010 which assessed floor area occupied by workstations and reviewed the occupancy of dedicated workstations. It identified that 80 per cent of the council's workstations within operational offices were being occupied between 68 per cent and 99 per cent of the working day, therefore providing scope for improvements in the use of office space in line with Worksmart principles. The workSPACE strategy was approved in September 2011, agreeing a reduction in the number of offices and council facilities by 25 per cent in the first two years, and a further 20 per cent thereafter.



## ***Building staff awareness***

- 1.14 A key material factor employed by the Worksmart project team to engage staff in the initiative has been the design of a dedicated website, so that all staff can access information on the programme. As only a third of the council's employees have access to a work PC, the website is hosted externally so all staff can access it from their home. The website provides information on each of the four different work profiles, gives case study examples (see box below) and regular bulletins about the progress of the programme roll-out and FAQs. It also hosts the application process.
- 1.15 The project team also makes itself available to hold one to one phone interviews with staff interested in applying for the programme and uses the website in these calls to help engage them with navigating through the site. Since its launch the site has had 65,000 hits and the platform has since been offered to other councils who are using the Worksmart brand (Stirling and West Lothian). See Figure 2.
- 1.16 The Worksmart project team also supports teams going through the transition. They conduct roadshows in the offices about to embark on the programme and if they are told by staff that a team is willing to enrol on the programme but are being prevented by their manager, the Worksmart project team will approach the individual manager and discuss their concerns. Teams that have already been through the transition are used as ambassadors to visit others who are interested but want to know more.

## ***Worksmart Case Study***

### **Team Manager (Care Management): Flexible Working Profile**

'I felt it was important to cut down on wasted time commuting and to try to reduce my carbon footprint, while saving money (due to the rising cost of fuel) for the council in business mileage claims and my own in relation to commuting miles and wear and tear to my car.

Working in this way has improved my organisational and planning skills as I have to attend a large number of meetings across Aberdeenshire, while also being available to offer support and guidance to the team I manage. As a flexible worker I can reduce my carbon footprint significantly just by planning meetings and supervision in a more effective and efficient way. This also enables me to have a greater work / life balance as I don't have to spend two hours every day commuting to work.

I have also increased my network of contacts throughout various offices in Aberdeenshire as I can and do access office space and work effectively in most council locations. As a result of my positive experience of Worksmart I have supported the majority of my team through the Worksmart process and the feedback has been extremely positive, especially during the time of exceptionally bad weather last year. The team were able to provide a high quality service, while reducing the risks to themselves by not having to travel on icy roads.

Initially working from home was quite challenging, more in relation to the perception of others, and it requires a degree of self discipline, but in only a short space of time I felt and continue to feel that I am actually more efficient and can achieve as much if not more while working at home, in a quiet environment without interruption. I use the communication tools such as Lotus Notes, Instant Messenger and the mobile phone to stay in touch with my team, manager and colleagues and find these effective ways of keeping in touch. I have also used Meetme / WebEx (audio conferencing / web conferencing) with my colleagues and manager, which has proved to be a success and completely cut out the need for travel on a number of occasions and especially during bad weather.'

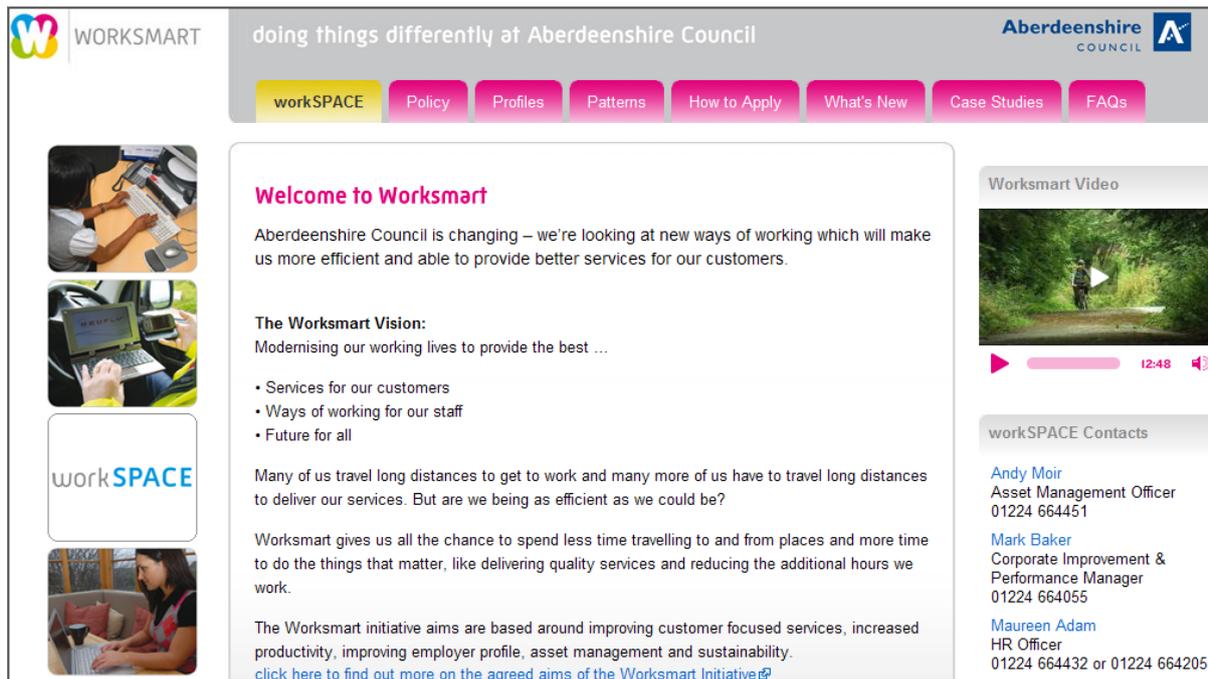
Source: <http://worksmart.aberdeenshire.gov.uk/>

- 1.17 Worksmart and workSPACE generate opportunities to make both significant financial savings and energy savings. Management at the council believed that the most effective way of communicating the programme to staff was through focusing on the financial savings that could be achieved through a change in the way of working, due to the heightened awareness of staff of the budgetary constraints being imposed on local authorities. The focus on the financial message made the communication more relevant to them as teams and an organisation; however the carbon reduction impact has also been communicated. One management interviewee told us:

*'We were not convinced that branding the programmes as a green issue would be very helpful in the current climate as budget cuts and the need to make financial savings are most important in people's minds, but low carbon activity and sustainability was a key driver of the programme'.*

- 1.18 There are e-learning packages also available to staff which cover issues such as the use of technology, managing staff working remotely and staff adopting different working practices. To ensure that staff do not feel isolated when working from home, managers are encouraged to ensure that one to one meetings and team briefs are set up regularly. The available technology also assists with this, for example, the use of web-cams and Instant Messenger. Further training has also been offered to managers who would find it useful to be supported in adapting a more flexible working approach and a change in management style to be more of a 'manage by output' rather than through 'presenteeism'.
- 1.19 The WorkSmart website also has a section dedicated to workSPACE. This has been set up to inform staff about the timetable of the programme roll-out, providing an overview of the process and the strategy report.

**Figure 2: Worksmart website homepage**



Source: <http://worksmart.aberdeenshire.gov.uk/>

## Staff responses

- 1.20 The Worksmart Project Board believes it has been fairly easy to engage employees with the Programme:

*'The rising price of fuel has made it easier to persuade employees to avoid work-related journeys and adopt more flexible working and by eliminating the commute, staff have more personal time.'* – Manager

- 1.21 However, the social context in which behavioural change is required is a challenging one. When teams were first approached to participate in Worksmart, they were initially concerned as they enjoyed their team dynamic and their own desk space and persuading staff to move away from this is difficult. However, the project team report that they have not had anyone join the programme and then revert back to traditional working practice. The Project team initially heard 'tea-room chat' that some staff did not want to work from home, but these people were not aware of the options available and once told that instead of driving to an office half an hour away from their home, they could work from an office much nearer to home instead, they were more willing to sign up to the programme:

*'Staff are willing to give time back as well if you take a three-hour commute out of a staff day, they will happily work longer for you when needed. It's a win-win situation as happier staff are more productive staff.'* – Manager

1.22 Staff in our focus groups also generally seemed satisfied with the introduction of Worksmart as they were pleased that they could now work around their personal or domestic commitments. One team leader expressed concern that there had been a loss of cohesiveness in terms of knowledge exchange and mutual support; and one staff member had concerns about confidentiality of sensitive information when working alongside unknown council employees occupying hot desks. Overall staff reported that the benefits of the practice outweighed these concerns. One management interviewee also reported that:

*'Staff, once started on the programme, change their behaviour and the type of technology they use to communicate with their team and they see the benefits of being able to start their working day from home.'*

1.23 The project team reported that older colleagues were the 'hardest sell' as they were not familiar with the technology such as Instant Messenger which allows dispersed teams to communicate. The flexible working allows staff to deliver their 37-hour working week at any time during the working week and therefore staff can realise benefits through this such as convenience in meeting childcare or educational commitments. One necessity for engaging staff with the programme was the ability to disengage staff from what is a standard nine to five office environment. The council has also moved to delivering services later at night which improves effectiveness. For example, environmental health officers can now visit hot food premises later in the evening when they are open, or social work assessments can be conducted in the evening which is more convenient for families.

1.24 Some staff reported selling their second household car due to Worksmart and managers have also become more willing to try out new energy efficient working methods. One manager told us they have tried 'walking meetings'. Instead of booking a meeting room and turning on the lights, they simply walk around the site:

*'It's productive and we're at the forefront of testing our own boundaries. Productivity is important with the budgetary challenges we have.'*

## **Key challenges**

1.25 With the introduction of Worksmart, the potential breakdown in team dynamics was a significant concern for staff and managers. Early lessons learnt from BT and the visits arranged through Nomad Scotland to other organisations that had implemented large scale flexible working, confirmed for the Senior Management Team that they did not want to see rows of featureless 'hot' desks, where staff did not know the person working next to them. Therefore the design for Aberdeenshire has been to retain team areas, so staff who come into the office will be located with their team. This is thought to help build employee satisfaction and foster a better working environment. One manager told us:

*'if this collegiate atmosphere had been removed then people would not want to be a part of the change programme'*

- 1.26 Another challenge the Worksmart project team faced was the contention from staff that while there may be a reduction in carbon emissions from reduced business and commuting mileage, this would be offset by heating individual houses when staff were working from home. This offset is an unavoidable reality of the flexible working initiative but in balance managers and staff believe the reduction in travel, combined with the office rationalisation that Worksmart allows, produces greater savings for both the employer and employee. The Worksmart programme was rolled out before the onset of winter 2010 and the additional costs of heating during cold weather could be a barrier to home working for some staff, however no interviewees reported this as a problem.
- 1.27 Individual factors impacting behaviour change included the beliefs held by some managers that individuals need to be present and visible in the office (the 'presenteeism' culture) in order to be performing. There were concerns from managers about how they would be able to manage productivity with dispersed teams, as they had the perception that *'I can't see my staff so I don't know what they are doing'*. Further training for managers now focuses on encouraging managers to be specific about what they require of individuals and measuring this.
- 1.28 The material context within which staff work will become more significant as greater numbers of staff adopt Worksmart and there is a greater reliance on using electronic documents. Improvements in efficiency will be realised as more services adopt an electronic filing system. The project team is working with ICT and finance to further explore the corporate roll-out of an electronic filing system. There are still some concerns around loss of efficiencies through supporting technology not performing as well at home and the project team are addressing these issues through development of e-learning modules to support employees and managers.

### **Evidence of impact**

- 1.29 The Worksmart Project Board has identified the overall key benefits of the project to be :
- increasing team efficiencies
  - a reduction in annual running costs
  - more efficient use of space in buildings
  - a reduction in business mileage
  - and a reduction in commuting mileage.
- 1.30 When Worksmart was first introduced it set a target of enrolling 420 staff in the first year onto the programme. This was subsequently revised to 620 as interest in the initiative grew and this target was exceeded in year one. Over 1,000 staff are now participating in the Worksmart initiative.

1.31 Worksmart allows commuting mileage to be monitored through a computerised spreadsheet which participants in Worksmart complete every day. It collects their working pattern on that day so that commuting mileage can be calculated. The business mileage is collected through mileage claim forms and the council's lower emission pool cars are also checked for mileage. The latest data available, based on 722 employees' travel claims submitted to Finance in the first and second quarters of the 2011/12 financial year, shows that there has been a reduction in business mileage claimed over the previous year of 16 per cent in the first quarter and 10 per cent in the second quarter, which equates to a reduction in spend on business mileage of £30,502 in Q1 and £16,130 in Q2. The council has also recorded a saving of 136,588 commuting miles (based on 202 employees completing data collection between April and September 2011), which corresponds to 33,995 CO2 g/km emissions saved through working from home or base locations closer to home. This is likely to be an underestimation of the true savings, since many participating employees did not submit information for monitoring.

1.32 When new staff join the council the Chief Executive runs a corporate induction programme and staff are asked six months afterwards to describe the top three things they like about working for the council and the three things that get in the way of them doing their job:

*'The Worksmart programme is proving to be one of the top benefits described by staff.'* – Manager

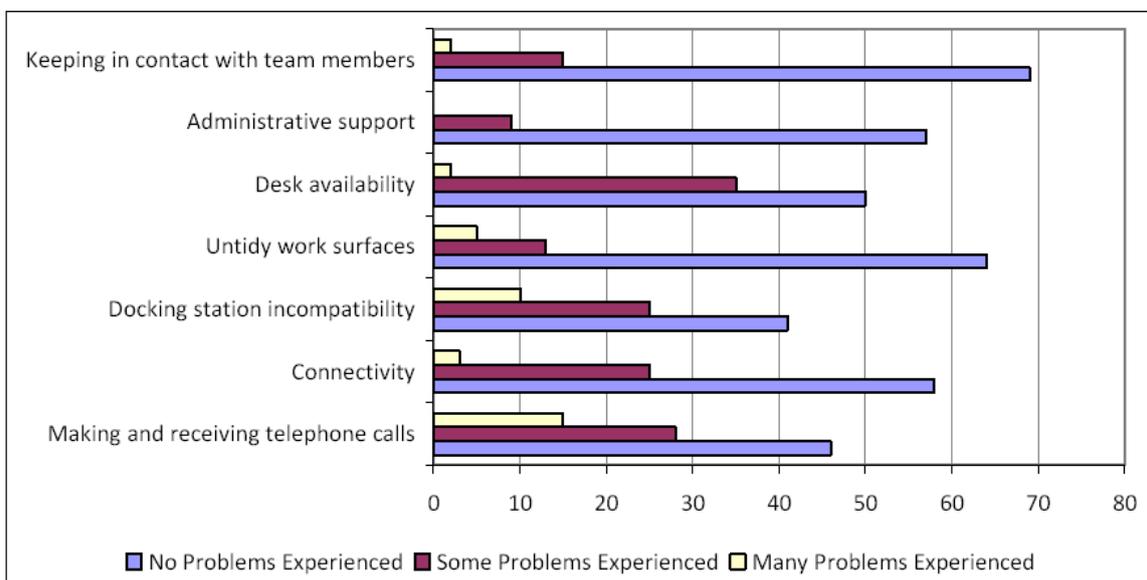
1.33 During September 2010, a survey of all employees participating in Worksmart was conducted. The majority of respondents reported no problems when working from home – the use of Instant Messenger, secure printing, administration support, keeping in touch with team members, and making and receiving telephone calls caused no problems when working from home although broadband connections, saving and retrieving files from networks and accessing web based systems did pose some problems. Some of these issues will be caused by the users' home equipment and network speed in their local area. Keeping in contact with team members – one of the concerns raised by individuals and managers in initial discussions – showed very few problems, with only just over 10 per cent of people experiencing issues (see Figure 3). The majority of respondents (67 per cent) also said their team dynamics had remained the same since participating in Worksmart. Some 19 per cent reported that team dynamics were felt to be worse. The project team expected this as the teams adapt to their new ways of working and hope that team dynamics can be improved through the use of instant messaging and other communication tools. At least three-quarters of managers felt they could manage their team effectively now that they had adopted a more flexible manner of working.

1.34 A feedback survey for managers with staff who have adopted Worksmart conducted in March 2011 sought evidence of impact of the Worksmart Programme on productivity and efficiency savings. Interestingly, 62 per cent of managers indicated that they felt productivity had increased as a result of adopting Worksmart and the remaining 38 per cent felt it remained the same, with no managers reporting that productivity had dropped. In fact, even

during periods of adverse weather, when prior to Worksmart productivity may have fallen due to office inaccessibility, productivity remained the same as employees were able to work at offices closer to home or from home. Some 82 per cent of those surveyed also reported that their team was happier having changed their profile or pattern of working through adopting Worksmart.

1.35 At the time of writing, the cashable benefits already realised from the combination of the Worksmart and workSPACE programmes are estimated to be savings of around £50k, through disposing of seven office spaces and amalgamating where staff work in those instances.

**Figure 3: If you are working from several offices / desk sharing, please comment on each of the following:**



**Critical success factors**

1.36 Critical success factors identified from analysis of the case study findings are as follows.

***Planning and preparation***

1.37 It is evident from the description of the project management of Worksmart that the council invested a considerable amount of time in research before launching the programme, which involved seeking external expertise and learning lessons from other organisations. This preparation appears to have paid off in relatively smooth implementation.

## **Information and consultation**

- 1.38 One of the factors identified as necessary for the success of the Worksmart programme has been allowing staff time to understand the changes and adapt to their changing working style. This was supported by multiple sources of information including web-based resources, telephone and face to face discussion. Involving staff in the change is also considered to be important as:

*'...employees will often feel that changes are imposed on them but providing them with an opportunity to discuss the initiatives with those driving it forward can help appease staff who have concerns' – Manager.*

However, when introducing a programme of change that requires staff to change behaviour, employers cannot simply rely on sending out corporate messages in an effort to engage staff:

*'Time needs to be given to meeting staff, sitting with teams and telling them what is being done and why and then asking what their concerns are.' – Manager*

## **Leadership**

- 1.39 Any change programme must start with establishing commitment from senior management in order to secure the resources that the programme needs to be a success. Middle management is often the challenge in implementing change of this nature and strong communication needs to be directed towards this group as if they do not display the behaviours and competencies required to drive the activity, their employees are unlikely to engage with the activity. Providing additional training and support to help managers to support teams working flexibly appears to have been necessary.

## **Branding the change**

- 1.40 Creating an identity for the programme of change; for example, Aberdeenshire Council created the dedicated Worksmart website which is considered by management to be one of the reasons for the success of the programme in order to embed it and engage employees. The programme also offers very clear personal benefits to employees which is likely to enhance sustained employee engagement.

## **Future plans**

- 1.41 In future, further savings are to be sought from the material environment through the workSPACE strategy. There are ongoing discussions with public sector partners (police and NHS) about co-locating to the Aberdeenshire Council Headquarters building, to create a central public sector hub which would deliver further low carbon savings across the public sector through occupation of fewer buildings and efficiencies in cross-working.



## Key learning points

- The success of the programme was highly reliant on effective technical support and it was felt that this was an area that required greater time investment before the roll-out of the scheme. Programmes relying heavily on ICT require some time to bed in and organisations may encounter teething trouble where IT provision is not within their control (e.g. domestic broadband provision). Anticipating and where possible providing alternative solutions to meet these challenges can help the smooth implementation of home working initiatives. Investment in staff training to maximise ICT is also necessary and may require tailoring for different types of staff.
- Financial pressures on an organisation can provide a good opportunity to reflect on how work is organised and provide opportunities to combine cash savings with environmental sustainability.
- Once initial changes have been made, it is helpful to ask staff what worked and what didn't so that these lessons can be built into future programme delivery to provide '*ambassadors rather than terrorists*'.
- Feedback from employee surveys at the council have revealed that staff want to hear about change from their line manager so project teams need to engage effectively with these managers so that they are delivering the message that is needed for the success of the programme. Managers need to take on the responsibility for communicating change but they require support from senior teams to deliver this. Managers may require additional training and support to do this and it may be helpful to gauge this in some detail before implementing change.
- Encouraging managers to lead by example is also valuable: '*If the manager demonstrates they are happy to work from home, this attitude will filter through the team.*'
- Aberdeenshire Council found that learning from BT and other organisations through the Nomad Scotland network was a valuable process and they advocated that it is not always necessary to design a programme of change from scratch. Communication with organisations that have implemented similar changes, thinking about how existing policies can be tweaked and how to challenge barriers in organisational culture should be considered in order to bring about change. Staff also noted that a high level of preparation is necessary when rolling out a remote working programme.

## 2 BT

This case study provides valuable learning for large organisations with highly mobile and dispersed workforces that are attempting to engage staff in low carbon activity. It illustrates how organisations, in which decisions are typically taken at senior levels of the corporate hierarchy, can find opportunities for staff to contribute to programmes of change. It also emphasises how in target-driven businesses, appropriate priority needs to be given to environmental activities which achieve real, quantifiable, success.

### Background

2.1 The BT Group aspires to be a sustainable and responsible business leader. The BT commitment to environmental sustainability has caused it to set itself challenging global carbon footprint reduction targets. The objective, by 2020, is to reduce carbon intensity by 80 per cent compared to levels in 1997. In their UK operations, a reduction of around 60 per cent has already been achieved. BT is responsible for approximately 0.7 per cent of the UK's electricity consumption through its use of power servers, networks and 7,000 buildings and data exchanges, therefore demonstrating environmental sustainability to its customers and employees is considered to be critical.

### Low carbon initiatives

2.2 The BT carbon reduction strategy is based upon driving energy efficiency, developing renewable energy generation, and purchasing energy from low carbon sources. Its commitment to carbon reduction activities covers all its businesses and a wide range of activities. BT's sustainability strategy, 'Better Future', has three main dimensions: reducing the levels of carbon that the company is emitting through its operations and products; building stronger communities through technology and people and helping customers and suppliers to reduce their carbon footprint through responsible behaviours.

2.3 The focus of this case study is upon the BT Energy Saving Campaign. We, however, also look briefly at the fuel efficient driving programme that is being rolled out across the BT Openreach division.

### *Energy Saving – The BT Campaign*

2.4 Over the last couple of years, a significant focus has been placed upon the BT building infrastructure and its carbon contribution through the use of heating, lighting and equipment permanently located in BT premises. Efforts have been made to make staff aware of energy use and give employees opportunities to make a difference to the carbon consumption of the business. The five major commitments for BT in this campaign are to:

- audit energy use
- install energy efficient lighting

- switch off unnecessary network equipment
- optimise air conditioning and heating
- stop using energy in office space that is not being used.

2.5 In 2010 a pilot for an Energy Saving campaign was run in BT Headquarters, which houses 3,000 staff. A target of 10 per cent energy savings over a three month period was set for this pilot. Teams of volunteers in the BT Group worked closely with catering and facilities partners in order to identify areas in which the five commitments above could be realised. The team held weekly teleconferences and conducted an in-depth analysis of energy expenditure in the building as part of the energy audit commitment. As a result, a 17 per cent saving was achieved over the three months. Following this pilot, the team approach has been rolled out to another 25 buildings around the BT estate. The Campaign also recruited 92 'Energy Champions' – BT employees who have volunteered to champion energy saving and encourage staff to engage with the commitments of the campaign. These champions, sourced from all levels of the business, are helping to raise awareness and reduce energy waste by reporting energy faults, conducting energy audits of their buildings and by networking to share ideas. These duties are conducted on top of existing work commitments.

### ***Transport – Fuel efficient driving***

2.6 BT Openreach is the largest division within BT and 80 per cent of the BT vehicle fleet is within Openreach. Of the 30,000 staff in BT Openreach, some 20,000 are engineers who use BT vehicles to maintain the network between home/business and the exchanges. Openreach is seeking to reduce the carbon footprint of its fleet across three areas:

1. the Driver – training and behaviour
2. the Journey – avoiding journeys or resolving issue electronically
3. the Vehicle – making sensible choices based on necessary size of vehicle for task and its load.

2.7 Fuel efficient driver training, which first took place four years ago at BT Openreach, focuses on the driver behaviour factor. The training is delivered by the Government's SAFED (Safe and Fuel Efficient Driving) scheme which provides subsidised training for organisations to undertake driver training.

### **Process of implementation**

2.8 The Energy Saving Campaign, during the pilot stage, was targeted towards the individuals who could make a marked difference due to their sphere of influence. Engagement managers identified the 'key players' in BT Headquarters who could do something significant to reduce energy use, such as, the Head Chef and the manager of the BT auditorium. The BT HQ was chosen as the pilot location as it is one of BT's largest buildings and is well-placed to set an example to the rest of the company. Successful initiatives

here can be rolled out to the regions with the message that if Head Office can achieve savings and are prepared to engage in the campaign, regional offices should as well.

- 2.9 The Head Chef was asked to assess the potential savings in the kitchen area and found he could store food in two fewer fridges by changing the menu and ordering process. His contribution was recognised through a BT award which took the form of a retail voucher for an eco store. One interviewee told us: *'If you give people power to act in their area and get them engaged, they will amaze you'*.
- 2.10 The BT auditorium manager was also asked to join the campaign due to the level of energy use in the space. He now turns off the studio lights and TV screens unless they are needed.
- 2.11 BT Energy Champions have also been rolled out across the BT buildings and there are now 332 champions in the UK who conduct energy audits and report energy faults, as well as encouraging staff to make energy savings such as turning off monitors and lights and recycling. The option to be an Energy Champion is available to any BT employee, whether they are a mobile worker or home worker. The message that was communicated (mostly electronically) to staff was that *'if you care, we would love to listen to your ideas'*. Staff can join the energy campaign online in which they can sign up to receive information on progress and plans. A simple checklist has also been made available online for staff who wish to do a mini audit of energy use in their BT building or in their team and posters are also available online for printing locally to make colleagues aware of the energy challenge and the actions they can consider to make a contribution. Staff can share ideas for energy saving through submitting them through the BT New Ideas scheme. All new ideas are evaluated by BT's environment management team, which meets monthly. Staff are also encouraged to report unused areas of an office or a site to their line of business property representative, as there may be potential for the area to be mothballed. Staff can also join a BT Carbon Club which is a method of bringing staff together to discuss climate change issues. These clubs were launched in 2007 based on feedback from BT employees and there are now 500 club members. Club members are volunteers and can focus on areas of interest to them such as recycling. The clubs are given support by the champions to implement ideas such as reducing the footprint of a particular building by, for example, making sure people turn off monitors at night and recycling waste. Each club elects a captain and has its own web page which includes information such as, club name; member list; club objectives; line of business and location, which creates an informal network.

### ***Fuel efficient driving***

- 2.12 A fuel efficient driving pilot was conducted initially and some 50 drivers received the training and then the programme was rolled out to other selected staff. Openreach selected drivers for the fuel efficient driver training based on risk which included drivers with highest mileage and those who had the highest level of accidents. An external training provider conducts the training in house; which consists of a presentation and then practical training for the

driver. Currently about 200 drivers a year are trained in this way by Openreach.

- 2.13 Investments to change the type of vehicles are also being made. At one BT event an electric van was displayed so that drivers could see the vehicle and learn about how their vehicles may change in future. Currently Milton Keynes and East London are the first BT sites to begin testing electric vans and, if successful, BT plans to roll them out more widely across its whole vehicle fleet.

### ***Building staff awareness***

- 2.14 BT employees are highly mobile and dispersed, which presents a challenge for engaging them in low carbon initiatives and therefore there is a necessity for strong communications. These have the following characteristics:

#### *Communication type*

- 2.15 Unsurprisingly in BT, primary communication is typically electronic. The majority of corporate communication is through email. For example, a weekly newsletter is sent out via email by the corporate communications team and information is also placed on the BT news website. Low carbon initiatives are also promoted in this way. Campaign posters are used in buildings due to the large engineering workforce who may work from exchanges rather than main office sites. Communication also goes through a management cascade down the individual lines of business and core BT targets will be localised, so that staff are briefed by their individual line managers in team meetings on how they can contribute to a corporate target. There is also a dashboard of measures displayed within BT buildings which show carbon reduction achievements.

#### *Consistency and relevance of message*

- 2.16 Consistency in behavioural messages is considered important by managers. Messages can be backed up by case studies of staff that have implemented new ideas to reduce carbon consumption as this provides recognition for engaged staff. This also enables front line staff to see their colleagues engaging in these behaviours and being recognised for it rather than managers enforcing behaviours.
- 2.17 However, one interviewee believed that it was important to be '*careful not to over egg*' communication in an attempt to maintain interest and momentum in the energy saving campaign. The engagement team wanted to avoid a 'drum beat of activity' and instead give more careful consideration to how often the programme is promoted and to whom. For example, when 25 additional buildings were included in the energy saving campaign, this was rolled out in October when the annual change from British Summer Time takes place and news coverage usually begins to highlight the challenges of rising heating bills. BT also run an Energy Saving Week in October, across the whole of BT, in which it holds a short series of informal lunchtime presentations and discussions on what BT is doing to reduce its energy demand:

*'By timing promotion carefully you can make sure you don't become a stuck record and time it when the messages will have the most impact rather than banging the drum constantly.'*

#### Inclusive communications

- 2.18 BT wanted to communicate an inclusive message regarding the Energy Saving Campaign due to the different profiles of their workforce. Some staff are fully mobile, some are home workers or based in a call centre, so it was important that all groups were included in the campaign as opposed to focusing on full-time office-based workers. For home workers, a pilot was run with about 430 home workers in Wales which attempted to identify what home workers would want to know about the energy saving campaign and how they could contribute. A dedicated website was set up which gave tips about how to save energy at home. Some 310 home workers visited the site and some 26 per cent registered on the website to receive progress reports and regular information. The site also provided feedback to staff on the contribution they were already making by working from home and therefore reducing carbon consumption related to the commute and saving energy in the BT offices. For example, to work from a desk in an office is estimated to cost £5,000 a year, but as a homemaker once initial set up costs for network lines and equipment have been covered there is a potential for significant savings.

#### Peer communications

- 2.19 In October 2011 BT used its energy champions as the voices of Energy Saving Week, as 'people can get bored with the corporate voice of BT'. Energy Champions led the 2011 Energy Week, spreading the message of why they were involved and what they did at home to save energy. This 'user generated content' is considered to be sometimes more powerful than corporate communications. The frameworks to engage and structure low carbon initiatives have been set up with corporate level managers (e.g. Carbon Clubs and Energy Champions) but these then seek ideas from operational staff, such as the ideas for savings from the Head Chef and Auditorium Manager.

#### Communicating the financial benefits

- 2.20 According to the quarterly employee survey, the majority of employees are classified as on the 'side of green'. This means that they believe that energy saving is the right thing to do and individuals can have an impact. However, one manager told us:

*'BT doesn't shy away from the fact that these low carbon projects are a win-win. The core motivation for BT to introduce them is to drive down costs as well as the environmental consideration. There is no embarrassment that it is also about driving down costs too. You can do all the right things from a green perspective but you will also generate cost savings; be more efficient and reduce travel.'*

### Communicating fuel efficient driver training

- 2.21 Within the fuel efficient driving programme, drivers are told that a benefit of attending the course is that they will learn techniques that will benefit their personal driving behaviours when not at work. This can be attractive when fuel costs are rising. Fuel efficient driving can help take 10 per cent off a personal fuel bill. For some drivers this rationale is appealing, but others want to divorce what they are doing at work from their behaviour at home.

### **Staff responses**

- 2.22 The BT 2010 annual employee survey revealed that energy saving and waste were at the top of the list of issues that employees felt they should support. Almost 10,000 people, out of a workforce equivalent to 75,000 full-time staff, have signed up to at least one of their engagement initiatives which include Carbon Clubs, Energy Champion, Car Sharing, and cycling to work. In 2010, BT also piloted online sustainability training modules for BT staff to help employees integrate sustainability into their work. These specific modules help product managers and developers embed sustainability into products and covers issues such as energy efficiency, waste and reuse. There is also a module for sales and marketing teams to help them communicate the environmental and social credentials of BT products and services to customers. Over 1,000 employees completed one or more of the courses in the first six months. BT also now has over 300 Energy Champions across BT since its launch in October 2010.

- 2.23 Energy Champions across the BT Group meet up and have conference calls to share best practice and the team in Northern Ireland is particularly proactive, using the Energy Champion network to share ideas. One manager told us:

*'You need to make a judgement call on how much you interfere with this and try to co-ordinate them as it can lose its magic. You need to give staff the opportunities and then you stand back and watch it happen. We want people to be engaged and have ideas without us directing it too much.'*

- 2.24 Staff felt that the core motivation behind the Energy Awareness campaign is to drive down financial cost, however they were also confident that carbon reduction was a significant driver:

*'It's our corporate social responsibility, companies should be leading by example and people can be involved by just being energy efficient – in that sense everyone can be an energy champion.'*

- 2.25 Staff also felt that many of the energy saving initiatives that have been highlighted by the Energy Awareness Campaign have become part of the BT culture and colleagues support the message:

*'If you come to a meeting you have to make sure you do printing on double sided and it's got to be black and white. People are not*

*pleased if you've even printed out handouts for meetings; this is a good change in the culture. Colleagues comment about it if you don't do your bit to save energy.'*

- 2.26 The role of managers in supporting the message of the Energy Awareness Campaign was also seen as important by staff. One home worker described her manager as 'personally very passionate about saving energy'. She described how her manager only holds team meetings when absolutely necessary in an attempt to save commuting costs due to having a core home working team and having managers 'leading the way' is seen as encouraging to others to save energy in the way they work.
- 2.27 Responses from drivers to the fuel efficient driver training were mostly positive according to managers. However, some drivers sent for the training felt they did not need it and there are some reports of non-attendance on the courses. The pilot evaluated ongoing fuel efficiency achieved by the driver and the outcome from this encouraged expansion of the scheme to greater numbers of drivers, based on cost efficiencies in fuel efficiency.

### **Key challenges**

- 2.28 One of the key challenges for the Energy Saving Campaign was that staff are busy and campaigns have to be sufficiently creative to engage people who are focused on other business priorities. This may have been exacerbated because much of the communication and engagement techniques have relied on electronic methods. One interviewee advised that in order to overcome this challenge '*you have to think about your people first before your own objectives. This is difficult to do but you have to think about whether what you're asking is realistic. If you have an answer for the 'what's in it for me?' question from staff, the message is much clearer*'.
- 2.29 A key challenge is providing staff with the opportunity to make changes in the workplace that will reduce energy use and embed these actions into their day job. It is also necessary to ensure staff understand how they can bring low carbon behaviours into their day job. This can be achieved through communication efforts. At BT, weekly newsletters are sent out through email, however, one staff member commented that the communication of these types of messages should not in themselves involve the use of a lot of paper, which is why electronic messages are considered the best method.
- 2.30 Challenges highlighted by previous energy-related campaigns run at BT (ie. the 'Big Switch Off') were related to persuading staff to demonstrate the behaviours they display at home in the office, as BT has found that staff do not automatically bring their values from home into the office:

*'Part of it is the permission piece – am I supposed to leave a light on, what if someone else doesn't know where it is? So to get around this we put signs on the doors asking people to turn lights off. We usually don't need permission to turn lights off so asking for it to be done, let's people know it's ok and encourages them to do it.'*



- 2.31 In the fuel efficient driving programme the biggest challenge to overcome is the driver's own perception of the need for the training. The only way to overcome this challenge is to draw the driver's attention to their own driving record. One manager told us:

*'Drivers are busy and they all think they are the best driver in the world so why do they need this training? They will tell you "what do you mean I've been selected because I'm high risk? I'm a good driver!'"*

### **Evidence of impact**

- 2.32 BT have publicised their energy saving target and want to reduce next year's total energy bill by 3 per cent, despite growth. Some 2.5 per cent in energy savings was achieved across the group last year while the business also grew, saving more than £18 million, which shows greater efficiency. Some £6.2 million of this total saving stems from the use of smart control initiatives, with electricity consumption now monitored through smart meters, which provide real time data on how much energy is being consumed and enable BT to identify and tackle any wasted energy. It was not possible to determine how much of the remaining saving can be attributed to the direct impact of staff efforts as part of the energy saving campaign, rather than material changes, but BT research has found that up to 1.4 tonnes of CO2 emissions can be avoided each year for every employee who works from home, rather than the office. As part of the annual employee survey, the question: 'Have you taken personal action over the last three months to reduce BT's energy consumption?' is asked of BT employees. Some 54 per cent of employees agreed with this statement in 2011. Over three months, energy consumption at BT headquarters was reduced by 17 per cent, lowering carbon emissions by around 1,500 tonnes and enabling annual savings of £200,000. Similar exercises rolled out to the 25 other BT buildings yielded a 6 per cent reduction in energy usage, giving annualised savings of £873,649 and 6,527 tonnes of CO2 – equivalent to the annual emissions from 1,000 houses.
- 2.33 The perceived benefits of the fuel efficient driver training were cost savings through more fuel efficient driving; reduced driver risk; improved insurance premiums; reduced carbon footprint; and improved driver engagement and morale.

### **Critical success factors**

- 2.34 Critical success factors identified from analysis of the case study findings are:

#### ***Communicate the financial benefits***

- 2.35 BT has benefited in part from rising energy prices which have helped engage staff in the energy campaign. One interviewee reported that: *'this has worked to our advantage as people are hearing about it in the media and feeling the pressure in their wallets'*. The financial driver is considered the most significant in communicating low carbon behaviour as the financial business case will open doors for people trying to promote low carbon behaviours in the business. The interviewee told us *'You can't decouple financial savings and*

*engagement. Don't apologise for engaging people through the financial route.'*

### **Invest in change through infrastructure**

- 2.36 Providing equipment or facilities to enable change is considered to be very important by BT as staff are presumed to be unwilling to contribute to low carbon behaviours unless they see visible signs that the company is investing in the mechanisms to enable them do it.

### **Leadership**

- 2.37 Using senior managers or influential staff to promote low carbon behaviour is also seen as important. It is seen as necessary to engage people who are advocates of low carbon behaviour at a lower level and promote what they are doing to the rest of the business, which is where the role of energy champions can be useful.

### **Incentives**

- 2.38 Engagement is ultimately a voluntary action and people need to be interested in programmes of carbon reduction. Offering incentives to people to demonstrate low carbon behaviours should involve making sure that incentives are properly related to the targets, for example, BT are considering giving away packs of energy saving gadgets and the BT award given to the Head Chef for his energy saving efforts in the HQ kitchens was vouchers for an environmentally friendly store. Offering something of benefit to staff guarantees that they will be interested, but there is a difference between incentives and bribes; incentives can work as a form of recognition for low carbon behaviour, whereas bribes will not foster genuine interest in programmes.

### **Future plans**

- 2.39 One manager we interviewed raised the importance of setting energy targets, but recognised this can be difficult in a matrix organisation, where a building will be filled by staff from different bits of the company. He suggested that setting energy targets for buildings and introducing an element of competition between buildings rather than business divisions could be useful:

*'We could take our main buildings in the UK and make a competition out of energy reduction. If you create more targets on top of tough work targets, people won't welcome them, but competition is something more fun'.*

## Key learning points

- Engaging staff in low carbon activities in a large organisation requires structuring a programme that enables them to form an identity with a smaller unit, team or division rather than the whole company, through building social affiliations.
- Engaging staff in a highly mobile and dispersed workforce can be challenging. Using web-based technologies in an ICT company helps to ensure reach but cannot guarantee engagement with and understanding of the messages that are being communicated. Smaller, local level teams and champions can be helpful in engaging individuals meaningfully through face to face communication.
- Communication fatigue can be managed through aligning the timing and content of messages about low carbon behaviours with changes in schedules and external media stories.
- Giving staff the opportunities and permission to contribute to programmes aimed at reducing carbon consumption is important in large organisations which usually take decisions on change at senior levels within the corporate hierarchy. To engage people in low carbon behaviours, it is necessary to let them self organise and not over regulate. Set up a framework for staff to work within, i.e. Energy champions or Carbon Clubs and then let staff come up with ideas.
- Make activities as enjoyable and entertaining as possible and avoid too much form filling.
- Low carbon activities can take time to embed and organisations must persist with them. BT stress the need to be 'human' about these initiatives and *'put passion into it and know you are doing it for the right reason, rather than simply focusing on targets'*.
- BT is a goal and target-driven company and recognises that unless priority is given to activities, they risk being sidelined. Some people are motivated by goals and targets and others are turned off by additional targets alongside heavy workload pressures. However, if staff are asked to deliver energy savings as part of their job, then it can become embedded in day to day routine. It becomes part of the culture and there is an understanding that this is the behaviour that the business expects. This suggests a delicate balance between the use of targets and the expectation of participation in low carbon activities, with these becoming akin to typical role expectations such as punctuality and attendance.
- It is necessary to find a motivation or a reason for staff to change behaviours. For example, identify individual motivations for attending training and try to meet those motivations. As different perspectives will appeal to different people, try and find this motivation for each individual if possible. BT as an organisation is comfortable with the mixed message that environmental sustainability is important in its own right but can also support cost saving to improve company financial performance.

- While the focus should not be completely upon targets, BT advises that it is important that organisations communicate the results of efforts to staff. BT is well practised in sharing strategic corporate results in sustainability but this communication can fall at local or national level in communicating the success of individual projects led by staff. Communication of this type is necessary to support the perception that individual or team effort can contribute towards larger, organisational wide achievements, in order to encourage all staff to make a contribution. Attaching savings to the initiatives is also important as it puts it into context for people and shows how *'every little bit counts towards the bigger picture'*.

### 3 COCA COLA ENTERPRISES

This case study provides an illustration of the patience required from organisations when introducing sustainable low carbon practices. This organisation introduced some infrastructure changes which helped reduce the need for people to make choices in their behaviour. They also provided ongoing and repeated communication about goals and progress to help raise awareness, break habits and sustain individual behaviour change. Key staff developed a belief in the purpose of the changes introduced, which helped them to feel confident and influence others.

#### Background

- 3.1 Coca Cola Enterprises (CCE) manufactures, sells, and distributes soft drinks for the Coca Cola Company. The workplace of interest for this case study is a manufacturing and distribution site located in East Kilbride, which has been in operation since 1964 and employs 181 workers. It operates on a continuous shift system 24 hours a day, five days a week, with three early shifts, three late shifts and one night shift. There is also a day shift of managers and operations support functions such as finance, planning and quality. There are four production lines and the plant makes 17 million cases of bottles a year. The site has a reputation for innovation in working methods and high performance within the wider organisation.
- 3.2 The company has a commitment to sustainability with a target to reduce CO<sub>2</sub> emissions by 15 per cent by 2020. This is part of the firm's aspiration to be a 'healthy' company as the firm stresses that reducing CO<sub>2</sub> emissions contributes to human health through improving the quality of our environment and supports a twin commitment to improving health and safety at work.
- 3.3 One of the initial drivers to reduce carbon emissions was the Climate Change Levy (CCL). This offers discounts to companies in return for meeting energy or carbon use reduction targets. Over time, the importance of embedding corporate values has become more important than saving money, as the company has placed more emphasis on its commitment to human health together with its commitment to best practice to reduce energy consumption. In a recent restructuring, the role of Environment Manager was created to place even more focus on energy use reduction and recycling in one role.
- 3.4 CCE has benefited from external support from the Carbon Trust whose staff have conducted surveys of the site to provide support on gathering baseline data and highlighting potential areas for improvement. It has also made investments in technology to support behavioural change. The implementation of new technology or new machinery is usually conditional on a one year pay-back period. However, green technologies are given up to three years to recoup the costs. The company recognises though that infrastructure changes alone are insufficient:

*'There's only so much you can do with hardware and bits and pieces. If you don't reach the people behind it, you're just wasting your time.'*

- 3.5 The focus for CCE now is to maintain and reduce carbon consumption, waste and emissions by concentrating on behaviour change. Managers feel this is a harder task than some 'relatively easy' achievements by changing infrastructure and hardware.

*'it's me now that has to do the tweaking bit and it probably is a bit harder for me as the big ones have all gone now. It's now looking at behaviour and what we do just to get little ones.'*

## **Low carbon initiatives**

### ***Energy monitoring and reducing energy consumption***

- 3.6 This site had started using energy monitors several years ago as a way of assessing water and electricity consumption. It has been able to share the data collected with the Carbon Trust and identify areas for reducing consumption. The monitoring systems measure how much energy is being used, where, and by which machines. This enables managers to identify when machinery has not been turned off. The monitors now produce reports automatically and managers have been able to use this information to save thousands of pounds by identifying which machines could be shut down for the weekend. Using the correct shut-down procedure is a behaviour that has had to be instilled in the staff and managers have tried to make it a habit. The weekend shut-down has become a routine on the site, so managers are now aiming to maintain consistent performance.

*'If it's a couple of hundred pounds more at the weekend, we're actually now challenging that and questioning it, whereas it would have been thousands of pounds before... And that system became so good that you can tell when people are leaving lights on and it enables us to challenge that.'*

- 3.7 Reports are sent out by email each Monday and highlight locations where energy use has been higher over the weekend than expected requiring the manager of each area to explain why has occurred.
- 3.8 In addition to these employee-focused initiatives, CCE has invested in infrastructure technology to help save energy. This includes voltage optimisation which reduces incoming voltage to avoid energy consumption which is not essential for running the production line. The projected energy savings range from three to 12 per cent. The firm has also installed LED lighting to replace office and walkway lighting, and motion sensor lighting; it expects that this will achieve a 15 per cent energy saving and use fewer bulbs so creating less waste.

## **Zero waste to landfill policy**

3.9 The site has been making steps towards reducing waste since 2006, but in 2009 it received a visit from the Scottish Cabinet Secretary for Rural Affairs and the Environment who enquired about the firm's waste strategy. Following this visit CCE made a commitment to send zero waste to landfill. Most waste is now recycled and 6.5 per cent goes to incineration to create energy from waste. Some of this has been achieved through structural changes such as providing recycling bins, but much of the change relies on the cooperation and behaviours of staff.

3.10 Two major behaviour changes were required from staff. The first was to segregate waste on site which makes it cheaper to be collected for recycling. The second was on the glass bottling line. Instead of recycling bottles that have been over- or under-filled, workers are required to empty the bottles and put them back into the production line. Managers identified that this could provide a significant cost saving:

*'there's no reason why the bottle can't be emptied and re-used, which has got to be a critical behaviour change. I think we could save 80 per cent of waste glass as a reasonable, conservative figure because about 80 per cent of that loss is bottles that have just been put in skips because it's easier than putting them back on the line.'*

3.11 Although the change is a simple one, it is not as quick as throwing the bottle into the recycling and managers recognised that it would require initial explanation and negotiation with staff before the behaviours became embedded:

*'It's not going to be a case of, do it, this is the way it's done, it's showing them where the losses are and if we work together, if we get a commitment from them ...gradually build that up, to try and build that new bit of the culture'*

3.12 As well as recycling waste produced on site, vending drivers bring recyclable waste back to the site and sales staff are given recycling boxes for car boots to discourage landfill waste disposal away from the site. CCE also has a policy of dealing with waste onsite which helps to save transport costs and consumption. Plastic waste is shredded on site which takes up less room and therefore requires less frequent collection by the recycling service provider.

## **Fuel Efficient Driving**

3.13 CCE incurs significant costs in product distribution and has sought to minimise these through changes to transport behaviours and methods. It has used the skills of a driver who undertook Safe and Fuel Efficient Driving (SAFED) training outside work and paid for him to qualify as an HGV SAFED trainer and deliver the training to the other HGV drivers. The training has also been delivered at other sites. Data collected showed potential savings of between eight and 15 per cent of fuel costs from fuel efficient driving, and in addition, the different driving style results in less wear and tear on engine

parts so they need less frequent replacement. At the end of one training session with an HGV driver, the worker recorded a 25 per cent improvement in fuel economy and a reduction of 66 per cent in gear changes. Managers are also trying to change other behaviours among HGV drivers including not leaving engines idling to heat or cool the cab while preparing to leave. Drivers who are part of the vending team have also undergone similar training to help reduce fuel by changing their driving styles, plan their routes more efficiently and reduce fuel consumption through carrying lighter loads.

- 3.14 As part of the Corporate Responsibility and Sustainability Week, the SAFED qualified driver delivered a version of this training to volunteers from the rest of the workforce for use in commuting and leisure travel. Nineteen staff took part in 2010 and a further ten took part in 2011.
- 3.15 Drivers who are members of the sales team are eligible for a sales bonus based on fuel saving performance. Managers measure the fuel consumption of each driver using fuel and mileage records and distribute a share of team savings in fuel compared to the same month in the previous year. This incentive scheme is self-funding and has no additional cost to the company.
- 3.16 To accompany these employee-focused initiatives, CCE has also made changes to transport methods to reduce carbon emissions. It now uses trains rather than trucks when transporting products and has set up a backhauling system for drivers from other companies to pick up goods on their way past the site. It also invested in new fork lift trucks which have more efficient engines and energy saving tyres leading to fuel cost savings.

### **Process of implementation**

- 3.17 CCE has used different methods for implementation for each of the initiatives. These include education and training, including presentations, toolbox talks<sup>1</sup> and workshops within working hours where staff could contribute ideas for ways to manage waste segregation. CCE runs practical training sessions for drivers under their continuing professional development scheme and lead to a Certificate of Personal Competence.

*'it's not going to be a case of, do it, this is the way it's done, it's showing them where the losses are and if we work together, if we get a commitment from them that maybe 60 per cent [of the currently wasted bottles] will be re-used in the first year and gradually build that up, to try and build that new bit of the culture.'*

- 3.18 Feedback and encouragement, including rewards and incentives were important for some roles where expectations about rewards were engrained among particular segments of the workforce. This was particularly true for drivers.

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<sup>1</sup> A discussion conducted by supervisors with their team, on specific subjects such as health and safety. These are a regular feature in construction and manufacturing settings.



*'We need to give them the proper feedback and encouragement that if they are showing those behavioural changes then they deserve encouragement and reward for it.'*

- 3.19 Training provided to encourage fuel-efficient driving has taken advantage of existing competitive attitudes between drivers and depots. Drivers are now keen to see who can achieve the best fuel economy and information spreads informally about how much savings drivers are making which acts as an incentive for other drivers. However, managers in some teams without a strong bonus culture had reservations about appealing solely to bonuses as a way of creating behaviour change. They would prefer workers to change their behaviour as a result of acquiring additional pro-environmental beliefs.

*'The environmental argument sends the right message, because not generating waste is a source of personal pride, I think. The longevity of the site by showing the correct behaviours and saving the money at source is how, I think, you sell that message.'*

- 3.20 Managers stressed that face to face discussion was integral to behaviour change. They talked to individual staff about how and why workers engaged in particular behaviours, for example why workers were throwing bottles into waste units rather than recycling them. This gave managers an opportunity to discuss and challenge the behaviours.

- 3.21 As a result, CCE gave some thought to how to make adverse behaviours more unappealing and more difficult than sustainable behaviours, by making it take longer to throw an item away than recycle it. They also tried to raise staff consciousness of environmental sustainability as an issue to think about in daily routines. One manager gave the common example of energy use that:

*'if somebody walks into the office and the light's on, just try and make them think well, why is it on? Has there been somebody in? Does it need to be on?'*

- 3.22 Lastly, managers stressed that implementation of low carbon initiatives could take a long time. For example, it took five years to achieve the goal of zero waste to landfill and absorbed quite a lot of management time to implement it successfully.

*'20 per cent of my time was spent analysing wastes, waste streams, speaking to people, educating them.'*

- 3.23 In addition to management roles in enforcing top down change, staff are able to make suggestions for improvements and an 'instant report system' is in place to enable this. Staff complete a form for reporting safety and environmental issues and includes space for suggestions of how they can be resolved. Forms are reviewed daily by the relevant managers to identify solutions and give feedback to the worker about whether or not suggestions can be implemented.

3.24 Most of the responsibility for implementation of the low carbon initiatives has been held by managers. CCE deliberately decided not to appoint individual workers as environmental champions on this site because safety representatives have taken on sole responsibility for reporting safety issues and the firm wanted all workers to take personal responsibility for environmental behaviours. Instead activities are co-ordinated by a manager responsible for environmental issues. He works in co-operation with the rest of the management team and staff and took the lead on the ongoing monitoring of energy consumption and waste generation, as well as initiatives to reduce it.

### **Staff responses**

3.25 Managers have a responsibility to reduce costs, overheads and CCE's environmental footprint embedded in their personal objectives. This has led to easy acceptance of the importance of low carbon behaviours among this staff group. They have a commitment to these measures and champion it with their staff so they work in cooperation with the Environment Manager and are supportive of the changes, because they recognise the importance of saving money for the organisation.

*'For me there's a change in my behaviour. I think about it a bit more, what I'm doing.'*

3.26 Some drivers were reluctant to change their driving styles, in particular the vending drivers, who thought that it would take them longer to make deliveries. Managers were able to allay these concerns with data collected about the impact of changing driving styles on route times, and also offered the bonus to help overcome initial fears. HGV drivers did not receive incentives but managers pointed out that adopting the changed styles would reduce fuel costs when driving outside work. Drivers were initially reluctant to adopt the behaviours using company vehicles but applied the fuel efficient driving techniques they had learned outside work in an effort to save their own personal fuel costs. These behaviours then spilled back into driving styles when using company vehicles. Among other staff, there was a very positive response to the driving training sessions as part of the Corporate Responsibility and Sustainability week and staff commented that *'there was a lot of buzz in the canteen about it.'*

3.27 Staff gave examples of how the initiatives at work had made an impact on behaviours outside work. One worker had just bought a hybrid car, in part because of the awareness of carbon emissions he had developed at work. The fuel efficiency training was also expected to have benefits for people outside of work.

*'One employee travels 40 miles here and 40 miles back so that's a lot of money for him, plus he's getting rewarded here in work as well. It's not exactly rocket science, it's just simple things. They can go and tell their wife, their son-in-law, their cousin or whatever and everybody can benefit from it.'*

3.28 Managers also hoped that the work they do on site to educate people would translate into the home life of their staff, for example through heightened awareness and adoption of recycling.

### **Key challenges**

3.29 CCE has found it more difficult to persuade frontline staff to change behaviours compared to managers. It has taken considerable management effort to persuade staff to commit to segregating waste or turning off machinery and for drivers to change their driving style in the long-term.

3.30 In order to reduce the amount of landfill waste, CCE has made progress each year by a mixture of embedding desired behaviours and introducing new methods. Progress was made by re-emphasising the need to recycle and moving the recycling bins to more convenient locations to minimise effort for workers. Managers now lock the general waste compactor outside the hours when it is supervised by the cleaner so that it is not used for disposing recyclable waste. The site has also continued to provide training and education for all staff as improvements to recycling and waste disposal are brought in and to support drivers to maintain efficient driving techniques. These changes have helped to make desired behaviours as easy as possible.

3.31 Communicating new ways of working can be a challenge for managers, but having a sense of personal commitment appears to improve individual perceptions of their own power. One manager spoke of 'believing' in the environmental message that he was trying to get across which made him confident that he would be able to 'sell' the message.

3.32 CCE also found that choice of language and measurements that workers can relate to was important. For example, leaving the lights on at the site at the weekend uses the same amount of energy that would power a family home for three months. Units of measurement are chosen to reflect domestic power use, which also helps to emphasise the scale of power consumption:

*'If you say that's four megawatt we've used this week, they just look at you like you've got three heads. If you actually say it's four million watts, give big numbers and they go, hmm.'*

3.33 One of the main challenges that CCE now face on this site is maintaining the work that they have done already. There are not as many 'big wins' left to achieve so the firm is focussed on maintaining behaviour change regardless of levels of production activity. Analysis of energy consumption shows that when production increases, unnecessary energy use occurs and waste is generated. Managers believe that this occurs because agency staff are brought in to supplement the existing workforce, and these workers are not as familiar with the behaviours required. Using permanent staff and line managers as the 'eyes and ears' of the environment manager has helped to tackle incorrect behaviour straight away.

- 3.34 Teams also bear the consequences of lapses in behaviour. For example when production staff contaminated a waste bin with material that could have been recycled, the manager asked the team to re-sort the waste properly. The team did not want to have to do this again so they will now challenge anyone seeking to dispose recyclable waste to landfill bins.
- 3.35 Incentivising teams has required a process of trial and error. There is a risk that competition across shifts could drive negative behaviours which would not benefit the site as a whole. There is little point in one shift scoring well on all three performance indicators at the expense of others. CCE tries to address this by communicating best practice between shifts and workers enjoy the competitive dimension of implementing best practice techniques.
- 3.36 CCE does not 'name and shame' individuals as managers have found that being singled out by management for leaving lights on can cause lack of co-operation. They report problems instead to team leaders who place collective responsibility across the team.
- 'We tend not to go right down to individuals because it can be counter productive sometimes when you start highlighting an individual by name. It sometimes has a negative impact on them; I'm not touching anything in future.'*
- 3.37 The plans to introduce motion sensitive lighting within all office space should also eradicate this problem.
- 3.38 An additional barrier faced at this site was in implementing the weekend shutdown. Some machinery did not start properly after the shut down which made staff reluctant to turn it off again. By monitoring the weekend's energy consumption, managers became aware of the problem and overcame it by carrying out maintenance work to ensure the technology functioned correctly.
- 3.39 It is sometimes difficult to release staff to take part in voluntary initiatives. For example, it was difficult to accommodate higher numbers of staff in the fuel-efficiency commuter driving training as their roles had to be covered while they were training.
- 3.40 CCE recognises that it will not be possible to achieve zero waste entirely since some materials on site cannot yet be recycled. These include foil crisp packets and paper hand towels. The firm is required to use the latter to meet an ISO quality standard for food hygiene in manufacturing. These waste materials are sent to waste-to-energy incineration.

### **Evidence of impact**

- 3.41 This site successfully achieved its goal of sending zero waste to landfill in 2011. In 2006 the firm sent around 200 tonnes of waste to landfill, which reduced to 103 tonnes in 2007, 83 tonnes in 2008, 63 tonnes in 2009, and 23 tonnes in 2010. Since January 2011, CCE has sent no waste to landfill and achieved 99.3 per cent recycling; 0.7 per cent being used to generate energy.

- 3.42 The site has also successfully reduced energy consumption. For example, the site will produce 17 million cases of drinks in 2012, using 2 million fewer kilowatts of electricity than in 2011, although it is not clear how much of the reduction is attributable to infrastructure versus behavioural change.
- 3.43 The company initially saved 10 per cent fuel when it introduced energy efficient driving to HGV drivers. In the year up to December 2011, delivery drivers had saved 2111 litres or 4.8 per cent of normal fuel consumption, which saved the organisation £2,132.11. The sales team delivery drivers saved 635 litres (9.3 per cent) over one month, at an average fuel price in 2010 of £1.01 which gave a bonus pot of £641 worth around £50 to each driver.

### **Critical Success Factors**

- 3.44 The critical success factors identified for the low carbon initiatives at CCE include:

#### ***Values***

- 3.45 Instilling shared environmental values in individual employees or across teams was deemed to be essential for initiatives to succeed. This includes a need to persuade staff of the value of changing their behaviours.

#### ***Workplace Culture***

- 3.46 Tapping into existing workplace culture where a sense of competition is present – the site has a sense of collective pride and strives to be the best, beat targets and be innovative. The use of incentives must be carefully considered and fit existing cultures of the relevant work groups, without alienating other groups in the organisation. Motivating staff and management through rewards should ideally work in parallel with values-based change.

#### ***Communication and Information***

- 3.47 Putting information in language people understand/can relate to – this is not always easy to do, but it makes the information more powerful in its impact.
- 3.48 Giving staff information to motivate behavioural change and show its impact helps to persuade them through raising awareness of costs and benefits, including, for example, the negative consequences of not recycling. For example, giving information to drivers about how much fuel they are saving and how little extra time it takes helped convince them to alter behaviours.

#### ***Infrastructure***

- 3.49 Staff must be given the right tools or facilities to make behaviour change easy e.g. through location of recycling facilities.

## **Organisational Brand**

- 3.50 Building an environmental brand – information from newsletters and magazines illustrates what the company is doing to be more environmentally conscious throughout its workplaces.

## **External Support**

- 3.51 External support through the supply chain network has been helpful in generating new ideas for waste reduction. CCE has benefited from support from waste disposal and recycling contractors to suggest improvements. CCE has also used the Carbon Trust to conduct audits and help create action plans.

## **Future Plans**

- 3.52 This site intends to make further progress to reduce its carbon emissions. One aim is to maintain consistently low energy use. The zero waste to landfill policy has successfully reduced waste production and increased recycling but the site intends to continue its efforts in these fields. Managers will re-emphasise the 'reduce, re-use, recycle' mantra and focus on reducing the amount of materials the site consumes. It also seeking to reduce the road miles associated with processing recycling and waste. One plan to address this is to use glass crushers on production lines so that waste glass takes up less room and does not have to be collected as often. New sizes of cardboard baling machines are being acquired and a new recycling contractor will be used so that the waste can go straight to recycling, rather than involving an extra journey to be re-baled. There are plans to use no cardboard in trays of bottled drinks. This has required some technical development to make sure the bottles are stable without trays. Managers are also considering the feasibility of sending some waste products to pig farms.
- 3.53 CCE is also starting to share experiences of good practice with a local whisky plant, which has benefited from the support of Scottish Enterprise and has involved mutual learning visits and is also extending to joint product marketing.

## **Key learning points**

- Major change and achieving a zero waste to landfill policy has taken five years to achieve, because changes made have been sustainable for the long-term. Organisations need to be patient and committed to achieve changes on this scale: *'don't be too ambitious. Don't try too much at one time... And be patient. It doesn't happen overnight; we've been at it for years. Some things are easier than others.'*
- Ongoing and repeated communication through line managers is important to raise awareness, break habits and sustain individual behaviour change among staff.
- Investment in technology such as motion sensitive lighting can help remove the need for people to make choices.

- Connecting higher level corporate values with perceptions of appropriate role behaviour for individual workers requires an ongoing education process.
- Development of personal beliefs in the purpose of change among key staff such as line managers is helpful in improving their confidence and belief in their abilities to influence staff.
- Make use of the spillover effect of behaviour change at work to home and also from home to work.
- Customising motivational arguments for change to make them compatible with workplace and individual team cultures is important and can involve a process of trial and error. Cost and benefit arguments may need to illustrate personal rather than organisational benefits to front line staff and environmental targets may need to be aligned within performance management systems.
- Reducing barriers to behavioural change through making it as easy as possible to adopt the desired behaviour is helpful in tackling individual objections to change.

## 4 COMMERCIAL GROUP

Commercial Group is an interesting case study for a number of reasons. Firstly, it is an example of a company that has achieved a fairly radical environmental transformation in a short period of time. Commercial only began considering low carbon initiatives in 2006 but over the past five years has moved to a position where green issues are now at the core of their business. Normalised carbon emissions have fallen by around 75 per cent since 2006 and waste to landfill has reduced from nine tonnes a year to less than one.

Secondly, Commercial's green strategy puts a great deal of emphasis on staff involvement. The company uses a number of mechanisms to involve staff both in implementing green projects and generating ideas for new schemes. In particular, Commercial has experimented with a number of methods for maintaining enthusiasm and momentum in the initiatives. Staff surveys indicate a high level of engagement with the firm's carbon reduction programme.

### Background

4.1 Commercial Group is an office supplies and procurement company, founded in 1991 and based on a site in Cheltenham. The company's founders remain on the board. It currently employs around 170 people and is in the process of expanding. Commercial's customers are primarily other businesses to whom it provides four main sets of services: Office supplies, office interiors, IT services and support, and printing.

### Low Carbon Initiatives

#### *History*

4.2 Commercial's carbon reduction programme began in 2006 when the Sales Director (who is also one of the company's founders) attended a talk by Al Gore and a screening of 'An Inconvenient Truth'. The event was one at which clients and other key firms in their sector attended and was intended to have a networking purpose as well. Commercial had always prided itself on being a 'responsible' firm in how it operated, emphasising the quality of services it provides and ensuring staff were well looked after and rewarded. However, the talk alerted her to green issues as an area that a responsible company should be aware of:

*'I walked in, quite happy, feeling great about the business. I thought we had a responsible business. We looked after our staff well. We didn't keep all the wealth to ourselves... and I came out of that talk, thinking, holy cow, we are not quite like I thought we were. We didn't do anything about the environment. We didn't recycle anything. It was one of those epiphany, stab through the heart moments. I came away from that [thinking] we've got a responsibility. We are a proud organisation... so we should be doing something. If we're not doing something we're not a responsible organisation' – Sales Director*



- 4.3 Alongside the consideration of green issues as a moral imperative, the company was motivated to engage in low carbon activities due to potential business benefits. Given that the products the company sells (paper, printer cartridges etc.) and services they provide (particularly IT) are key sources of business waste and energy usage, it was anticipated that there would be increasing interest in reducing the environmental impact from both customers and regulators. Greening the business would potentially be a source of competitive advantage in the future.
- 4.4 Low-carbon activity has evolved over several stages. A small informal team was assembled to develop a plan and as part of this a member of staff with interest in green issues was seconded to act as an Environmental Strategist. They spoke to a number of organisations involved in providing low-carbon advice and guidance. In addition to larger infrastructure and technical projects, the team was encouraged to look at smaller, more behaviour oriented projects. One team member suggested a bike to work scheme, another suggested introducing double sided printing and set up a system for filtering out junk faxes and a third member suggested replacing disposable paper cups with tumblers.
- 4.5 The plans were then launched more widely across the company and externally. Commercial ran a Corporate Social Responsibility day to advertise their success so far and their intentions to customers. The night before they held a film night showing 'An Inconvenient Truth' which was compulsory for all staff, and outlined their plans to staff. At this stage they had a number of small teams in which staff could get involved on waste management and carbon reduction, allowing staff to make suggestions to identify and deal with inefficiencies within the firm.

### ***Low carbon projects***

- 4.6 After a year and a half of small teams leading low carbon activities, the company found these had got somewhat stale and so they launched the **Green Ambassadors scheme**. This was an initiative to help employees reduce their carbon emissions (and by extension their fuel bills) at home. The scheme was voluntary and involved providing employees with advice and assistance to reduce their emissions and employees making commitments to undertake specific actions. The aim was for the actions to be as easy and achievable as possible and ranged from installing cavity wall insulation, to working from home or walking to the shops. Employees were asked to fill out questionnaires relating to their energy usage at the beginning and end of the scheme and scored on their environmental behaviour. Green Ambassadors had a community focus, encouraging staff to share the advice and support they received with people in their area. For example, one employee helped their neighbours get cavity wall insulation. The project lasted a year and ended with the most successful employees receiving prizes. After around a year it was felt the project had achieved its main objectives of helping employees reduce emissions and fuel bills and so they put the scheme on hold.

- 4.7 The current flagship scheme is the **Green Angels project**. Green Angels teams are groups of staff members selected every six months to undertake a project of their choosing which contributes to one of Commercial's social and environmental commitments. The purpose of having a constantly changing Green Angels team is to maintain enthusiasm and prevent the initiative from going stale. Projects have full backing from senior managers and board members but are entirely controlled by the employees on the team. Each team is made up of different members of staff. Two Green Angels teams had been run at the time of the case study, the first had focused on the commitment to reduce waste to landfill to zero. They expanded recycling in the company to include an additional two waste streams and took a number of steps to increase awareness of recycling. First they improved signage around recycling areas, secondly they ran a day which included workshops on recycling. The second focussed on a more social commitment – caring for others less fortunate than ourselves.
- 4.8 In addition since 2006 Commercial has made a number of investments in technology and infrastructure which also shape staff behaviours. Most notable is a **biodiesel pump** which is used primarily for the company's own fleet but is also available to staff for their own cars. Commercial help staff driving diesel cars to find information on the correct biodiesel blend required for their vehicle. This information is stored on the pump which employees can access using a key fob. The cost of bio-diesel for private use comes directly out of staff salaries. There is no large disparity in costs between bio-diesel from the Commercial pump and normal diesel. Depending on the fluctuation of forecourt fuel prices, the bio-diesel can be either slightly cheaper or slightly more expensive. Other examples of material measures include a covered bike rack, lighting which responds to external light levels and movement and multiple recycling stations.
- 4.9 Commercial has a **bike to work scheme** through which employees can receive a loan towards the cost of a new bike. Employees can request money towards a bike and assorted equipment (for example lights, helmets and bike locks) which they then pay back from their pre-tax pay over twelve months. To facilitate cycling, Commercial constructed a bike shelter on their premises and there are also shower facilities available.
- 4.10 On a more day-to-day basis Commercial attempt to reduce waste to landfill by **recycling extensively and re-using packaging wherever possible**. They have made it policy only to use new packaging where this is specifically requested by a customer. Commercial currently has a recycling rate of 99 per cent for paper, wood and metal and a packaging reuse rate of 95 per cent.
- 4.11 Additionally staff are encouraged to use public transport wherever possible to attend meetings. It is company policy that staff should use public transport where this is a practical option, although the policy change followed widespread voluntary uptake of public transport amongst staff.

## Process of implementation

### ***Building staff awareness***

- 4.12 The use of set-piece events, special days and project launches has been important. There is a particular emphasis on making these kinds of events as enjoyable and involving as possible. The staff screening of 'An Inconvenient Truth' helped launch the low-carbon programme within the organisation. This had an important impact, not necessarily due to the message of the film but because the event itself made staff realise that the company was now intent on taking green issues seriously. By holding a high profile all-staff event Commercial immediately raised the prominence of environmental concerns in the workplace.

*'It's when we had the screening as a company of The Inconvenient Truth... It was one of those things where we were all told, we want you to come to this; you have to come to this. And we'd all been, oh, what's this, and I'm not really interested; got there, watched the film, and I know that impacted everybody' – Employee*

- 4.13 There is a strong emphasis on communicating messages in ways that are fun. The recycling activity undertaken by the first Green Angels team was as much about making staff aware of what needed to be done in relation to recycling as anything else. The team developed a number of ways to communicate the recycling message, for example through improved signage and a recycling game. The game was a relay race which involved splitting employees into teams each with a pile of rubbish. The teams had to place items of rubbish in the correct recycling bin as quickly as possible. The winning team was the one that recycled the most items correctly in as short a time as possible. Employees were extremely enthusiastic about the game which appeared to make a big impact on their willingness to recycle.

- 4.14 Similar methods were employed when promoting cycle to work schemes:

*'When we were launching the Cycle to Work Scheme everyone came in, it was a bit of a laugh, we had some bikes and we tried some of these electric bikes, riding up and down. And we engaged everybody on a playful level; it's not too serious, it's not just sitting there being lectured to' – Employee*

- 4.15 Additionally word of mouth appears to be important. In particular there was no large scale launch of the Green Ambassadors scheme, just an e-mail inviting staff to participate and emphasising that the scheme would help them reduce fuel bills. The rationale for this was that because the scheme was about changing behaviour outside of work, the company did not want staff to feel they were being pressured into taking part. Most of the advertising for the scheme came from early participants being encouraged to share their experiences with colleagues, which raised participation from around 38 per cent of staff up to around 60 per cent by the time the scheme was closed. A similar approach was used in a recent effort to encourage increased uptake of the bike to work scheme; those on the scheme were asked to talk to their

colleagues about cycling to work and what they could get from the scheme. This kind of peer-to-peer communication appears to be very effective.

- 4.16 Given that Commercial is currently growing, introducing new staff members to the various schemes is important. New recruits receive an introduction to green activity in the workplace as part of their induction. This includes an introduction to what staff need to do e.g. relating to recycling, as well an explanation of the green ethos and values at Commercial.

### Staff responses

- 4.17 Generally staff were very positive about the green initiatives. Moreover staff engagement in the Commercial carbon reduction programme is high. A staff survey in 2010 found that over three-quarters of staff felt 'totally engaged' with the programme with the remainder feeling either very or slightly engaged. In particular they commented on the enjoyment they got from participating in Green Angels teams and in the activities that were organised by the Green Angels. Employees felt that the Green Angels scheme was conducive to a good organisational culture, making working more enjoyable and strengthening relationships between staff. The quotation below illustrates that success in building anticipation and a sense of excitement about initiatives through making them enjoyable, can build staff engagement.

*'[Does the scheme make work more enjoyable?] Yes, definitely. There's always that little bit of, oh, what are the Green Angels doing now? And I'm actually working very closely in location to two of the girls who are in the current team, and I'm always trying to listen in to what they're doing, just to find out, because you know it's going to be a really fun day' – Employee*

- 4.18 Among staff interviewees there was a particularly high level of enthusiasm for Green Angels, which appears to be because it is more or less exclusively staff-owned. As such it is a crucial part of engaging staff with the carbon reduction programme and maintaining staff interest in low-carbon activities alongside any effects of the individual projects.

- 4.19 Along with the fun element, a number of employees were enthusiastic about the fact that the schemes allowed them to 'make a difference':

*'Green Angels serves a great purpose for team camaraderie..but it is also good because of what it stands for' – Employee*

- 4.20 However, there was a difference between managers and employees regarding attitudes to climate change. A concern about climate change was one of the key reasons for senior managers instigating low-carbon activities. However, many of the staff interviewed, while not indifferent to climate change, did not see it as a reason to get involved in green activities in the workplace:

*'I think climate change is relevant but it's so big, how relevant is it to me at the moment? I think bringing it in locally... is the relevant part to*

*it... I'd like to make a difference somewhere else but the key thing is what I do here' – Employee*

## **Key challenges**

4.21 The main challenges identified in the interviews tended to be practical problems and waning enthusiasm for projects which had reached maturity.

4.22 One of the key practical problems identified by staff was a lack of time. Employees felt that non-involvement of some staff could be put down to people who were busy with high workloads.

*'There's always going to be people that get more involved and people that get less involved. I don't think that you can affect everybody equally; I think it depends on how busy people are and how much they take in, really... Family commitments, things like that, make a difference. But the majority of people do get involved' – Employee*

4.23 Commercial has made efforts to ensure that staff have the time to participate in projects, however. In particular staff are given time away from their normal activities to work on Green Angel related projects. This appears to reduce but not eliminate the problem.

4.24 The Cycle to Work scheme appeared to face particular challenges. Again, for the most part reasons for not cycling to work were practical reasons such as living too far away or personal circumstances:

*'I find myself making an excuse not to ride, to still get in my car because I've still got to take the kids to school'– Employee*

4.25 There appears to be a limited amount that Commercial can do on these issues. The provision of cycling equipment through the scheme removed the 'excuse' of not having a suitable bike but the weather, personal circumstances and distance from work are predominantly out of the company's control.

4.26 Additionally staff reported a lack of promotion of the scheme meaning that some of the initial enthusiasm had dissipated, and lower numbers of people cycling to work were partially the result of a lack of awareness of the scheme. In recognition of this, managers had been making some recent efforts to draw greater attention to the project and this appeared to be making some difference:

*'There was a bit of a push on it, because it had gone a little bit quiet recently. Aiden had a bit of a push a couple of months ago, and I know that there are a few people that got involved again and bought bikes, people that would drive normally'– Employee*

Despite these issues, in good weather around 45 to 50 members of staff (out of the total of around 170) cycle to work.

4.27 The waning of enthusiasm for schemes and the consequent reduction in their effectiveness was discussed in relation to other activities by senior management, in particular the original carbon committees:

*'[The first green committees] started to lose their lustre. It became a bit more a committee, and people were coming in and it was a bit of a whinge, and we didn't want it to be a bit of a whinge' – Director*

4.28 As noted above, the company has responded to this challenge by regularly starting new initiatives, as well as re-launching old schemes in an effort to keep low-carbon activity as fresh as possible. Moreover the Green Angels initiative is specifically designed to maintain freshness and enthusiasm. By focusing on relatively short projects and regularly changing team members it is hoped the initiative will not simply become 'just another committee'.

### **Evidence of impact**

4.29 Overall, Commercial has had considerable success in reducing its environmental impact. For example it has reduced its waste to landfill from nine tonnes in 2006 to less than one tonne in 2010 and the company's overall carbon emissions have reduced from 63.42 kg CO<sub>2</sub> per million pounds in revenue to 16.02 kg CO<sub>2</sub> in 2010. Recycling rates for paper, wood and metal are at 99 per cent and the reuse rate for packaging and cardboard is 95 per cent. However within these headline figures it is difficult to identify the particular contribution of staff initiatives over infrastructure initiatives.

4.30 There have been evaluations of particular schemes, in particular the Green Ambassadors in which participants were given a low carbon score based on their answers to a questionnaire. The questionnaire was administered at the start of the scheme and while participants were on the scheme. After six months, the average score rose from 46 to 56. On average those on the Green Ambassadors programme reduced their electricity consumption by 16 per cent and their gas consumption by 27 per cent. Additionally the scheme had a wider community impact, for example in stimulating behaviour change among neighbours in the wider domestic community. Overall the scheme was estimated to have saved 500 tonnes of carbon.

4.31 The bike to work scheme, as noted above, is highly sensitive to changes in weather. Nonetheless, in good weather around 45-50 staff have cycled to work this year and a recent commuting survey found that 18 per cent of staff regularly cycle to work. Additionally a number of interviewees commented that receiving money to purchase cycle equipment made them considerably more likely to cycle in than they otherwise would have been.

4.32 The impact of Green Angels activity is harder to quantify. The first Green Angels team added two new waste streams to recycling, which helped reduce waste to landfill but does not clearly show up in the waste to landfill data over and above other actions taken by Commercial. The impact of the Green Angels came out more clearly in staff interviews. Following the first Green Angels day, which focused on recycling, staff felt much more aware and

knowledgeable about recycling within Commercial which led directly to behaviour change.

*'because the guys made it so informative, and they made the game... it was such a fun element that now, I recycle, I put stuff where it should go, without even having to think about it. It's stuck in your mind and you know that you recycle' – Employee*

4.33 One employee admitted that prior to the Green Angels day she had not been particularly aware of the existence of some recycling bins, but following the Green Angels day she now recycled regularly. Similarly recent recruits felt their behaviour had changed since joining the company.

4.34 There was also evidence of changes in staff attitudes outside work. For example a recent recruit who discussed the biodiesel pump said he was considering buying a diesel car when he replaced his current vehicle:

*'I wasn't necessarily frowned upon for driving a petrol car, but ...There was an element of encouragement... to use biodiesel. You can see, evidently, from the tank outside that it's something as a company we take very seriously. I think from my perspective, I've taken on board a gentle bit of encouragement and perhaps upon my next purchase I could benefit from that' – Employee*

4.35 Similarly in relation to recycling, even employees who had recycled in the past felt they had extended their level of recycling:

*'It's almost as if the enthusiasm of what's going on at work then transcends into your home life, and what isn't difficult here, you go that extra bit further at home which is quite interesting' – Employee*

### **Critical success factors**

4.36 Critical success factors identified from analysis of the case study findings are:

#### ***Making green activity normal and habitual***

4.37 One of the most striking aspects of Commercial is the extent to which, low-carbon activity is a normal part of day-to-day life. Managers pointed out that it is important for low-carbon activity to not feel 'special' or unusual in anyway, rather the aim is to imbed this activity into the day-to-day working lives of staff. These norms make low carbon activity routine and help maintain low carbon activity. The role of these norms in shaping behaviour was acknowledged by staff.

4.38 The interesting question is, therefore, how Commercial went from being a company which did very little in terms of low-carbon activity to one in which it is a central part of daily life.

## **Leadership**

4.39 Undoubtedly one of the most important factors in the changes introduced by Commercial has been the strong and determined leadership at board level. Simply looking at the chronology of low carbon activities at Commercial demonstrates the central role that this leadership played in instigating low-carbon activity; in particular the early momentum came from a decision at board level to begin taking environmental sustainability issues seriously. More than this, however, leadership was identified as important in shaping values:

*'It's leadership as in this is who we are, this is our brand, this is where we're going, this is our plan, and we are going to execute this plan, so come on team, let's march' – Director*

4.40 The support for low-carbon activities at board level filtered down to employees, who understood they had the backing of those at the top of the company when they were engaged in low carbon activities. The support made staff feel that any suggestions they had on low carbon activity would be taken seriously by senior managers:

4.41 However, the emphasis was on leadership that enabled staff to participate rather than 'dictating' green behaviours to staff, this is central to the design of the Green Angels project.

*'[Green Angels is] not being led by director level. Initially, yes, it was but it's then fed down to every Tom, Dick and Harry really, and I think that's the important part - it's the fact that it's not being just beaten into you with a stick from up above to say, look, you will do this' – Employee*

## **Big events**

4.42 The role of big events in shaping norms was noted by managers. High impact events involving large numbers of staff have been used frequently by Commercial to launch projects. While these events do not necessarily have a direct effect on reducing carbon, they help 'set the agenda' for the company by raising the salience of green issues and also to generate momentum for the project. For example although staff were shown 'An Inconvenient Truth' at the start of the low-carbon initiatives, the aim was to run a high impact event that would clearly state Commercial's commitment to 'going green' as well as 'convert' people to the climate change cause. Rather than targeting individual beliefs the screening is arguably better understood as an attempt to shift the organisation's culture.

4.43 Large scale events were important in launching the carbon reduction programme to the workforce as a whole, however it should be noted that by the time of the launch, small scale initiatives had already got underway. Managers emphasised the importance of 'getting going' with green initiatives as soon as possible, even on a small scale. Events could then be used to widen the group of people involved.



## **Staff involvement**

- 4.44 Staff involvement was identified as a crucial element of Commercial's carbon reduction programme. The main impetus for starting the Green Angels project had two elements, generating staff support for the green initiatives and making use of staff knowledge and abilities to advance the scheme. Managers generally felt that involving staff helped increase support by making green activities something staff could control and contribute to rather than being forced on them. Among staff interviewees, there was a great deal of enthusiasm for the Green Angels project and of particular importance is the involvement of key or popular members of staff. Involvement of these kinds of people helped spread initiatives at a peer-to-peer level, this was used to considerable effect in increasing uptake to the cycle to work scheme. Furthermore the involvement of staff has expanded some projects, for example bringing two additional waste streams into recycling as part of the Green Angels project. Employees pointed out that the open and friendly culture at Commercial which existed prior to the low carbon initiatives this helped contribute to the initiative's success.
- 4.45 It is also important that staff receive time off to participate in green activities. Employees particularly emphasised that being given time off from duties to be able to participate in green initiatives was very important.
- 4.46 Staff involvement is also becoming easier thanks to Commercial's growing reputation as a low-carbon organisation. The director commented that increasingly applicants were choosing to apply for a job at Commercial because of the company's commitment to green issues. Although there is obviously no policy to only recruit people with strong environmental beliefs, there appears to be a trend in new staff coming to the company with an awareness and interest in low carbon activity.

## **Information**

- 4.47 Provision of information, advice and guidance about green activities was seen as important by both staff and managers. Some projects, such as Green Ambassadors, were almost entirely based on the provision of information and advice on how to reduce carbon emissions. Similarly the first Green Angels team focused on how to best communicate information about recycling to the workforce.
- 4.48 Commercial have used a range of methods to communicate information, such as seminars run internally or featuring an external speaker, information packs and online content. However, as noted above, managers tended to prefer encouraging peer-to-peer communication wherever possible.
- 4.49 Additionally, from the point of view of staff involvement, providing staff with information on progress towards targets was also cited as important. By doing this it was felt that targets become collective objective for which all staff are responsible rather than a management objective. When targets are reached, this becomes a success for the whole company.

## ***Fun***

- 4.50 Across all Commercial's green activities there is an emphasis on making activities as fun and as enjoyable as possible.
- 4.51 For staff in particular, the most important incentive – more so than any financial reward – was that the activities were fun and enjoyable to participate in. The Green Angels, in particular, aim to make their projects enjoyable. The best example of this is the recycling day organised by the first Green Angels team, rather than communicating information about recycling through lectures or information sheets the Green Angels ran the recycling game to help people remember what and how to recycle.
- 4.52 Additionally the Green Angels teams are designed to ensure they stay fresh and interesting. By having a constantly changing membership with small teams working on a project for a set amount of times it is hoped that Green Angels teams would not become stale in the way a team with fixed membership might.

## ***Infrastructure and equipment***

- 4.53 Material factors are also important and staff in particular emphasised that without recycling bins or the cycling equipment provided through the bike to work scheme, behavioural outcomes would have been quite different. In particular it was emphasised that the facilities available made it 'easy' to get involved.
- 4.54 Furthermore, it is important that facilities that are required to enable behaviour change need to be in place fairly early on in the process so that, for example, staff are able to recycle or have somewhere to put their bike at work. Failure to have facilities in place can cause a project to stall.
- 4.55 Aside from this, there is a strong symbolic effect of low-carbon infrastructure which feeds back into the social and cultural. The biodiesel pump on the forecourt, the multiple recycling bins, the lighting systems along with the boards throughout the premises reporting progress on waste, carbon emissions and so on contribute to a green 'ambience' throughout Commercial. They add to the sense that low carbon activity is both a core part of the company's identity and that low carbon behaviour is the norm.

## ***Incentives***

- 4.56 There were mixed views about the role of incentives, particularly financial incentives. Senior managers expressed concern that financial incentives could be divisive. In particular it was felt that the personal circumstances of some members of staff might prevent them from taking part in activities and exclude them from rewards. For example members of staff with children might need a car for the school run and cycling in to work would not be practical.

4.57 There were some incentives available to staff, for example a half day holiday and shopping vouchers for Green Angels participants but this did not seem to be a major reason for employees participating:

*'We were given a little reward at the end, we were given a half day holiday, we had some vouchers – but I didn't know anything about that, so I got involved purely because I thought that it was a really good thing to be doing' – Employee*

4.58 Senior managers felt providing recognition was more important than incentives, the rewards for Green Angels participants were framed more in terms of recognising a contribution than incentivising participation.

### **Policies**

4.59 Both staff and managers broadly agreed that coercive policies to encourage behaviour change were not particularly effective. The major concern was that being too coercive would risk 'getting people's backs up' and alienating them, making low carbon activities something they did grudgingly rather than voluntarily. Although Commercial have made some use of policy changes, for example on public transport and reuse of materials, the emphasis is on bottom-up changes leading to new rules rather than on top-down measures. For example, the policy change on public transport came about because a large number of staff were already voluntarily choosing to use public transport for meetings, largely because a senior member of the sales team had already begun to use public transport more often and was encouraging other staff to do the same.

### **Future plans**

4.60 Currently Commercial has a number of planned extensions to the initiatives. These include encouraging other organisations to take up the Green Angels model, providing information about the benefits of the scheme and advice on setting it up to interested businesses. Both staff and directors will be involved in this initiative.

4.61 Internally they discussed plans to try and integrate green initiatives into the company's HR system to ensure low-carbon behaviour is recognised:

*'We've got a performance management system now, so we've been doing a lot in HR, and the final part of jigsaw will be like a scoring system, and within that there will probably be a part on the environment that means that you can then get rewarded' – Director*

Beyond this the focus is on monitoring the current initiatives and refining systems to ensure they work as effectively as possible.

## Key learning points

- Taking a first step is important. Starting small scale activity as quickly as possible rather than spending time preparing to start activities can be helpful. Small scale projects help generate early momentum, even if they do not necessarily have a major impact on carbon emissions or involve large numbers of people.
- Leadership commitment has helped get the projects off the ground and still ensure momentum even as the pool of people involved has widened. Credible commitment at the top of the organisation has meant that staff at all levels have taken on board the message that low carbon behaviour is important.
- Staff involvement and engagement in the carbon reduction programme through team-based approaches to activities can generate a sense of enthusiasm and commitment among participants as well as acting as a method of peer to peer communication.
- Successful engagement of staff is at least partially reliant on making green activities enjoyable to participate in. Some staff may initially be keen to be involved as much because they enjoyed the activities as from desires to 'save the planet'.
- Maintaining enthusiasm has been a particular source of concern for Commercial and there appeared to be a widespread fear that engagement in green activities could become dull. The Green Angels model of a green team with regularly changing membership working on a specific project of their choosing is a particularly interesting approach to this problem.
- Big picture issues, such as climate change, are not universal motivations for participating in low carbon projects. For many interviewees the focus was on what could be achieved at a local level.
- Infrastructure and equipment can play a dual role by both facilitating green activity and acting as symbols contributing to a low-carbon culture. Equipment such as recycling bins and the biodiesel pump obviously enable staff to undertake low carbon behaviour that would otherwise be impossible but they also serve as very visual reminders of Commercial's commitment to low carbon activity.

## 5 EAE

EAE is interesting as an example of a small company in an industry that generates a considerable amount of waste that has introduced substantial changes to reduce its carbon footprint. There are a number of differences that can be observed with cases of larger organisations. For example, to a large extent EAE's approach to low carbon activity has not involved the kind of formal structures such as green teams and committees that have been present in other case study organisations. The EAE case demonstrates what can be achieved through strong leadership and a very pragmatic approach to low carbon initiatives.

### Background

5.1 EAE is a leaflet distribution company based outside Edinburgh with other locations north of Aberdeen along with 10 'home bases' in rural and remote areas of Scotland. Over the year they average around 47 staff, although this grows to around 54 in the summer (particularly during the Edinburgh Fringe Festival) and can fall to around 40 in winter. The company provides a range of services including leaflet delivery and display, marketing and design support and storage and warehouse facilities.

### Low carbon initiatives

5.2 Sustainability has been a key concern of the business since it was founded in 1987 and has it developed and evolved over the last 24 years. The Managing Director was aware that waste would be a major issue given the short shelf-life and disposable nature of the company's products. More importantly the Managing Director himself has a strong personal commitment to environmental issues and wanted to ensure his business was run in accordance with his beliefs. Recycling, in particular, was an important principle adopted by the business from its start. In recent years, EAE has widened the range of waste recycled and the infrastructure available to make the system more effective.

5.3 The firm's original commitment to sustainability developed further when the firm moved to its current base in Loanhead in 2005. With new premises and a 25 year lease, the MD felt that they could introduce larger changes and plan further ahead. The showers were installed to encourage cyclists and investments in larger projects went ahead. For example, a wind turbine was installed in 2007. Since this point, EAE have consistently sought to identify new areas in which they can reduce their carbon emissions. Their overall aim is to be carbon neutral by 2015.

5.4 EAE do not organise their low carbon activities as specific 'projects' but they pursue green activities in a range of ways. Effective recycling is an important objective for their sector. Recycling bins are provided for work related waste, general waste (drinks bottles etc.) and compostable material. Staff are encouraged to bring material for recycling in from home. For example, battery recycling facilities were provided before the legal requirement to provide such facilities was placed on battery retailers.

- 5.5 The firm has also improved the carbon consumption of their delivery fleet through investing in low carbon vehicles including an electric van and biodiesel vehicles and this has been accompanied by a greater focus on fuel efficient driving. They have used both internal and external resources to train drivers and all drivers are provided with a card containing fuel efficient driving tips. Eco-driver training involves the manager going out with drivers in the electric van for their first week, at first demonstrating how to drive efficiently and then taking to the passenger seat to observe the driver. Because the electric van needs to be driven in a more efficient manner (due to the need get maximum distance between charges), it is a useful learning tool for fuel efficient driving. The habits learnt from driving this vehicle can be transferred across to petrol vehicles.
- 5.6 Staff are encouraged to cycle to work with a £50 contribution from the company to pay for cycling kit. Additionally EAE installed showers specifically for those cycling to work.
- 5.7 The company also runs a staff suggestion scheme under which staff receive rewards of £50 for suggestions which help the organisation become more sustainable. Additionally, there is an expectation that staff have a responsibility to demonstrate low carbon behaviours on a day-to-day basis. For example lights are turned off and heating and hot water are used sparingly, signage reminding staff to do so is present and new staff are informed of practices in this area. However, for the most part this is maintained informally with staff and managers reminding each other. As will be discussed later, experienced staff find this behaviour to be almost automatic.
- 5.8 Finally, EAE have invested in a number of renewable energy infrastructure projects, the most prominent of which is a 15 metre high wind turbine. Although this equipment does not require staff engagement or behavioural change, EAE have attempted to engage staff with the turbine as much as possible, for example by reporting the amount of electricity generated by the turbine in the staff kitchen. The aim of this was to encourage a sense of ownership of the wind turbine among staff. Other high profile green initiatives include a biodiversity garden around the edge of the EAE site. The biodiversity garden features a range of native wildflowers and also attracts a considerable amount of wildlife including foxes, voles, blue tits, field mice, toads and frogs.

### **Process of implementation**

- 5.9 The Managing Director has been vital to the development of EAE's green activity and the majority of the green initiatives within the company appear to have come from his desire to ensure his business was run in a manner consistent with his beliefs.

*'I'm lucky I've been able to mould this company to reflect my own personal beliefs... If you've got your own business, why would you run it contrary to your own lifestyle?' – Managing Director*

- 5.10 Other staff and managers acknowledged the importance of the Managing Director and all were aware of his commitment to environmental issues. However, the schemes have also been helped by input from staff and managers, for example through staff suggestion schemes and managers taking charge of and developing specific areas such as fuel efficient driver training.
- 5.11 The company introduced fuel efficient driver training around two years ago and sought outside training from external organisations. One of these was a trainer who came in to talk to the drivers and the second involved the use of a driving simulator. Following this they set drivers a week long challenge to adopt fuel efficient driving principles to demonstrate how much could be saved, with some drivers improving their mileage by 10-15 per cent.
- 5.12 Due to management scepticism about the value of the external training, the firm has since largely relied on internal resources for driver training, particularly from the area manager for Edinburgh who also looks after the electric delivery van.
- 5.13 With the exception of the staff suggestion scheme, EAE do not have many formal mechanisms specifically for the implementation of green initiatives. For example, the Managing Director was fairly sceptical about the use of green teams and champions as a method for implementing low carbon activity, feeling that it was better to simply implement measures rather than spend too much time on procedures:
- 'We just get on and do it, instead of having a green team, like lots of other businesses do, they start off the wrong way round. They start with worrying about how they set up the protocols and the processes. It's very simple... just put the bloody bin out and say, look, recycle here. And if people don't then you just remove the rubbish bins' – Managing Director*
- 5.14 This reflects an approach where control of infrastructure is used deliberately by the organisation to limit the choices available to employees.
- 5.15 Managers also reflected that because EAE is a small company there may be less need for green teams and eco-champions. The Managing Director has frequent contact with most members of staff, making it easier for him and other managers to implement changes.
- 5.16 Much of the 'formal' action to raise staff awareness takes place at the point of recruitment. Staff are made aware of the expectations relating to low carbon behaviour when they come to interview and the environmental programme is incorporated into the induction process for new staff. They are also informed about schemes such as the cycle to work incentives and the staff suggestion scheme. The Managing Director noted, however, that increasingly new recruits are aware of EAE's environmental track record when they apply for jobs and many are attracted to the company specifically because of its green credentials. As low carbon activity is such a key part of working at EAE this feeds into the recruitment process and helps them select candidates who will

best fit into this ethos. Rather than having to invest in changing the values and behaviour of staff, instead the company is selecting employees whose values and attitudes are already consistent with those of the organisation.

- 5.17 EAE also report on the progress of green initiatives to staff through monthly staff meetings and the quarterly staff newsletter. This includes energy meter readings and wind turbine energy generation and staff are also aware of the introduction of higher targets for achieving reductions in the firm's carbon footprint, for example the aim to be carbon neutral by 2015.
- 5.18 Given the extent to which low carbon activity has been a core part of business for so long, staff awareness of low carbon practices is high and communication with long-serving staff is mostly informal. Managers occasionally give staff a 'gentle reminder' about, for example, recycling or fuel efficient driving technique when slips in behaviour are noticed. However, staff members are reported to remind each other to maintain low carbon behaviours.
- 5.19 Finally, more significant investment in infrastructure, particularly the wind turbine, has had at least some symbolic effect. While its main function is practical, the generation of electricity acts as a signal of EAE's commitment to environmental sustainability. The MD described the installation of the turbine as a 'tipping point' which helped generate staff enthusiasm for and awareness of green activity at EAE.

### **Staff responses**

- 5.20 Of the interviewees, managers tended to be slightly more enthusiastic than staff about the initiatives. Staff were not in any way opposed to the green activity but tended to see it as simply a duty that was part of their job, rather than an activity to which they had a deep personal commitment. One employee described how his initial reaction upon joining the company had been *'oh Christ, they're telling me I've got to do this now... I can't believe we've got to separate everything down and recycle it'* but over time he just got used to it, to the extent that now he felt it made more sense to recycle than to send everything to landfill. This reflects the fairly straightforward approach the company took to introducing recycling, of simply requiring employee compliance rather than voluntary participation.
- 5.21 Staff also appeared to be less concerned with the goal of mitigating climate change than managers (and particularly the Managing Director) were. Broader environmental concerns were not irrelevant to them but there were perceptions that the local level was most important – they were interested in what the company could do and how.

*'There will be people that do feel passionate about it [the environment], but I think if you pull it down to a lower scale, I think, or something that would affect them, I think then they would start paying attention to it, but on a grand scale I think it's just straight over their heads' – Member of staff*



- 5.22 Some affection among staff was evident towards elements of low carbon activity at EAE. For example there was genuine interest in the wind turbine, which has been dubbed the 'Windy Boy' by staff. Similarly a member of staff came up with the idea of putting the electric van in the Edinburgh Fringe Festival parade to advertise EAE both as a leaflet distributor and a green friendly company.
- 5.23 The greatest reservations identified by interviewees was among drivers being asked to drive the electric van. One manager felt that some drivers were uncomfortable with the attention the van gets around town. However the manager responsible for this area generally felt that it only took a small amount of persuasion to get drivers to accept the van. This may suggest that staff would benefit from some support in being confident to promote and explain why the van is being used to any curious road users.

### **Key challenges**

- 5.24 For both managers and staff, the activity with the biggest difficulty was encouraging staff to cycle to work and the primary barrier was the accident risks of cycling in Edinburgh and out to Loanhead. Every interviewee had either witnessed an accident involving a bike, knew someone who had been knocked off their bike or had themselves been knocked off their bike on one or more occasion. In particular interviewees commented that cycle lanes were frequently blocked by parked cars. Additionally take up of cycling is extremely sensitive to the weather, with very few staff cycling in the winter.
- 5.25 Also, the staff suggestion scheme appears to have stalled somewhat in recent years. The Managing Director felt that this was largely because most of the smaller changes that could be made, which are the kind of alterations which tend to come from suggestion schemes, have already been made.
- 5.26 Slips in behaviour do occur from time to time, for example, staff not using recycling bins for their general waste or drivers departing from fuel efficient driving principles. Monitoring of employees is not done formally or strictly, because the Managing Director expressed concern that if staff felt they were constantly under surveillance it would build resentment amongst them. For example, the MD and other managers keep an eye on recycling bins and if they identify a problem of non-compliance this tends to be handled with a 'quiet word' to individuals or notes to all staff. Additionally where there have been repeat problems, they have looked for ways the system could be improved. For example they identified that the bins around where the drivers finish for the day were often filled with recyclable waste which was inhibiting recycling. To counter this they moved more recycling bins to the area to make it easier for drivers to recycle their waste.
- 5.27 A similar approach is taken to driving behaviour. All EAE vans are fitted with a GPS system that feeds back to the office. This can monitor things like fuel consumption and speed, and the company has recently acquired new software that enables the production of a green report detailing the extent to which individual drivers have been fuel efficient. To make full use of this software EAE would require a dedicated staff member which is beyond their

resources, however, managers do use the data to gain a general sense of whether staff are using fuel efficient driving techniques. In instances where drivers have been inefficient, the area manager will have a quiet word with them to explain what they have been doing wrong.

## Evidence of impact

- 5.28 Generally compliance with the low carbon behaviours appears to be high within EAE. Staff report avoiding using heating and light unless absolutely necessary, which is evident simply from touring EAE's premises.
- 5.29 At an organisational level, EAE have been highly successful in achieving reductions in carbon footprint and increases in material recycled. All office paper and unused print is recycled and there has been a downward trend in fuel consumption. However, within this data it is difficult to identify the impact of staff behaviour compared to infrastructure. For example, it is difficult to isolate the impact of eco-driver training due to constant improvements in the fuel efficiency of the van fleet. There was a sense that while fuel efficient driving was clearly important, changes to the fleet had a larger impact on fuel consumption.
- 5.30 In general, monitoring largely takes place at the firm level, for example electricity, gas and fuel consumption. Due to the size of the company, managers themselves are able to monitor outcomes like recycling and the use of light and heating by walking around the premises. In their opinion compliance is generally good, which appears to be supported by impact measures.
- 5.31 Additionally, while EAE have the technology to directly monitor drivers' performance they do not have the staff resources to dedicate to it full-time, meaning it is difficult to say to what extent individual drivers adopt fuel efficient driving standards on a daily basis. However, the area manager felt that from his overview of the data available most drivers do adhere to the expected standards. Where managers identify drivers who have not been driving in a fuel efficient manner this is dealt with by a quiet word with the driver. Recently two EAE drivers came third out of ten companies in a 50 mile fuel efficient driving race which perhaps indicates the effectiveness of their eco-driver training.
- 5.32 Additionally there is qualitative evidence of impact on staff behaviours from the interviews which suggests that norms of low carbon behaviour are fairly strongly ingrained in EAE staff. When questioned about their behaviour both staff and managers felt that working at EAE meant they behaved differently from how they would if employed by another company. Warehouse staff commented that both their recycling behaviour and usage of heating and lighting would be likely to be very different if they were working elsewhere.

*'If I wasn't encouraged to do it here, I'm going to be honest I probably wouldn't do it [recycling] that way... if it was another job and it wasn't required, I would still probably do it.. but I wouldn't be as... strict as what I am here' – Member of staff*

- 5.33 Furthermore, both staff and managers commented that working at EAE has also shaped their behaviour outside of work, particularly in relation to recycling.

*'There's a knock-on effect when you go home. You don't just put your banana skin in the bin; you'll actually stop and think where's my recycling tub?' – Manager*

### **Critical success factors**

- 5.34 Critical success factors identified from analysis of the case study findings show that three factors particularly stand out in the success of low carbon activity at EAE.

### **Leadership**

- 5.35 Leadership clearly comes from the Managing Director and his commitment to ensuring his company is consistent with his own beliefs about environmental protection. Interviewees all identified him as the main motivating force behind the green activity at EAE. At a purely practical level it has meant that green projects are pursued rigorously and well resourced. Moreover, it provides the green initiatives with direction and momentum meaning that green activity has become a core part of EAE's identity.

*'There has to be a driver... There has to be somebody fairly senior who fundamentally believes in this sort of philosophy... It has to be about leadership. And leadership by its nature has to come from a fairly senior point. It would be very difficult for a relatively young and junior member of staff in a fairly big organisation to start changing that company' – Managing Director*

- 5.36 The Managing Director characterised himself as 'bloody minded' when it came to implementing projects and ensuring that low carbon standards were maintained at EAE. The Managing Director's persistence and proactive attitude to implementing green projects ('just put the bloody bin out') has also filtered down to other managers and staff. Staff also commented that they found it positive that managers 'practised what they preached'.

### **Creation of company norms supporting habit formation**

- 5.37 Social norms also appear to be important, as it is striking how much activity occurs at EAE in a routinised fashion as a practice embedded in organisational culture without any great fanfare or effort. All interviewees regarded low carbon behaviours such as recycling and using energy sparingly as just a normal part of the job that was in no way exceptional. Interviewees discussed how staff would remind each other about the need to recycle, turn lights off and use heating sparingly. Additionally 'peer pressure' was cited as a factor in encouraging people to adopt low-carbon behaviours. Within EAE it is abnormal not to act in a low carbon manner.

*'When you've got a whole company doing it, why would you be the odd one out? It's almost a negative thing being the odd one out, so no one actually wants to do that. So everyone's encouraging everyone else to recycle' – Manager*

- 5.38 At an individual level it was noted that to a large extent low carbon behaviours are simply habit to many staff members, they are so used to working in a recycling-intensive, energy conscious environment so that it becomes second nature to perform these activities.

*'It just becomes habit, complete habit. It does change, I must admit. You find yourself just holding off until the last minute before you can turn on one section of the lights... It's just drilled in' – Member of staff*

### **Provision of equipment**

- 5.39 Lastly, most obviously, the availability of equipment makes low-carbon behaviour 'easy' for individuals. Interviewees particularly noted the wide availability of recycling bins which helped make it easier for employees to recycle than to put recyclable rubbish in the bin. The Managing Director explained how changing the allocation of bins could be used to shape behaviour which would include moving recycling bins to the spot where drivers finished for the day or reducing the size of rubbish bins.

- 5.40 Furthermore the provision of equipment, along with investments in green technology and infrastructure help 'normalise' low carbon behaviour. The wind turbine, electric van and recycling bins make low carbon behaviours salient in the workplace and reinforce the idea that low carbon behaviour is the normal way of working at EAE. The firm has made the effort to make the less 'behaviour oriented' pieces of infrastructure, such as the wind turbine, relevant to staff. For example reporting the outputs from the wind turbine generates staff interest in the turbine and again raises the salience of environmental issues in the workplace:

*'in the kitchen there's a chalkboard, where windy-boy's progress is reported. I like to see that... it's nice to know that it's making money and being environment-friendly' – Member of staff*

- 5.41 In terms of ordering these key points, leadership and equipment appear to be key at first, providing staff with the motivation and ability to act in a low carbon way. However, over time norms and habits seem to have become more important in sustaining behaviour. Managers do sometimes have to remind staff what is expected of them and the use of equipment is sometimes changed to make it more effective but increasingly behaviour is maintained because it has become normal and habitual to staff.

- 5.42 Beyond these three key factors, other elements play a subsidiary role. Provision of information both in terms of desired behaviours and information on energy usage and progress towards targets has an impact. Information was cited as particularly important in relation to the eco-driver training and providing drivers with cards featuring eco driver tips was one of the main

methods to encourage good practice amongst drivers. Information on energy usage was cited as important because of the way it helps make all employees feel that they are part of the process of achieving reductions in EAE's carbon footprint, emphasising that everyone is part of the team and making individuals aware of their individual contribution.

- 5.43 Organisational policies appear to play some role. Littering and failing to recycle are disciplinary offences but action is rarely taken and managers prefer to use gentle reminders rather than threats of disciplinary action. As the norms of low-carbon behaviour are strong at EAE, it appears that this light touch approach to dealing with problems is effective.

### **Future plans**

- 5.44 The major plans for the future at EAE are primarily related to infrastructure projects such as the installation of photovoltaic cells on the roof and rainwater harvesting equipment. The Managing Director has investigated external support for these projects but is pessimistic, feeling that they may encounter bureaucratic difficulties in securing external assistance. Instead, EAE anticipate they will need to rely on their own resources to install this equipment.
- 5.45 One manager also discussed the possibility of introducing driver bonuses for fuel efficient driving. Currently drivers receive a bonus at the end of the year if they do not damage their vans. However, rewards for fuel efficiency could help with both reducing carbon emissions and reducing fuel bills, at the very least reduction in fuel consumption could offset the costs of any additional bonuses. They are currently investigating the technology required to make such a system effective.

### **Key learning points**

- Leadership has been essential in driving low carbon behaviours and embedding it in the organisation. This may actually be easier in a small company which does not have a large management or bureaucratic structure where a single, determined individual can place an emphasis on 'just getting things done'.
- If simple changes are being made, small organisations should not worry unduly about 'where to start' or planning intricate processual changes.
- Make the most of 'moments of change'. These are events that signal to everyone in the company the importance of environmental issues. For EAE, moving to new premises was a 'moment of change' which provided EAE the opportunity to reflect on its activities and after which it intensified its efforts.
- Changes to infrastructure and use of technology to provide feedback on performance can be powerful visual symbols which help to engage and motivate staff to change behaviours. The wind turbine has served this purpose at EAE.

- Research external support and be prepared to be selective in choosing the most appropriate sources of advice. Small organisations do not necessarily need to pay for the services of business support agencies to make simple changes, though they can be helpful for more complex initiatives.
- Ensure implementation processes for low carbon activities fit the organisational context. Small firms like EAE can adopt low carbon principles without using green 'apparatus' common elsewhere such as green teams, eco-champions or committees.
- Informal methods of monitoring and maintaining behaviour can be powerful in small companies through management observation and direct feedback on behaviour to employees. Once behaviour is embedded, staff then habituate themselves to it and develop norms.
- Organisations which adopt a primarily compliance-driven approach to low carbon activities, rather than an educational one, may have less impact on employee behaviour in the longer term. Although employees noted spill over from work to home, some felt they would not maintain behaviours if they moved to an organisation where low carbon behaviour was less tightly monitored.
- Changing travel to work methods may rely on supportive infrastructure which is outside an individual organisation's control. This was particularly the case in relation to cycle routes. Action may be required from organisations responsible for transport routes (e.g. local councils) and organisations may need to engage in dialogue with them to press for improvements to make sustainable travel a more attractive option.

## 6 HALCROW

Halcrow's low carbon initiatives are interesting for a number of reasons. In particular the organisation's restricted car parking scheme is a challenging innovation that has experienced a smooth implementation. The case also illustrates how organisations can take advantage of relocation as an opportunity to develop low carbon management initiatives and make use of the knowledge and experience of staff to improve and develop those initiatives.

### Background

6.1 Halcrow is a multinational engineering firm employing around 6,000 people across 98 offices worldwide. This case study focuses mostly on the low carbon initiatives running at Halcrow's Glasgow premises, which employs around 350 staff. The office is relatively new as Halcrow moved from a more central Glasgow location to their current premises five years ago.

### Low carbon initiatives

6.2 At a corporate level, Halcrow has a long term commitment to sustainability given the nature of the firm's work and the potential environmental impact it could have. Three factors have been important in the development of low carbon initiatives. First, the move to new premises provided an opportunity to reassess their office procedures and transport policy. Second, the attitudes of specific clients working with staff in the Glasgow office have been important. Thirdly, financial pressures resulting from the recession encouraged the organisation as a whole to look at reducing costs in a range of areas which could also help them reduce their carbon footprint.

6.3 Broadly speaking, Halcrow's initiatives can be divided into transport programmes aimed at reducing emissions from both commuting and business travel and office based programmes focussed on reducing energy usage and recycling.

### Transport

6.4 Halcrow's major transport initiative is the combined parking and public transport promotion scheme which aims to encourage lower carbon commuting. Staff wishing to drive their car to work are charged £5 a week and car parking spaces are allocated according to a range of criteria with those who car share or travel longer distances given higher priority. The money generated from this policy is then used to subsidise public transport for other employees. Currently they have an agreement arranged with bus companies in Glasgow but have not been able to work out a similar arrangement for rail travel. The scheme is further supported by the provision of information on public transport routes.

6.5 Alongside efforts to support public transport use, cycling is also encouraged. At the time of the office move, a cycle rack was installed in the car park and over time showers and lockers for cyclists have been added. Halcrow offers

loans for the purchase of bikes and pays for an external company to come in and service employees' bikes annually. A bike loan scheme operates for staff travelling to different locations within Glasgow to borrow a bike and cycling equipment rather than taking a taxi.

- 6.6 In addition to encouraging lower carbon commuting, Halcrow have made efforts to reduce levels of business travel for cost and carbon reasons. The Glasgow office has also invested in three video conference suites to reduce the need to travel for meetings. This supports a wider corporate level aim to reduce business travel. Halcrow's travel booking system requires the user to consider whether the meeting could be done via videoconference and requires a line manager to sign off all travel. This was introduced as part of cost saving measures following the recession. In addition, across the whole company, there has been an effort to develop effective systems to allow teams to work 'virtually' from different locations, reducing the need to travel to meetings.

### ***Energy and waste in the office***

- 6.7 Within the office environment, there is a focus on both reducing energy usage and encouraging recycling. Staff are encouraged to switch off their monitors when not in use and this is monitored by the office manager. To make switching off equipment easier the company has installed 'powerbar' sockets on each desk which are easier to reach than those on the floor. In addition, other innovations such as motion sensor operated lights have been introduced. For recycling, in addition to a large number of general recycling bins and the removal of general rubbish bins from each desk, a 'treehugger' which is a small box bin for scraps of recyclable material is placed at each desk.
- 6.8 Halcrow previously ran a company-wide sustainability and health education initiative called 'Spring Into Action'. Each Halcrow region received a fixed budget to allocate to different offices within the area in which Spring Into Action committees selected a sustainability or health initiative of their choice to use the money. These initiatives ranged from awareness raising days to longer term commitments like a cycle to work scheme. Staff at local level are more likely to have a good idea about the kinds of projects that are appropriate for their staff and location. Committee membership changed regularly to maximise involvement and encourage the development of fresh ideas. Due to economic conditions, Spring into Action did not run in 2011.

### **Process of implementation**

- 6.9 Low carbon initiatives at Glasgow Halcrow were sparked by the move to new offices. The most senior manager at the office saw this as an opportunity to make more of an effort to reduce carbon consumption, because the new office would permit the introduction of low carbon infrastructure and the move from the centre of Glasgow carried the risk of increasing emissions from commuting. The senior manager took a key role in providing initial impetus for the project, in particular in helping to secure time to allow staff to work on low carbon projects as well as providing a general leadership role and setting



an example of low carbon behaviour by, for example, cycling to work. The senior manager's inclinations were supported by a staff survey which showed that staff wanted to use the office move to improve the Glasgow office's contribution to the overall corporate commitment to sustainability. Although the project began before the recession, the weakened economic climate has more recently provided an additional impetus for low carbon initiatives which have cost saving benefits.

- 6.10 Initiatives are supported within each office by an environmental co-ordinator and sometimes a health and safety co-ordinator; these co-ordinator roles are additional to the main responsibilities of the staff involved. In Glasgow, the health and safety co-ordinator, whose main role is as facilities manager, has been particularly important. The role of facilities manager is key to implementing low carbon initiatives in their office environment for two reasons. First, as a member of staff not employed on client projects, time spent on low carbon initiatives does not reduce the time spent on income generation. Second, the facilities manager is in a position to make changes to infrastructure around the building, e.g. new recycling bins, lockers for cyclists and monitoring the extent to which staff are maintaining low carbon behaviours. Personal inspections by the facilities manager are one of the key ways in which compliance with policies such as turning off equipment are monitored and this person is also one of the main sources of information on the various initiatives underway.
- 6.11 Halcrow also has a broad range of environmental expertise to draw on among staff and use in implementing low carbon projects. For example, to measure the impact of transport initiatives Halcrow developed a carbon calculator to record the work related travel patterns of staff over a three week period. This was based on a tool developed by environmental consultants for a client project who were then given time to adapt it for wider internal use. Making use of these internal staff resources has been a considerable benefit to Halcrow. The facilities manager noted that although the office environmental co-ordinator was less able to contribute on a day to day basis due to client project commitments, she was available to provide advice and support drawn from her own knowledge of environmental issues.
- 6.12 Staff are involved more broadly in implementing projects. Aside from the staff survey, suggestions from employees are actively encouraged and the office has an environmental notice board on which requests for staff suggestions on specific issues (such as reducing paper waste) are posted. These often attract high volumes of responses. Additionally staff frequently make suggestions directly to the facilities manager. For example, lockers for cyclists were installed as a result of a staff suggestion.
- 6.13 Finally, Halcrow has worked with external organisations to help implement low carbon initiatives. For example, the bus subsidy was made possible by an agreement with local bus companies. The company had hoped to offer a similar arrangement for rail travel but this did not prove to be possible. Similarly servicing of employee's bikes is undertaken by an external organisation.

## **Building staff awareness**

- 6.14 Information about low carbon initiatives is communicated in a number of ways. New staff are given information on low carbon policies during their induction and all visitors receive an information sheet which includes information on recycling arrangements and reminders about turning off equipment. Staff receive information on a day to day basis from the facilities manager via e-mail including targets for recycling, feedback on performance and reminders to maintain low-carbon behaviours. The environmental notice board includes updates on schemes as well as asking for staff suggestions. Signs reminding people to recycle or switch off their computers are not used as the facilities manager believes that they have little impact and are often ignored after they are put up.
- 6.15 To support the car parking and subsidised bus travel scheme, Halcrow produced a green travel plan. This provided information on public transport and cycle routes throughout Glasgow and included photographs of bus stops with the intention of making it as easy as possible to commute without using a car. At the start of the programme staff were also offered individual advice about commuting to work by bike or public transport.
- 6.16 Finally a number of interviewees noticed that staff often 'policed' each other, particularly in relation to energy saving and recycling. The high level of support for low carbon activities among Halcrow workforce means that employees often remind each other about recycling or switching off equipment.

## **Staff responses**

- 6.17 Since low carbon projects have been introduced at least partly in response to staff suggestions, they have generally gained a considerable amount of support across the workforce. All the staff interviewed were positive about Halcrow's efforts to reduce its environmental impact and pleased that the schemes had been put into place. The main source of concern was allocation criteria for car park spaces from staff who were unable to secure a space. Some staff reportedly disliked the restrictions on travel methods to meetings and were not fully comfortable with virtual team working. Some staff viewed travel restrictions as unnecessary restrictions on how they undertook their work. Others believed that some staff were simply nervous or unwilling to accept changes to working practices.

*'It's these people that say, "I've been doing it all my life, I'm not going to move" ... They're the hardest ones to shift... however, they're the exception rather than the rule.'* – Manager

- 6.18 Managers addressed these concerns through ongoing explanation and discussion with staff about why Halcrow were taking the actions and the potential benefits it could have for staff and the organisation.
- 6.19 By contrast with the travel initiatives, none of the interviewees mentioned any specific negative reactions to either recycling or energy reduction initiatives.

Overall staff reactions to the initiatives have been very positive. For example one relatively recent recruit commented:

*'I think the attitude towards, definitely recycling and making sure your peripherals and your monitors and that were switched off was definitely better than my previous employers.'* – Staff member

- 6.20 There was an acknowledgement amongst staff that the organisation's motivation for undertaking some of the initiatives may have been at least partially cost related, however this did not appear to be an issue. Staff did not regard these cost motivations as particularly cynical and felt that management were also driven by a genuine moral desire to reduce the organisation's carbon emissions:

*'I think they [Halcrow] do care about carbon emissions... anything that tries to improve the environment is a good thing. I know some of their motives may be more profit driven, but as long as there's a positive element that's ok.'* – Staff member

### **Key challenges**

- 6.21 While new behaviours are mostly maintained, staff have occasional lapses in recycling and switching off equipment. The facilities manager usually reminds staff either personally or via email, and believes that occasional reminders are inevitable.
- 6.22 Some initiatives have been more difficult to implement. For example, although staff generally welcomed the opportunity to borrow bikes for cross-town travel, staff found it hard to cycle to meet with clients because of the risk of arriving at meetings sweaty and dishevelled.
- 6.23 Finding time to take staff away from client work to spend time on low carbon initiatives has also been difficult. In particular the Spring Into Action scheme was not run in 2011 due to increasing workloads and tighter budgets. The resource of the facilities manager, who is able to include low carbon activities within regular work has been helpful in leading the way on many of the low-carbon initiatives and is a major advantage. Specifically this offers an advantage over other staff would have to take time away from their main duties to work on low carbon initiatives.
- 6.24 Some aspirations for subsidising public transport have not yet materialised. Initially Halcrow wanted to offer subsidised train travel as well as bus travel but were unable to reach an agreement with train companies to put this into practice.
- 6.25 Relocating to a new building in Glasgow gave flexibility and control in adapting the premises to support low carbon consumption. At other sites, such as the Edinburgh office, premises are older and there is less scope for introducing infrastructure such as power bars. The open plan design of the Glasgow office also makes it easier to monitor whether computers have been switched off, but this is not possible in some of the other sites.

## Evidence of impact

6.26 Halcrow has extensively monitored the impact of a number of schemes, in particular those related to travel and commuting reduction. The table below shows the impact of some of these schemes. In 2009 and 2010 Halcrow used commuting travel calculators in which employees voluntarily reported their method of travel to work and distance travelled which could then be used to calculate carbon emissions. This was used both to assess the scale of impact of other travel schemes and as a way of raising awareness about emissions. In addition some teams working for clients which are particularly concerned to reduce low carbon activity run a similar system on a weekly basis to monitor business travel at work.

**Table 1: Impact of low carbon initiatives at Halcrow**

Initiative	Impact estimated
Video conferencing	200%+ increase in usage 2007-09 (788 hours to 1,589 hours). Saved 127 tonnes of CO2 between 2007-09
Car parking/bus scheme	12,300 bus journeys subsidised in 2009. Saved 6.4 tonnes of CO2 in 2009
Bike scheme	20 staff cycle to work, compared to 3 at previous premises

6.27 Assumptions behind the calculation of the impact of videoconferencing are that for every 10 hours used, one domestic flight is not taken. This amounts to 342 domestic flights not taken between 2007 and 2009 which roughly equates to a saving of 127 tonnes of CO2. For the car park and bus token scheme, each token used by staff is assumed to represent replacement of a three mile car journey taken by bus instead. This equates to a reduction in emissions of roughly 6.4 tonnes of CO2. Twenty staff now regularly cycle to work and although the number remains small, it is a considerable increase from the three who commuted by bike to Halcrow's previous premises, though it is difficult to say whether this is the result of the travel schemes implemented by Halcrow or simply a function of the office move.

## Critical success factors

### *'Making it easy'*

6.28 A number of factors have contributed to the impact of the low carbon initiatives and a generally positive response by staff. Firstly, a number of interviewees emphasised the importance of 'making it easy' for staff to act in a sustainable manner. Halcrow attempted to achieve this in a number of ways. Providing subsidised travel makes commuting via public transport more attractive for employees and this is supported by information and infrastructure to support low carbon transport methods such as bike racks and lockers for cyclists. Providing video conferencing facilities has been important in reducing the need for business travel and reconfiguring power switch locations makes it easier to turn off appliances. These changes have helped

Halcrow remove as many 'excuses' as possible for not commuting in a sustainable way.

### ***Policies***

6.29 Formal organisational policy frameworks and restrictions have helped to encourage low carbon behaviour through seeking to limit business travel and commuting, and the requirement to gain management approval for exceptions. A number of interviewees cited the business travel restrictions as particularly important in reducing the travel related carbon emissions between 2009 and 2010. Wherever possible, Halcrow has sought to soften the impact of these restrictions by making the alternatives more appealing through ease of change and cost effectiveness with personal cost savings for staff.

### ***Staff involvement***

6.30 Gaining staff involvement has also been important across all low carbon activities from the initial staff survey at the time of the office move, through the Spring Into Action staff committees to requesting suggestions via the environmental notice board and the facilities manager. Staff involvement is an important feature of management practice and organisational culture at Halcrow more broadly, so this provides both a good platform from which to embark on low carbon initiatives and an essential component to their success. Staff involvement has enabled Halcrow to take advantage of the knowledge, skills and experience of staff members including those who have an influence over carbon management within the organisation, as well as those who have a personal interest in environmental issues. Managers also stressed that consulting staff and involving them in decision making has helped secure support for the initiatives. For example, restricting car parking arose from a staff suggestion, which helped strengthen the case for maintaining the scheme when some individuals complained about the allocation of parking spaces.

6.31 Halcrow has clearly benefited from a workforce which takes environmental concerns seriously and is generally supportive of the organisation's commitment to low carbon management. Some staff initially viewed low carbon activities less positively but a combination of effort to reduce barriers to change with staff involvement techniques to identify initiatives which receive staff support has been helpful.

### ***Leadership and use of key staff***

6.32 Leadership and the involvement of staff in key roles has also been important. The senior manager primarily plays a strategic role. He focused on integrating low carbon activity within planning for the office move and, as a senior manager, he was able to secure resources for a range of low carbon activities, in particular allowing staff to take time away from project work to participate. He and other senior staff have also set a personal example by regularly cycling into work. On a more day-to-day basis the facilities manager has exerted influence to make change over the office environment.

Leadership was also important in taking advantage of the office move and turning this into an opportunity

### ***Planning and provision of equipment***

6.33 Halcrow has been careful in structuring the change process. Projects involved a considerable amount of planning, with staff involvement right from the start. When restrictions on behaviour are introduced, equipment and infrastructure is provided at the same time to make change as easy as possible.

### **Future plans**

6.34 Interviewees emphasised that Halcrow regularly seeks to improve its low carbon activities. There remain regular calls for staff suggestions and managers regularly review how the initiatives could be extended and improved. One main change being discussed is whether company car lists could be changed to favour lower emissions models.

### **Key learning points**

- Build on and develop a culture of staff involvement. Staff involvement can be an important aspect of low carbon initiatives through allowing staff to shape initiatives wherever possible, rather than relying on top-down changes without consultation. This approach can enable organisations to implement more ambitious and challenging low carbon initiatives schemes, such as restricting car parking, which can be tricky to gain workforce acceptance. Having an organisational culture which already maximises staff involvement and taking advantage of any existing interest in low carbon management among staff is helpful.
- Make use of internal expertise and staff in key roles. Use of internal resources can include staff in key roles and those with knowledge of environmental issues. Senior managers can provide some of the initial impetus for the initiatives and then quickly involve staff to help implement or develop them. Organisations can benefit from identifying and utilising the skills and interests of staff in key positions.
- Create incentives to shape desired transport behaviour in a way that is cost-neutral to the organisation. Incentives can help motivate behaviour change, but can be expensive. Innovative car parking schemes can generate incentives while being cost neutral for employers.
- Capitalise on moments of change with lots of planning. Office moves can be an important moment in the development of low carbon initiatives and build on the opportunity for radical change in low carbon management. However this did not happen automatically but required staff and managers to take advantage of the office move. In order to take full advantage, carefully advance planning in surveying staff and developing initiatives is helpful to build momentum and interest behind it.

- Negotiate with external suppliers such as transport providers. Successful negotiation with public transport companies for co-operation to make subsidised public transport scheme successful can be supported by drawing on data about staff travel to work patterns.
- Lower all barriers to change as far as possible. Before implementing initiatives Halcrow gave considerable thought to the kinds of barriers individuals might face and steps were taken to remove as many of these as possible. Guidance on public transport including detailed route maps and photographs of access points can help make it as simple as possible for people to find and use public transport.

## 7 HILTON EDINBURGH GROSVENOR HOTEL

The Hilton Edinburgh Grosvenor case study illustrates how low carbon initiatives have centred on the kitchen, which provides an interesting context for the adoption of low carbon behaviours. Secondly the hotel industry more broadly presents unusual challenges not faced elsewhere in the economy, most notably that a significant proportion of the building's carbon use is used by guests rather than staff. Finally Hilton Edinburgh Grosvenor's low carbon journey began relatively recently compared to other case studies and the maturity of initiatives varies across different departments. As such the hotel offers us a useful snapshot of an organisation at a mid-point in the development of initiatives.

### Background

7.1 Hilton Worldwide is a global hospitality company with over 140,000 staff and over 3,800 hotels across 88 countries. This case study is focused on the activities within one hotel in the chain, Hilton Edinburgh Grosvenor based in Edinburgh's West End. Hilton Edinburgh Grosvenor is a listed building dating from the nineteenth century which has been a hotel since the 1920s. It was acquired by Hilton Worldwide in 2001 and subsequently underwent major renovation. Currently the hotel employs 135 staff. The hotel has a four star Scottish Tourist Board rating and its customers include both leisure and business travellers. The hotel also has a restaurant and provides event and meeting facilities.

### *Corporate framework*

7.2 The commitment to corporate level sustainability principles is driven by both business benefits and ethical principles. There is a clear business benefit from having an advanced sustainability programme in the hospitality and tourism industry. Corporate customers, and, to a lesser extent, individuals are increasingly using sustainability criteria in making decisions when purchasing business travel services. Hilton Worldwide is a founding member of the International Tourism Partnership and has participated in initiatives to develop sector-specific environmental standards and is keen to lead that movement.

### *Initiatives in the Hilton Edinburgh Grosvenor*

7.3 Within the corporate framework established by Hilton Worldwide, hotels vary regarding which aspects of sustainability they engage in. Hilton Edinburgh Grosvenor has made particular efforts to promote low carbon management in the last two and a half years, and given the size of its workforce and customer base, the hotel felt it was in a position to influence a significant number of people. In addition to encouragement at corporate level, the hotel manager has obtained a Green Tourism Business Scheme certificate at silver level. He regards this as a way of attracting customers interested in the 'green' credentials of the hotel in addition to his own desire to reduce the organisation's environmental impact.



- 7.4 As part of the efforts to promote low carbon ways of working, Hilton Edinburgh Grosvenor has implemented a number of low carbon initiatives, many of which have focused on the kitchen and administrative functions of the hotel. This was a deliberate strategy because these areas were identified as having potential to make large scale changes more simply than other areas of the hotel. These areas are relatively easy to monitor and control and, particularly in the case of the kitchen, were areas that saw significant sources of waste and energy usage.
- 7.5 Within the kitchen there has been a focus on reducing food waste both through less wastage at preparation stage and recycling where possible. Food waste is now recycled through CORE, a company which specialises in recycling commercial and industrial food waste and chefs have also been concentrating their efforts to use food more efficiently in the meal preparation process. The executive chef has stipulated that, whenever possible and appropriate from the quality perspective, food is sourced locally, within approximately an hour's travelling time from Edinburgh. In addition to reducing the kitchen's carbon footprint, he believed that customers would prefer locally sourced Scottish produce.
- 7.6 More broadly, the hotel has also sought to reduce total energy consumption. This has focused firstly on altering infrastructure by, for example, replacing existing light bulbs with more energy efficient models, introducing motion sensors in conference rooms, modifying the air conditioning systems and replacing older windows in the building to offer better insulation. Other initiatives have focused on staff behaviour. For example, the housekeepers have re-organised the process for stripping down rooms so that now an initial sweep of rooms is done to ensure electrical equipment within the rooms is switched off after guests have left before cleaning begins.
- 7.7 Recycling of non-food waste has been introduced including paper, cardboard, plastics, toner cartridges and batteries (eg from TV remote control handsets in rooms). A cardboard baler has been purchased for the kitchen to reduce the amount of space taken up by cardboard packaging and reduce the amount of time required to flatten packaging. Similarly, a recycling bin for plastic coffee cups has been provided next to the vending machine.

### **Process of implementation**

- 7.8 Low carbon initiatives have been driven primarily by the Hotel Manager. The first phase of implementation involved raising awareness of low carbon management among heads of department. As a result, a senior level Sustainability Team was set up to implement low carbon initiatives involving monthly meetings of the hotel manager with heads of department (from the kitchen, housekeeping and maintenance) and the hotel manager's PA.
- 7.9 Getting the right people on the Sustainability Team was very important and the hotel manager ensured that heads of departments participated to ensure senior level leadership across the hotel. The hotel manager was particularly keen for the executive chef to captain the Sustainability Team, partly due to the power of his role within the kitchen and partly because he has an

engaging personality which would help to encourage other staff to participate. He has led all the kitchen based initiatives, such as local sourcing of food and the recycling of food waste, and also takes charge of communications between the Sustainability Team and other staff. Together with other senior staff in the kitchen, he has been responsible for monitoring and enforcing low carbon activity by reminding people to turn off equipment, use pot lids and recycle correctly.

- 7.10 While low carbon initiatives are primarily developed, resourced and implemented in each hotel, having access to advice, resources and support from corporate managers was also important. The Sustainability Team has been able to get advice on a number of subjects from corporate level. For example a corporate sustainability manager helped the executive chef understand what being captain of the Sustainability Team would require.
- 7.11 Individual staff have also been involved in driving change. In housekeeping, an employee began separating waste out for recycling on her own initiative, which helped demonstrate that it could be done without adding too much additional work to the process of cleaning rooms.
- 7.12 As part of the development of green initiatives in the hotel, the senior Sustainability Team members recognised that they needed more input to develop low carbon initiatives. As a result, they began to recruit sustainability reps among front line staff in an effort to expand low carbon initiatives. The aim is that by including more staff with a different 'perspective' to the original Sustainability Team, new and fresh ideas for green initiatives will be generated.
- 7.13 As well as developing hotel level initiatives, the Sustainability Team is involved in implementing initiatives at corporate level. In particular they have made efforts to ensure all staff have completed the sustainability awareness e-learning courses.

### ***Building staff awareness***

- 7.14 Staff receive corporate information on Hilton Worldwide's low carbon initiatives at induction, through newsletters and e-learning modules. This information links sustainable management activities to the broader corporate responsibility objectives and it helps to reinforce the importance of low carbon principles to the Hilton Worldwide family of brands.
- 7.15 Within the hotel, communication about low carbon initiatives takes place face-to-face, with managers passing information to staff in their department both at departmental meetings and on a day-to-day basis. This is most obvious in the kitchen where the executive chef and some of the chefs de partie have informed staff about initiatives affecting their work. To encourage behaviour change in recycling and energy conservation in the kitchen the executive chef's approach was to keep awareness high. *'Constantly talking about it, constantly going around and switching off hobs, putting lids on things... constantly reminding people'*. Similarly one of the chefs de partie sought to raise awareness about how much food waste was being generated in

preparation by asking all staff on a shift to collect their food waste in an individual bucket. This helped staff visualise the amount of food wasted and encouraged them to think about how they might reduce it.

- 7.16 The same approach to communicating low carbon initiatives has been taken in housekeeping, where the head housekeeper has informed staff about the need to integrate recycling and energy conservation into their work.

### **Staff responses**

- 7.17 Initial staff responses to low carbon initiatives have been mixed, with some employees very enthusiastic and others more resistant to change.

- 7.18 In the kitchen some staff raised concerns about turning off appliances frequently, sorting waste into different categories and finding ways to reduce food waste. They had some reservations about changing the way work is done in the kitchen, in case it reduced their efficiency in a busy environment. These concerns were shared by some staff in the housekeeping department

*'[Staff said] things were working the way they were, why do we need to change them; I don't have time to do that.'* – Head Housekeeper

- 7.19 Over time, however, staff adopted low carbon behaviours and they appear to have become habitual, particularly in the kitchen where the initiatives have been running longest. In the kitchen this has been achieved by repeated communication about the importance of recycling, re-using materials and conserving energy. Occasional lapses in staff behaviour occur, for example gas rings or grills being left on, but these are not widespread and are resolved through reminders from the Executive Chef or senior staff.

- 7.20 One new recruit who joined the housekeeping department since the initiatives began noted that they were covered in the induction process and felt that low carbon behaviour is increasingly 'part of the job'. Overall, newer members of staff were particularly positive about the new practices.

### **Key challenges**

- 7.21 Setting up the Sustainability Team required consultation with some staff to get them engaged. The Executive Chef had limited experience of low carbon management practices and was unsure what the role would entail. Conversations with the Hotel Manager and a Corporate Sustainability Manager convinced him of the importance of low carbon management to the hotel and helped him understand the role within the Sustainability Team.

- 7.22 Like all hotels, a major challenge faced by the Hilton Edinburgh Grosvenor is that much energy use is controlled by guests rather than employees or managers. Guests vary in their use of energy within their rooms, but in an effort to help them reduce their energy usage, the hotel provides information on how their behaviour can help low carbon management.

- 7.23 Another challenge is the design of the hotel premises which is a listed building dating from the 1860s. This has been a particular problem for infrastructure

changes with regards to replacing windows and re-wiring. Planning permission and specially designed windows are required and there is potential that the building may sustain damage associated with re-wiring. However it also poses problems for some behavioural initiatives. For example, rooms are located in narrow corridors and split across several different levels which has complicated recycling by housekeepers. The main issue has been how to store recycling in a way which separates it into different categories of waste, as there is only limited space in corridors for recycling bins so the nearest recycling points can often be several flights of stairs away. The head house keeper is currently redesigning and standardising the system for cleaning rooms and examining how best to fit recycling into these activities and how staff participation in recycling can be measured and monitored.

- 7.24 Although support from corporate level managers has been important in helping low carbon initiatives, managers have also worked flexibly with corporate procedures to implement local initiatives. In particular, hotel menus are usually based on chain-wide standard menus and food purchases are made through a common list of approved suppliers, which may not necessarily be local to each hotel. However, the Executive Chef was able to negotiate some freedom in order to implement the local food sourcing policy.

### **Evidence of impact**

- 7.25 Hilton Worldwide monitors energy usage, water usage, waste output and carbon output through their LightStay system. It is difficult to disaggregate the effects of behavioural programmes versus changes to infrastructure or technology. At a global level between 2008 and 2010, Hilton Worldwide achieved reductions of 6.6 per cent in energy use, 3.8 per cent in water use, 7.8 per cent in carbon output and 19 per cent in waste to landfill output. The figures for Hilton Edinburgh Grosvenor are a reduction of 22.4 per cent in energy use, 22.4 per cent reduction in water usage and a 13 per cent decrease in CO<sub>2</sub> emissions. In total 40 per cent of waste is currently being recycled and recycled food makes up 23 per cent of total waste volume.
- 7.26 There are also other qualitative indicators of impact. The hotel has been awarded a Green Tourism Business Scheme certificate at silver level which exceeded initial expectations. Although the initial inspection suggested the award would be at bronze level, the changes that were being implemented by the time of the official inspection a month or so later led to the higher level being awarded.

### **Critical success factors**

#### ***Leadership***

- 7.27 The first critical success factor for the hotel's low carbon initiatives is leadership at multiple levels. Leadership at corporate level has helped emphasise that sustainable management practices are taken seriously by the whole organisation. At hotel level, leadership from the general manager in instigating the low carbon projects, the Executive Chef and the Sustainability Team have been crucial in implementing the activities.

7.28 A lot of emphasis was placed on involving right people in the right positions to 'get things done' through colleagues who have the necessary resources and appropriate attitudes to push through changes. The hotel manager was keen for the Executive Chef to captain the Sustainability Team despite his initial lack of experience in sustainability issues. The rationale was that the chef was the head of a department where significant gains could be made and that he has a strong leadership style to influence others and effect change.

### ***Habits***

7.29 Within the kitchen, in particular, another critical success factor has been breaking old habits and replacing them with new, low carbon habits. Similar processes are under way in housekeeping where recycling is starting to be seen as part of the job by newer staff. This has been achieved primarily through constant reinforcement and reminders about appropriate behaviours. Key to the success was the emphasis from managers that it was important not simply to 'nag' people without explanation. Thus reminders are coupled with provision of information to explain why the hotel is implementing these initiatives, the potential benefits and feedback on how initiatives are progressing. This helped to justify the behaviour changes to staff.

### ***Policies and procedures***

7.30 Changes to policies and procedures have also helped shape habits. This is particularly clear in housekeeping where work is fairly standardised and employees are required to perform tasks using common processes following the same sequence. Building energy conservation into the procedure for cleaning rooms appears to have been fairly successful so far.

### ***Provision of equipment***

7.31 Material factors, in particular, providing recycling bins and the cardboard baler have been important in supporting a change in habits in the kitchen. Having easy access to this equipment has made it relatively straightforward for staff to break with their old habits.

### ***Access to support and services***

7.32 Finally, the ability to access support and services outside the hotel has been important. Some of this support comes in the form of advice and resources from the corporate level. For example, the hotel was able to access LightStay, one of Hilton Worldwide corporate brand standards, to measure various aspects of its energy and water usage and carbon emissions as well as advice from corporate sustainability managers. However Hilton Edinburgh Grosvenor has also used external companies in a number of areas. In particular, it would be difficult to recycle food waste if they were not able to access food recycling services and local sourcing of food is dependent on having a range of good quality suppliers in the area.

## Future plans

- 7.33 The key extension to the project, which is currently getting underway, is the introduction of sustainability reps from among front line staff. Hilton Edinburgh Grosvenor hopes that these reps will be able to generate additional ideas and identify potential areas for improvement which the more senior Sustainability Team has not identified. While employees interviewed felt that they could make contributions and suggestions, this extension to the project will bring an additional level of staff involvement.
- 7.34 As a department, housekeeping has faced more challenges than the kitchen. In this area a number of possibilities are being investigated including ways of reducing waste from plastic toiletry bottles and how to improve the housekeepers' access to recycling facilities.

## Key learning points

- Pick high impact changes for quick wins that make a difference. Hilton Edinburgh Grosvenor focused its resources and effort on areas where it was easiest to make significant change, specifically the kitchen. This has helped develop a sense of momentum and a confidence among the Sustainability Team that they can affect change within the hotel. The hotel manager believes that if had they attempted to tackle 'everything' at the outset, they would have spread themselves too thinly and potentially become disheartened if progress had not been made. Using specialised yet user-friendly online platform such as LightStay to monitor and benchmark performance helped to identify areas for change.
- Gaining commitment of influential managers is invaluable. Interestingly, selecting staff for their power to influence others appears to be successful, even if staff are not already engaged in low carbon behaviours. Mutual support from managers of different departments through the Sustainability Team helped sustain commitment at a senior level.
- Frequent and consistent reinforcement of new behaviours is required. This requires persistence and determination. It helps to break undesirable habits and form beneficial new ones. Face-to-face communication by managers is important on this front.
- Flexibility in corporate policies and willingness to challenge these at local level can be important in enabling local level change, as in the case of local food supply.
- Material factors of incorporating low carbon behaviours as part of work schedules and providing tools and equipment such as the cardboard baler to make low carbon behaviours physically practical is essential. This improves individuals' sense of agency and perception that they have the power to alter their behaviours.
- Making the most of internal and external resources through supply chain networks or access to individuals as sources of expertise can be important in sourcing knowledge, equipment and services.

- Embedding sustainability principles within corporate values and connecting them to commercial pressures such as customer preferences can make a powerful argument for change, although it can be challenging to ensure front line staff recognise how these values relate to their daily work.

## 8 INTERFACEFLOR

This case study provides an example of how incentivising change through setting targets linked to bonuses and awards in a performance driven culture can encourage employee behaviours which support sustainability. Providing feedback on progress towards goals using simple communication techniques in a manufacturing environment helps employees engage with corporate-level targets for carbon reduction and introducing an element of competition can also prove a successful method for implementing change.

### Background

8.1 InterfaceFLOR Europe makes modular flooring and is a division of Interface Inc., an American company which designs and produces environmentally responsible carpet tiles and commercial floor coverings. It has manufacturing facilities at its head office location at Shelf in Halifax, West Yorkshire and Craigavon, Northern Ireland and a showroom in London. In 1994, the CEO had an 'epiphany' about the unsustainable nature of industry after reading Paul Hawken's 'The Ecology of Commerce'. Since then, the company has made a commitment to sustainable management practices. This commitment is set out in its 'Mission Zero' promise which states the firm's target is to achieve zero carbon emissions. It aims to become 'ecologically sustainable by 2020, and ultimately to become restorative in terms of impact on the planet's resources' through its 'War on Waste'. To achieve Mission Zero, it has set out clear goals for 2020 on Seven Fronts. These Seven Fronts include eliminating waste and using renewable energy; redesigning processes and products to ensure all resources can be recycled; using resource efficient transportation; establishing links between employees, suppliers and customers to alert them of the impact of their actions on the environment; and focusing on the delivery of service and value instead of materials.

### Low carbon initiatives

8.2 InterfaceFLOR Europe operates a wide range of internal sustainability programmes in order to wage its 'War on Waste' – a campaign to tackle the excessive waste produced by flooring manufacturers. The main activities discussed in this case study are the QUEST initiative, EcoSense, sustainability training and 'Green Ambassadors'; and the Green Energy Team. These examples present a rounded view of the individual, social and material factors that are influencing behaviour change at InterfaceFLOR.

### *Energy and waste*

8.3 The QUEST initiative (Quality Utilising Employee Suggestions and Teamwork) uses employee suggestions to improve the efficiencies of manufacturing and office procedures in order to reduce waste. On the factory floor, operatives who work shift patterns are rewarded for improvements to work processes that increase environmental performance, through a bonus scheme that incentivises reductions in waste and resource consumption. The QUEST bonus is worth £800 a year and 175 shop floor operatives are eligible for the



payment if they reach a 10 per cent savings target each year for energy, material and waste savings. All staff on the factory floor are eligible for a separate annual 5 per cent bonus if the company's operating income achieves financial targets, and the QUEST bonus is additional as shop floor operatives handle the raw materials and have the greatest opportunity to contribute savings to the business-

- 8.4 EcoSense is a programme designed to encourage staff to recommend new ways to work more sustainably and take part in environmentally sustainable projects. Interface awards EcoSense Points for the successful completion of activities that fall within categories such as implementing environmental or quality management systems; sustainability training; resource efficient transportation and sustainable purchasing. It allows factories to benchmark themselves against other European and international sites, establish goals and track and report progress. Managers reported that there is strong competition between sites around outperforming other factories and accumulating the highest number of EcoSense Points at the end of each year.
- 8.5 Examples of initiatives proposed by staff which have won EcoSense points have been purchasing more fuel efficient lorries to reduce CO2 emissions; and Interface sites that have received ISO 14001 certification (a voluntary international standard for environmental management systems) have also received points. A European site was awarded points for staff participating as mentors in a local school and sites are also awarded points for implementing sustainable commuting programmes such as car-pooling and cycle-to-work schemes.

### ***Sustainability training and Green Ambassadors***

- 8.6 The company has had a structured training programme since the mid 1990s which encourages staff to promote sustainability at every stage of production and design. This training evolved from the CEO's vision of becoming a more sustainable company. The training is split into three stages. The first two stages are delivered internally and the final stage is delivered by Forum for the Future, which is a non-profit organisation which works with businesses globally to encourage sustainable behaviours. The first stage of the training consists of mandatory attendance at a presentation for all new employees, while stages two and three are voluntary and each consists of a one day training programme which can be undertaken during work time. Participation in the third stage attaches the status of 'Green Ambassador' to the participant. These Green Ambassadors are given some paid time at work to develop sustainability initiatives and help to deliver sustainability training and awareness campaigns across their own departments.

## **Green Energy Team**

- 8.7 The Green Energy Team is a small group of interested volunteers across the Shelf factory which employs approximately 204 staff. The Green Energy Team meetings began in March 2011, after the Environmental Manager and Energy Manager decided to form the group following Climate Change Week. The team currently has around 12 regular members which meet every six weeks. The format of a typical meeting is for two members to lead discussion on green projects within the factory, providing an update about progress and activities and then facilitating a session where the team asks for further ideas. In one Green Energy Team meeting the group discussed Climate Change Week 2012 for which they want to organise an activity to raise awareness of environmental issues within the firm. The role of the Green Energy Team is currently loosely defined and despite being named 'Energy' team, it focuses on all areas of potential waste and savings. The main purpose of the team is to inform staff about what is happening at the factory and 'keep it ticking over in terms of getting people to contribute ideas'. The ultimate goal is to establish Green Energy Teams in multiple sites across the world and for them to report back to a central point at regular intervals to compare, develop and share ideas.

## **Process of implementation**

### **QUEST**

- 8.8 The QUEST bonus was introduced in 2005. The European QESH (Quality, Environment, Safety & Health) Director decided to change the bonus for production line staff in order to pass a share of the savings being achieved from waste reduction onto factory floor staff. Production workers traditionally received a bonus based on factory output but the QESH Director negotiated with the trade unions to change it to reduction in waste consumption while maintaining external quality. The latter protects customers to ensure employees are not using substandard material to reduce waste and material consumption. The bonus is measured through assessing factory performance against targets and if targets are met all staff receive the same bonus. For example, in a financial quarter, the number of kilowatt amps used per square metre of carpet produced were measured and a target was then set for reducing this energy use through simple measures such as switching off lights, turning machines off when no material was running through it and closing doors to retain heat. The 10 per cent annual savings target was an arbitrary figure at the time of introduction in order to present a consistent challenge for staff, as InterfaceFLOR believes that there are always opportunities to make savings.
- 8.9 A QUEST committee meets regularly to review results. This committee consists of managers and supervisors who consider whether there are opportunities for other savings in a production area. They instigate trials for waste, energy and material savings, work out the cost effectiveness of initiatives and determine if investment is required in order to achieve greater environmental savings in the manufacturing process.

- 8.10 A director revealed that it was difficult to get the trade unions to accept the QUEST bonus at first as they were '*very conservative and suspicious about change*'. Industrial action was threatened until it was guaranteed that either the existing bonus or QUEST bonus would always be paid, whichever was the highest. The senior management team also had to be convinced about the introduction of the QUEST bonus, which is funded through savings achieved in the production process. For example, in a year the company may spend £28 million on nylon to produce 15 million square metres of carpet. If the level of output can be raised without increasing nylon expenditure then there is a clear saving. The ratio of expected usage to actual usage can then be translated into cash savings. Managers stated that this ratio is easily worked out:

*'Most companies can do this through their management costing information and it's not difficult to achieve.'* – Director

### **EcoSense**

- 8.11 To gain EcoSense points, employees must submit requests in writing along with all necessary supporting documentation from the business division to the EcoSense Administrator in the United States. The Administrator also audits divisions and spends time in each workplace to check that the environmental or quality programme is actually being implemented effectively at the workplace. Interviewees claimed that chance of being awarded EcoSense points for employees' efforts brings out '*the natural competitiveness of senior managers*'.
- 8.12 A point is awarded for implementing an initiative and another point is awarded for producing energy, waste or material savings. The workplace which scores the highest number of EcoSense Points for environmental and quality programmes each year receives a trophy and a signed letter of thanks from the senior management team. The competition element between the different facilities helps motivate staff to engage in EcoSense, in addition to engagement with the Mission Zero commitment.

### **Sustainability training and Green Ambassadors**

- 8.13 **Stage 1:** The first stage of sustainability training is part of the mandatory induction for all new employees. It informs staff about the internal sustainability programmes (QUEST, EcoMetrics (see below) and EcoSense), so that all employees understand the environmental mission of the company and what their role in it is, i.e. to reduce waste and material consumption on the factory floor where possible through awareness of how their behaviour and actions has implications. The training involves a presentation delivered by HR and a staff handbook which describes the 'green' achievements of the firm and its ongoing focus. Examples of the information shared in the induction presentation are:
- an explanation of the cost of yarn, so that staff understand that there is a value attached to wasteful actions

- the value of cardboard boxes, as the factory houses thousands of boxes for carpet tiles. Staff were beginning to use them to catch material coming off machines, until informed that each box costs 51 pence and should only be used for the intended purpose to avoid costly overconsumption.

- 8.14 **Stage 2:** Stage 2 of the training requires volunteers from any part of the business to engage in a one day training session. The one day training is run internally by Level 3 'Green Ambassadors' and focuses on various issues for sustainability. It also provides information on the aims and objectives that have been achieved within the firm and those which are currently being worked on. Each participant has to undertake a small project and presentation about sustainability activities they have participated in or what could be done to achieve future environmental aims. The Green Ambassador becomes a mentor who will maintain contact with the trainee after the training day to guide their efforts. Personal interest typically drives voluntary progression from stage 1 to stage 2, although there is an implicit expectation that managers should complete this stage.
- 8.15 Stage 2 training, in particular, explains EcoMetrics, which InterfaceFLOR began tracking in 1996. This measures energy and water intake, waste streams, greenhouse gas emissions and raw material streams, to determine the progress towards Mission Zero goals. The company mantra is that 'what gets measured gets managed' and EcoMetrics assesses how much the firm consumes, in terms of materials and energy, and the volume of products and waste. Each InterfaceFLOR plant tracks hundreds of metrics quarterly. The results are aggregated, annualised and internally published in newsletters and on noticeboards in each workplace.
- 8.16 **Stage 3:** This stage of training is delivered externally by Forum for the Future and discusses sustainability in a broader context, outside the manufacturing environment of InterfaceFLOR. The Sustainability Director asks for volunteers to become 'Green Ambassadors' at varying points throughout the year when batches of new ambassadors can be trained together. Level 3 ambassadors have to submit a project based on one of the Seven Fronts. There are 80 ambassadors across Europe across the total workforce of 957. Ambassadors come from all business functions including finance, sales and operations. All staff who have become ambassadors are still engaged with the programme as it is seen as a long term social behaviour, through which they develop sustainability initiatives in their own departments and help to deliver sustainability training and awareness campaigns. This group can be called upon to represent the firm for external speaking, training, guiding and mentoring.

*'I've done things like go out and talked to schools, I get involved with occasional community groups, the local business environmental forum, that sort of thing....we step outside our main role into other areas where we're trying to influence, at least, share ideas about sustainable practices' – Green Ambassador*

## **Building staff awareness**

8.17 The main methods used at InterfaceFLOR to build staff awareness include presentations, meetings and high visibility notice boards on the factory floor. All presentations about QUEST are mandatory for staff so that staff are aware that there is a system for making suggestions. These presentations typically inspire suggestions. One employee attributed this to people either saving up ideas they may have had in order to share at meetings or the presentation prompting staff to look for energy, waste and material savings.

8.18 Specific notice boards across the shop floor display smiley faces when a shift has achieved its QUEST target of a 10 per cent reduction in waste, energy or material. The boards also show how much of the £800 bonus has been achieved. Staff can receive £200 in a quarter. If the bonus is missed in one quarter, staff can still achieve a £200 bonus in the next quarter.

*'Staff pay a lot of attention to the boards and it encourages people to report waste that is occurring elsewhere to their supervisors' – Director*

8.19 Energy monitors are also placed across the factory floor so staff can identify any use of power above the normal levels. Charts about CO2 emissions and kilowatt usage are displayed on notice boards so staff can monitor how they are performing against targets.

8.20 Where a saving has been achieved in a particular process, a plaque on the wall, item in the newsletter or note on the intranet is used in order to make people aware of the achievement. This approach is also used to embed the process if the achieved saving requires a behaviour change across a wider group of staff.

8.21 Behaviour change is also encouraged through establishing social networks and inter-group links. The Green Energy Team uses meetings on the factory floor to 'get in front of staff' as the schedule of manufacturing operations means that staff are not available outside scheduled shift team meetings. A director stated that cross team meetings have also been introduced in order to get different groups of staff engaging with one another to identify further energy savings:

*'Electricians never used to talk to the mechanics and cross team meetings attempt to mix them up and get them engaging with each other. Breaking down these barriers has been a culture change but it has helped make suggestions which contribute towards achieving the full bonus' – Director*

8.22 Staff were originally made aware of the formation of the Green Energy team through a notice board poster and the Environmental Manager informed shift managers that meetings were going to be held every six weeks and asked them to encourage production workers to attend. An email was also sent out to invite office-based staff to the meetings.

## Staff responses

### QUEST

- 8.23 Managers believe that the QUEST bonus has proved an effective method of encouraging staff to identify areas for savings. They have observed that shop floor staff seek out information and look at the notice boards to see the level of bonus they are achieving. Each quarter the savings are displayed on the notice boards and if the targets have not been achieved, shop floor staff will question why the saving is low. Notice boards are a key communication tool in the manufacturing environment because workers have no access to PCs. Worker interest in environmental performance is in part likely to be attributable to the bonus that is attached to the savings, rather than an individual behaviour change. However, one manager commented that staff showed genuine engagement in Mission Zero.
- 8.24 Staff can make waste reduction suggestions verbally to their shift leader or on green environmental cards dotted around the shop floor which production workers can fill out and leave on their shift leader's desk for discussion at the next shift team meeting. The individual who makes a suggestion is often appointed leader of the initiative, which instils a sense of achievement, ownership and encourages them to make the suggestion successful through achieving cost savings. The factory also keeps an 'Opportunity Database' in which suggestions are logged and acted upon.
- 8.25 Managers believe that the incentive provided by the QUEST bonus has led to some good suggestions from shop floor operatives and has maintained their interest in seeking energy, waste or material savings.
- 'Whatever they're doing and wherever they're working they look at ways to reduce energy. Having an objective to think about (10 per cent saving) makes them more focused rather than going away and thinking about savings for 10 minutes but then forgetting about it all' – Office employee*
- 8.26 One idea which came from the shop floor has been adopted globally. Workers welded a bar across a machine to make it possible to draw a straight line across a roll of carpet with a marker to get a straight edge at the end of a roll. This saves two or three inches of carpet on each roll produced which is a substantial saving when multiplied across the 12 million square metres of carpet produced in Europe. This idea was spread globally by the Green Ambassador at the original site through a monthly telephone conference with other Green Ambassadors about projects at each site. Managers stated that ideas generated by staff are often the best, because production workers see what waste is being thrown away and what waste is being generated.
- 8.27 Managers in particular have engaged with the QUEST and EcoSense programmes, although they also encourage staff in lower grades to identify reasons for lower performance:

*‘Managers tend to be quite competitive and if we can tap into that in a healthy and constructive way then that’s good. You don’t want to be the manager of a factory that comes at the bottom of EcoSense every year. There is an incentive to keep improving all the time. Metrics are published monthly to all heads of divisions so they can see what areas have got worse in terms of material usage and can question teams to see why areas are not performing. All staff get involved in QUEST and EcoSense’ – Director*

### **Sustainability training**

8.28 An employee who had undertaken Stage 2 sustainability training believed that the training affected his day to day decision making by encouraging him to consider how he works; what type of materials will be used; what will be the most sustainable way of running mechanical equipment; what type of energy consumption the equipment has; whether alternative methods can be used; and what can be recycled. He praised the training as ‘very good’ and emphasised the importance of role modelling and leaders showing genuine interest in efforts in order to encourage staff to get engaged with the company mission:

*‘It was good to see enthusiasm from the trainers (ambassadors). There wasn’t just lip service being paid to sustainability, they have a genuine interest. The trainer personally followed up any ideas that came out of the training with us ‘ – Employee*

### **Green Energy Team**

8.29 The members of the Green Energy Team are considered to be personally committed to sustainable management practices and have shown interest in learning about ways to reduce the impact of manufacturing on the environment. Members attend conferences and seminars and come back and share their learning with the team. For example, a member attended a conference and trialled a fuel efficient vehicle, which they are now considering hiring for InterfaceFLOR’s efforts for UK Climate Week. The Green Energy Team has also been reviewing a new training module for staff which specifically focuses on raising awareness of sustainability e.g. the importance of turning off lights. This module has been produced externally and the Green Energy Team has been reviewing the training offered and providing feedback on it. The team objective was to review and comment on the training before it is given to all staff. This training message is relevant to the home as well as the workplace, because it provides general guidance on controlling thermostats and defrosting food at room temperature etc which are behaviours that could take place at home and work. Managers and staff both reported engaging in low carbon behaviours at work and home with one employee stating:

*‘We’ve got recycling on site and this trains people’s habits which translate to home’ – Employee*

- 8.30 More managers than production workers are members of the Green Energy Team with a 10:2 ratio between management and shop floor staff. Equally supervisors from the factory have expressed more interest in the team than office based staff. This is attributed to the separate location of manufacturing and administrative staff:

*'The office block is a separate building to the factory block but we're all on the same site Attendance from the office block has typically been much lower than from the production building; and in that regard it could be speculated that they view the team as a separate thing that is not to do with them and think we're focusing on factory specific improvements rather than company wide improvements.'* – Green Energy Team member

### **Key challenges**

- 8.31 The Green Energy Team has faced challenges in terms of attracting and maintaining staff interest in the group and its efforts. About 25 people attended the first meeting in August 2011 but this number has more than halved since then. The dwindling numbers makes the team's goals harder to achieve and declining participation is attributed to misconceptions staff have about the team:

*'When you sit in a Green Energy Team meeting as a staff member, it feels a bit like a lecture – listening to what others are doing and there are these specific champions who are focusing on particular initiatives and staff can end up thinking they're not engaged with this work. People come along to the session, feel like they can't contribute meaningfully, may not understand what's going on fully and go away thinking they're not needed there.'* – Green Energy Team member

- 8.32 The team has discussed attendance at the Green Energy Team meetings and would like to see more shop floor workers attending meetings because attendance has declined among this group. Attendance at meetings is a challenge for manufacturing staff because shifts are not planned around workers taking time out for meetings. The Green Energy Team usually meets at 10am but this is an inconvenient time for night shift workers (shift starts at 9pm) or late shift workers (starts at 1pm). The timing of the meeting therefore excludes these workers from attending. The team has discussed holding meetings at a shift change over time but this raises the question of whether staff would be paid to attend the meeting before or after their shift.

### **Evidence of impact**

- 8.33 InterfaceFLOR has monitored evidence of the impact of material changes, in the context of technology and infrastructure, rather than individual or social behaviour change. Since 1996, greenhouse gas emissions from its global manufacturing operations have reduced by 35 per cent through a combination of process efficiencies, energy efficiencies (such as lighting and equipment replacement), fuel switching, and use of renewable energy). Also, since 1996, there has been an 80 per cent reduction in manufacturing waste sent to



landfill per unit of production which has saved \$433 million in cumulative avoided waste costs. More specifically, the space heating policy was reviewed in 2008 and the temperature in most working areas was regulated at 18-20°C rather than being unregulated (which was leading to typical temperatures of 24°C during winter months). Reducing the voltage that feeds lighting systems also cut energy use for lighting. Overall efficiency measures have reduced the energy use per m<sup>2</sup> of carpet by at least 38% since 2004.

- 8.34 InterfaceFLOR has also conducted a life cycle assessment of its products in its 'War on Waste' to assess the environmental impacts associated with all the stages of the carpet tile life cycle from raw material through production to use and disposal. It found that about two-thirds of the environmental impact of the product stemmed from its raw materials and only about seven to nine per cent was caused by their own manufacturing.

*'We'd spent years making our own manufacturing as efficient as possible, when what we really should have been doing was tackling the supply chain.'* – Director

- 8.35 Subsequently one of InterfaceFLOR's first tier suppliers has done its own life cycle assessment and has found that 17 per cent of their environmental impact is due to their own manufacturing and 83 per cent stems from their supply chain (chemical manufacturers who have high energy consumption).

*'Every stage of the product life cycle requires a company to do their bit. If you can enthuse rather than demand sustainability from your supply chain they are much more willing to engage'* – Director

### **Critical success factors**

- 8.36 The critical success factors identified from analysis of the case study findings are as follows.

### **Communications**

- 8.37 Communication from managers about the need for change is important in order to engage employees in waste reduction. This helps build a workplace culture of sustainability through consistent messages and recognition of efforts and behaviour which support sustainability and the Mission Zero goal:

*'To get staff engaged you need to patiently explain the need for change; then impose clear and consistent leadership and direction and this takes attention to detail to get it right. Focus on employees; make sustainability part of their everyday tasks. Share the successes with them (bonus) and recognise the sustainability heroes.'* – Director

- 8.38 Cheap but highly visible communications suitable for the workplace context are helpful. Noticeboards in the Shelf factory have been a useful tool in stimulating engagement in low carbon behaviours among manufacturing staff through providing performance feedback. To make notice boards effective

and engaging they must be kept up to date and organised. Managers must also use them and encourage their staff to refer to them.

*'If notice boards get tatty, then they become equivalent to wall paper and people stop noticing them and if managers show interest in them then shop floor staff will too' – Director*

### **Focus on savings**

8.39 Combining a focus on cost savings and waste savings in a target-driven culture can be a powerful motivator for change. InterfaceFLOR has a distinctive culture with a rigorous approach to monitoring and performance measurement and a target driven culture across staff groups. It has cleverly embedded measures of environmental performance in key performance indicators and aligned these to performance management systems used for staff.

### **Incentives**

8.40 Incentives can be important where these are embedded in the workplace culture but may focus behaviours on easy changes. Encouraging staff to make 'the easy changes' is a good start in reducing waste and generating environmental and cost savings and can be triggered through incentives if these are an integral feature of organisational culture. An easy change at InterfaceFLOR was for production workers to use the last scraps of material rather than moving onto a new roll in order to reduce waste. The incentive derived from the QUEST bonus encourages these easy changes and helps build waste reduction into the way of working. Incentives may not be enough to 'get people to push over the hump' and focus on the harder to achieve savings which may require external inputs in order to maximise effectiveness. For example, carpet tile waste (edge waste) is one of the hardest types of waste for the company to reduce but it is difficult to challenge staff to reduce this by ten per cent as it would require input from factors outside of their control.

### **Future Plans**

8.41 Interface FLOR is considering making transport changes in future, particularly with reference to its car fleet for its sales workforce. They are undertaking a 'green fleet review' which will examine the existing car fleet, mileage, types of vehicle, types of fuel and company car policy with reference to incentives for lower emissions cars. They may also introduce training in environmentally efficient driving techniques.

8.42 The Shelf factory is also currently awaiting credit approval to install electrical vehicle charging points onsite. The existing car fleet are not electrical vehicles, but this installation is regarded as a 'gesture of intent' to change the existing vehicle types and potentially offer charging points for staff and the local community use.

## Key learning points

- Waste reduction targets which are set must be challenging and realistic. Setting lofty targets like Mission Zero means that staff may have unrealistic expectations and these may need to be managed in order to maintain the momentum of engagement in waste reduction. Staff need to understand that achieving the ultimate goal may be a long-term process:  
*'You must set the right targets and get people's expectations right; often with these projects people will expect the moon, but you'll never achieve that.'* – Director
- Provision of feedback is key to maintaining employee commitment to sustainability goals and using data to measure energy savings is critical to demonstrate to people how close they are to achieving targets. This information should be shared with employees but managers need to take responsibility to interpret statistics and advise on methods of achieving savings. The incentive to act needs to come from regional managers who review the metrics and encourage those on the shop floor who identify waste sources to suggest solutions. Developing a sense of shared responsibility is helpful here.
- The QUEST bonus changed the culture of the factory floor because the workforce is financially motivated. Do not underestimate the impact of incentivising change but recognise that it may not be enough to get staff to tackle the biggest challenges.
- Maintain momentum even if only minor improvements are being achieved. These minor changes can produce significant results on a large scale.
- Finding time and space to discuss changes and identify savings is important in a manufacturing environment. When staff have ideas about making savings they need time to 'bounce them around' and refine them in order to implement them.
- Acting on suggestions made by staff and getting staff to lead on their implementation can be highly motivating. The simplest suggestions can often make the biggest changes and it is the shop floor staff that are best placed to identify wasteful practices.
- Staff from different functions or different buildings, on different grades, on the same site may need encouragement to participate in whole site activities and the relevance of low carbon activities to all workplace environments should be stressed. Team meetings need to provide opportunities for all members to contribute and may require structuring to ensure that staff from different departments contribute and careful chairing to ensure that staff feel able to ask questions and develop a common level of understanding.

## 9 SSE (Scottish and Southern Energy)

This study highlights how embedding sustainability principles within corporate values and commitment from the senior management team can provide clear signals about acceptable, sustainable behaviour. It also shows that individual engagement and face-to-face communication are also very important. This organisation took tough decisions to tackle behaviour change and found that understanding the reasons behind staff behaviour, timings of launches, and providing better or equal to existing options made a difference to the success of initiatives.

### Background

- 9.1 Scottish and Southern Energy (SSE) is the UK's broadest-based energy company; its activities include the generation, transmission, distribution, and supply of electricity, and the storage, distribution, and supply of gas. It has also recently moved into providing new services relating to gas and electricity, along with telecoms networks and data storage. SSE is the 32nd largest company in the FTSE 100 with £11.9bn market capitalisation.<sup>2</sup> It has grown rapidly from employing 16,500 staff three years ago to 20,250 people today.
- 9.2 Operating in such an energy intensive industry, carbon consumption is high, but the company's stance is interesting because although 95 per cent of its carbon footprint comes from the generation of electricity at its power stations, it still focuses on reducing the remaining five per cent from other sources.
- 9.3 Senior management commitment to tackling climate change is evident at the highest level as SSE's Chief Executive chairs the 2020 Climate Group and writes a blog on the company intranet often highlighting research into sustainable practices.
- 9.4 Low carbon management principles are embedded within SSE's six core values which were established in 2006. The values are; safety, service, efficiency, sustainability, excellence and teamwork. These are widely known and embedded through all areas of the business, and are introduced to staff during their company induction.
- 9.5 This case study illustrates how an organisation can take a tough stance on transport policies to tackle both commuting behaviour and travel at work. Although the organisation may initially meet resistance from staff, these policies can be important in tackling areas of behaviour where voluntary change is least likely, such as commuting methods.

### Low Carbon Initiatives

- 9.6 SSE's low carbon initiatives are all intended to support the core value of sustainability. Activities are partly embedded within the company's ongoing communication systems and partly through independent projects or initiatives.

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<sup>2</sup> Correct at November 2011

Communication channels which have been used to embed the activities include the SSE intranet which has a dedicated 'Sustainability' area, newsletters, electronic briefs, induction training, workshops, and through schemes such as 'sustainability champions' (from 2008-09), and more recently 'Economy', a scheme through which employees are rewarded for sustainable behaviours in the form of donations to their chosen charity.

### ***Travel at Work***

- 9.7 For several years SSE has sought to reduce the carbon emissions resulting from staff travel. Four years ago a target was introduced which stated that for every four flights an individual took, they must take a rail journey, and this was implemented through SSE's Travel Desk which is an internally run travel booking service. An in-house team of seven staff monitor booking trends and can exert influence over how and when people travel. The Travel Desk collects information on modes of travel at the point of booking and reports this back to the SSE management team on a monthly basis. If the Travel Desk team believes that the journey could be made another way, with lower carbon emissions, then they will discuss this with the individual.
- 9.8 The company also introduced two no-fly months every year, in August and December, when all but essential flights are prohibited. When this initiative was initially launched, first class rail travel was permitted for journeys over four hours. More recently, a policy has been implemented to promote travel by rail rather than plane, along with a policy encouraging people to avoid travel completely if possible. Reducing business miles travelled, especially by air, is a key objective for the Travel Desk and while supporting the company's sustainability value is a key motivator for this, increasing fuel costs have provided an additional incentive to do this.
- 9.9 SSE has also trialled a 12 week 'no-fly period'. This had a more dramatic impact as the duration of the initiative meant staff were less likely to simply postpone travel until after it finished. Reaction to this trial was generally positive as managers found that it saved money and also meant that employees were more likely to try out the alternatives in this period than during a four week restriction on flying.
- 9.10 The travel team also promotes the use of telepresence which is a form of videoconferencing, introduced to SSE in 2009, following a suggestion from a member of staff. The state of the art equipment was installed in Perth, Reading, Horley, Edinburgh, Portsmouth and Dublin and has proved to be very popular, with estimates suggesting that telepresence has helped staff avoid approximately 847,500 miles of travel in the past year, based on journeys from Edinburgh to London alone.

### ***Low Carbon Vehicle Policy***

- 9.11 Although emissions from company vehicles represents a small proportion of SSE's total carbon footprint, improvements made in this area are highly visible and offer daily opportunities to help uphold the firm's value of sustainability.

- 9.12 A new company car scheme was launched in January 2010 when the fleet contract was renewed. Over 1,800 staff currently participate in the blended<sup>3</sup> company car scheme. The new scheme offers more attractive cars over a longer period of four years or 88,000 miles and places a cap of 150g of CO<sub>2</sub> per km on vehicles that can be chosen. This cap of 150g was selected after a benchmarking exercise against other company car schemes, and a deliberate choice to adopt a lower cap than the one commonly found of 160g/km. The company would like to reduce the cap at some point in the future to 140g following further engagement with staff.
- 9.13 SSE also operates a fleet of commercial vehicles. The commercial fleet has a target of running with no more than 180g of CO<sub>2</sub> per km which SSE is seeking to lower to 150g by 2016. It is also implementing other measures to reduce the impact of the commercial fleet including reducing fuel consumption, fleet size, and annual mileage profiles, while also trialling the use of electric vehicles. For example, the 'black boxes' in vehicles used to monitor speed for safety reasons have a dual function in that they can also be used to assess fuel efficiency and monitor fuel efficient driving techniques. SSE gives its staff fuel saving driving tips, and provides drivers with Sat Nav systems, programmed with the location of pylons and poles so that they can be located quicker. SSE has also stopped replacing pool cars in order to reduce the number of them on each site, and has supported this move by introducing a minibus for travel between some sites.

### ***Travel to Work***

- 9.14 SSE operates many different initiatives under the banner of '*employee commuting*'. These include: lift sharing, car parking schemes, private and public bus schemes, cycle to work schemes, public transport season tickets, walking groups, the Big Green Commuter Challenge, and a Sustainable Travel Summit.
- 9.15 **Restricting car parking** – SSE has reduced the number of car parking spaces on some of its sites relative to the number of employees working at them. For example, on one site there are over 2,000 employees and only 857 car parking spaces. SSE originally tried to restrict car parking by emphasising the safety risks of overcrowded car parks but this failed to make an impact. It was then decided with the support of the Chief Executive to promote the environmental benefits of reducing parking availability.
- 9.16 The company analysed the home postcodes of staff working at the location and found that as 62 per cent live within five miles of the site, they should be able to access viable alternatives to driving. The scheme which was introduced permits staff to park their car on only four out of five days a week, effectively reducing the number of cars being parked by 300 each day. Car-sharers are permitted to park every day and have preferential spaces.

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<sup>3</sup> The blended scheme includes both Contract Hire and Employee Car Ownership. Employees can choose depending on which suits their needs best.

- 9.17 **Lift Share** – Nearly a quarter of staff car share, something which SSE encourages and enables by providing access to a lift sharing website, where staff can find other commuters with whom they can car share.
- 9.18 **Local buses** – At one location, SSE collaborated with another large company to make a proposal to the local bus company for an additional public bus route for their staff. Both organisations postcode-plotted their employees' homes and worked out a suitable route, contributing £20,000 each, which along with £20,000 from the bus company funded the provision of the desired service.
- 9.19 SSE negotiated amended bus route times to enable staff to get to work in time for their shift patterns and also negotiated access for staff on the early shift to the first bus of the day which is normally reserved bus drivers themselves getting to work.
- 9.20 **Big Green Commuter Challenge** – This is an annual competition which seeks to encourage staff to try alternative forms of travel for one week. A cash prize of £250, which goes towards a sustainable project, is awarded to the location with the highest participation rate among its staff, while several individual prizes such as iPods are also awarded randomly to participants. The purpose of the scheme is to help break habits, as one manager explained: *'the hope is that when staff try it they think, actually it's quite easy to get the bus.'*
- 9.21 **Travel Survey** – At one site SSE sent a survey to every member of the local Chamber of Commerce, with the aim of understanding the issues that staff at other local businesses faced in relation to commuting and to present a united front when approaching bus companies to lobby for change. Four hundred and seventy-three responses were received, most of which came from SSE staff. The results showed that 56 per cent of people lived less than five miles from their workplace. Sixty per cent of people had tried an alternative means of travelling to work in the past and staff reported that the main reason for choice of travel mode was 'convenience'. SSE has learned from this that in order to help persuade staff to try sustainable alternatives, they will need to be made convenient for people. The team wants to continue its research and find out why many staff do not maintain sustainable travel methods.

### **Energy Reduction**

- 9.22 SSE aims to reduce CO<sub>2</sub> emissions resulting from energy consumption at its Carbon Reduction Commitment (CRC) qualifying buildings by two per cent in 2011-12. In the last year Automatic Meter Readers (AMRs) have been installed to monitor energy usage at over 200 sites meaning that 99 per cent of total energy consumption is now recorded in half hourly format.
- 9.23 SSE has an ongoing investment plan to improve energy efficiency in its buildings through improvements to building fabric, lighting and heating. Low energy, motion sensitive lighting, new air conditioning systems, and energy saving Dyson Airblade hand dryers have been installed in recent years. These measures reduce energy consumption but also encourage behaviour

change as employees can visibly see the company's commitment to 'putting it's money where its mouth is' in terms of energy efficiency.

- 9.24 SSE provides training for staff, such as facilities managers, who have control over building energy consumption, in order to improve their understanding of why it is necessary to reduce energy use and how they can make changes to achieve savings. SSE also emphasises that infrastructure improvements need to be supported by staff behaviour changes and believes that the cumulative impact of small behavioural changes are valuable in themselves:

*'We've got low energy flat screen monitors and computers, but there's still an element of behavioural impact which remains; simple things like switching the monitors off... it's a very simple message, but because there's such a large number of people, if everyone does the small things, it'll make a big difference.'*

- 9.25 The company encourages changes in staff behaviour through a variety of means including the provision of energy data, league tables comparing consumption across a range of sites, and financial incentives linked with energy savings.
- 9.26 For the past five years SSE has conducted an annual sustainability survey and last year received 4,560 responses, which represents 23 per cent of the total workforce, and over 50 per cent of those who have regular access to a computer. The survey explores staff understanding of sustainability and gauges both their attitudes and level of activity in relation to it. The findings show that:
- SSE employees' rate their understanding of sustainability as good (with an average score of 7.5 out of 10)
  - between 40-60 per cent of employees travel to work in a sustainable way
  - between 56-70 per cent say they always switch off equipment when it's not in use and
  - between 56-70 per cent of staff say they always segregate waste.

### **Process of implementation**

- 9.27 Sustainability became a core value when SSE's values were launched in 2006. New employees find out about SSE's commitment to sustainability and its low carbon initiatives through an interactive Sustainability presentation in the company's induction process and a Sustainability e-learning package which focuses on both global and SSE-specific sustainability issues.
- 9.28 Existing staff can gain information on many of the initiatives from the intranet and notice boards. For example, a 'Frequently Asked Questions' document was provided for the low carbon vehicle policy.



- 9.29 Some of the low carbon travel to work initiatives have also been publicised through promotional stands in reception areas, from which staff were able to obtain factsheets, personalised bus timetables detailing all the different buses to the site, maps and ticket offers. Prior to the roll out of car parking restrictions, staff were sent a letter signed by a senior manager to emphasise the importance of the scheme.
- 9.30 In relation to energy usage, AMR data, analysed and presented in graphical form, is provided to facilities managers and site managers of SSE's depots and retail shops. This enables staff who are in a position to make a difference to analyse consumption patterns and think about what they can do to reduce their energy usage.
- 9.31 Staff are also made aware of new policies through email and meetings within their teams but SSE recognises that there is still more work to be done on informing staff of schemes.

### Staff Responses

- 9.32 Staff reaction to the introduction of sustainability as a core value has been generally positive, although some of the measures to embed the core value have prompted varied responses from staff.
- 9.33 For example, the recycling scheme was difficult to implement at first, as some staff believed that the recycling contractor mixed the waste together again when they collected it, while others reported that they would like more information about what ultimately happens to the recycled materials. As one member of staff indicated:

*'The recycled bottles are ultimately converted into new bottles or school uniforms, trousers, jumpers or fleeces ... it would be useful to have a conversation with staff, asking them if they realise that they're throwing into general waste what could be recycled into a pair of trousers, just to get the conversation going.'*

- 9.34 There have been variations in the level of response to initiatives from different departments. For example a relatively high proportion of staff in Customer Services, compared to other business areas, take part in the annual *Big Green Commuter Challenge and Sustainability Survey*. This is perhaps due to the departmental culture of encouraging staff to participate and contribute whenever possible.
- 9.35 **Travel at work** – Some staff have responded very well; one employee, previously in the top five of the list of most frequent fliers in SSE has now gone 11 months without flying and travels by train instead. Being able to travel first class and do work on the train initially convinced the individual to change from flying everywhere.

*'The company gets the environmental benefit of shifting from plane to train and I get the benefit of being able to do more work on the train than on a flight, so from that perspective it's a double benefit.'*

9.36 Another employee has tried to stop business travel all together, preferring to use the telepresence facility for internal meetings with staff from other SSE sites. Other organisations are becoming more open to this idea too, but few companies have telepresence facilities as yet, so its use is limited for external meetings.

9.37 **Energy Reduction** – Providing SSE’s Retail Shops with energy usage data collected through AMRs has already started to have an impact and managers reported that staff have welcomed the information so that they can think about how they can reduce their energy consumption.

*‘When the shop manager received the report, there were a few things that she couldn’t understand and so she actually got all of the staff together to go through and look at the consumption patterns to work out why usage would be higher at certain times. So it seems to have been a fairly effective means of bringing energy consumption to the forefront of people’s minds, which is the starting point on the road to behaviour change.’*

9.38 **Restriction of Car Parking** – The car parking initiative restricting parking to four days per week was introduced during November 2009. The timing of this change meant that people were reluctant to try alternative modes of travel and give up using their cars in the winter. Car parking permits are monitored on entry to the site to ensure that staff comply with the scheme, but it has been described as a constant battle to get people to comply with the policy. Some staff continue to drive on their restricted day and park off-site. In the summer months staff seem happier to give up using their cars and try alternative means of commuting to work, such as walking or cycling.

9.39 **Low Carbon Vehicle Policy** – Company cars are an emotive subject and SSE found that people are passionate about their car entitlement. Managers have found that staff have responded well to being given information about why changes were being made, and the policy was made palatable to staff due to the fact that there is a wide range of cars to choose from under the 150g cap. Staff were also pleased that the newer cars were less expensive to run.

9.40 Staff have the opportunity to give both formal and informal feedback on changes that have been introduced. SSE operates an employee suggestion scheme called ‘Licence to Innovate’ which allows any member of staff to submit ideas and receive rewards if the idea is implemented. This has generated useful suggestions like the introduction of telepresence, and types of vehicles that could be included in the company car scheme.

## **Key challenges**

9.41 One of the key challenges for reducing air travel and promoting rail travel is to combat staff assumptions about the relative costs and time associated with different methods of travel. SSE has calculated that on some routes it is quicker to travel door-to-door by train and that travelling by rail can be more productive than by air. For business travel, SSE believes that cost should not

be the main determining factor in travel choices, although they do try to reduce the cost of rail by choosing ticket types carefully, researching offers and working with the travel companies to get better deals. For example, the company has been able to make use of the Scottish Executive Package<sup>4</sup> on the East Coast Mainline.

*'We've said that the cost aspect is an internal thing for us at the Travel Desk to address. So cost shouldn't be the determining factor for the travellers when they come to book their travel; for them it should be the sustainability aspect.'*

- 9.42 The Travel Desk team have engaged with a number of staff on a one-to-one basis regarding the pros and cons of various types of travel. A particularly important challenge is to break habits by persuading staff to try a new travel method for the first time. Once employees have successfully used an alternative, they are more likely to use it again, as has often proved to be the case with employees using the rail sleeper service to London. One way the company aims to influence staff is by making workers who are willing to try out new modes of transport unofficial 'ambassadors' for it, encouraging them to share their positive experiences with others. This is done on an informal basis by asking departmental managers to share their experiences with their teams and signposting staff to these 'pioneers' to share their experience.
- 9.43 This tactic of using informal champions has been adopted across various low carbon initiatives. The company has made use of people who are passionate about green issues and sustainability to reinvigorate the restricted car parking scheme and tackle staff who dropped out of using alternative transport methods and were ignoring the scheme due to the time of year. Staff who are passionate about cycling talked to colleagues during the Big Green Commuter Challenge and set up a cycle surgery which provided free bike checks and repairs.
- 9.44 While SSE is able to control individual behaviour at work, staff are often more resistant to change if it affects the amount of time they have at home such as travelling overnight for work or leaving the house earlier in the morning in order to catch a bus.
- 'At work we can say to employees, "you must put that bottle in that bin". They follow suit because they're at work and they're paid to do it. It's obviously more difficult to change their lifestyle, and their habits in their own time though. For example, someone may say, "If I walk to work I have to get up ten minutes earlier". To some people ten minutes is a lot of time in the morning!'*
- 9.45 SSE also found that it is more difficult to implement car parking restriction in winter months; when mornings and evenings are dark and the weather is bad. In the winter of 2011, SSE amended its tactics to promote car sharing more heavily than other alternative means of transport, as people are less willing to walk and take public transport in these months.

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<sup>4</sup> This train fare package includes free upgrade to first class along with other benefits

9.46 Some of the measures introduced by SSE such as restricted car parking were perceived by some at first as being 'heavy-handed', so the company is now trying to educate people and make the alternative more attractive. This includes highlighting the benefits to be gained outside of work, such as being able to use weekly bus passes for travel at weekends, and reducing energy bills at home through developing a habit of turning appliances off.

9.47 One challenge which SSE are still trying to tackle at one site is staff parking in surrounding streets on days when they are not permitted to use the car park. By reinvigorating campaigns, and improving them based on learning from experience, managers hope that this issue will be solved eventually.

*'In the summer, with this car parking scheme, everyone's happy to do it because it's sunny and they're happy to get the bus or walk because they can meet up with friends on the way. However as soon as the winter darkness comes people just want to be in their cars.'*

9.48 SSE also recognises the challenge of matching low carbon emission cars to staff preferences, therefore the company has also included a tolerance measure of five per cent of their target for senior executives who may request cars with additional features.

9.49 SSE ran a Sustainability Champions programme in 2008-09. Difficulties were encountered as volunteers often did not have enough time to commit to their duties as champions whilst also carrying out their normal roles. There are still a small number of unofficial Sustainability Champions in the Customer Services department, but generally the scheme has now wound down. Instead, SSE is trying to build sustainability into all aspects of daily working life so that it is not seen as an optional 'extra'.

9.50 Sustaining interest and engagement is also a challenge, described by one interviewee as a 'constant battle'. SSE has found that it needs to renew campaigns, altering the emphasis of them every few months to maintain staff attention. For example, in order to promote alternative commuting methods, SSE now promotes walking and buses in the summer, but focuses on car sharing in the winter. The company also recognises that in addition to ensuring people comply with organisational policies, it needs to win hearts and minds by tackling beliefs and values.

*'We've got to get smarter at selling the message, presenting the facts to people and getting them to sign on to it and really challenging those that don't believe in it.'*

9.51 One lesson that SSE have learned is that effective implementation of low carbon measures should follow a sequential process; involving staff at the beginning of the process of changing policies, then during policy change to make refinements, while providing feedback.

## Evidence of impact

- 9.52 SSE has been able to quantify much of the impact that low carbon initiatives have had. The lift share scheme has 1,489 members, of whom 1,381 have registered journeys, while 1,267 employees participated in the Big Green Commuter Challenge in 2011.
- 9.53 Table 2 provides a summary of available evidence on the impact of SSE's low carbon initiatives.

**Table 2: Impact of low carbon initiatives**

<b>Name of scheme</b>	<b>Aim</b>	<b>Achievement</b>
Travel at work	Reduce the number of business flights to 0.5 per employee and reduce travel miles overall.	Avoided 847,500 miles of travel in 2010
Low carbon vehicles	150g CO <sub>2</sub> /km cap for company car fleet in 2011, 120g/km to be achieved by 2016	Currently at 146g for company car fleet Currently at 180g for commercial fleet
Lift Share	150g CO <sub>2</sub> /km by 2016 for commercial fleet Reduce the demand on car parking spaces	Since Jan 2009 members have saved £918,908 in costs of parking provision, saved 3,455,313 miles of travel and 1,136.7 tonnes of carbon dioxide
Big Green Commuter Challenge	Reduce the demand on car parking spaces by encouraging other means of travel	Participants saved a total of 96,281 miles in 2010
Energy reduction	In 2011-12 reduce energy consumption at SSE buildings by two per cent	CO <sub>2</sub> emissions produced from energy consumption have decreased by around 3 per cent over the past year
Ecoinomy	Money saved from sustainable behaviours is given to charity	Staff have so far saved £12,000

*Source: IES interviews with staff*

## Critical Success Factors

- 9.54 Interviewees felt that multiple factors have made the schemes successful and they would not have succeeded without 'hitting it from all angles'.
- 9.55 The critical success factors for the low carbon initiatives implemented at SSE include:

### ***Corporate Values***

- 9.56 Linking individual projects to well known corporate values can help staff make connections between a diverse range of separate initiatives and an overall common purpose.

### ***Role Models***

- 9.57 Using senior managers as role models, for example, when restrictions to car parking were introduced this was supported at the highest level.
- 9.58 Using real examples, and real people as ambassadors for sustainable behaviour to challenge habitual behaviours through changing perceptions of behavioural norms.

### ***External Support***

- 9.59 Building and using external networks of organisations has been an important factor in changing public transport services through negotiation with local bus companies and getting the best deal in working with the rail and airline companies.

### ***Equipment and infrastructure***

- 9.60 Providing equipment and facilities can enable behavioural change. This includes, for example, making sure there are bike shelters, changing rooms and hairdryers for people cycling to work. Other examples include a minibus to transport people between sites, installing charging stations on sites for electric vehicles and the investment in telepresence facilities as an alternative to travel.

### ***Prioritisation***

- 9.61 Focusing effort where it will make the most impact, in terms of carbon savings, through targeting high users of business travel can be an important first step.

### ***Evidence***

- 9.62 Providing real evidence about comparative costs and times of different transport options can appeal to individual perceptions of mode of travel.

### ***Perception of the Schemes***

- 9.63 Making alternative choices attractive is important, such as in the case of changing company car options.
- 9.64 Minimising perceived inconvenience has shaped how the company promotes alternatives to car use according to seasonal climate variations.

## Future Plans

9.65 SSE intends to continue to build on the initiatives it has already started. It will soon implement changes to the travel booking system so that staff can make their own choices and book their travel themselves. The system will display the carbon impact of different modes of travel and will filter options to give prominence to the mode of transport with the least carbon impact. The aim is to use 'visual guilt' to persuade people to change their travel behaviour.

*'We want to be able to say to staff, "these are your two options" and clearly show to them the carbon impact of both, allowing them to make the final decision. If they choose the less sustainable option they will have to justify why they've done so.'*

9.66 The system will also record the reasons people give for choosing the mode of transport which will give SSE information to help develop low carbon initiatives and make them more self-sustaining. There may be plans to change the 'no-fly' months to different times in the year so that there is a bigger impact as they currently take place in August and December which are traditionally months when there is less business travel.

9.67 SSE would like to make further reductions in the CO<sub>2</sub> emissions cap for their commercial and company car fleet. The goal is to eventually have company cars which emit less than 120g/km by 2016 as opposed to the current average of 146g.

9.68 SSE plans to continue with the restrictions on car parking by promoting alternative means of transport appropriate to the time of year. SSE is also working towards a national award to become recognised as a cycle-friendly employer.

9.69 Plans are in place within SSE's retail shops to trial different methods for encouraging behaviour change in relation to energy reduction, including competitions, financial incentives and information provision. Energy reports produced using data collected from AMR meters at each shop will be shared with staff who can influence energy consumption there. The project will generate findings which will be used in planning the next carbon reduction campaign for staff in other sections of the company.

## Key learning points

- Embedding sustainability principles within corporate values and linking environmental sustainability with workforce sustainability can help justify change.
- Changing corporate policies and making the impact on staff unavoidable can be helpful in providing strong signals about acceptable behaviours. Taking tough decisions which may initially meet resistance from staff can be important in tackling areas of behaviour where voluntary change is least likely, such as commuting methods.

- Individual engagement targeting staff with carbon-intensive travel behaviours can make significant impacts.
- Timing of launches; any low carbon initiative which can be influenced by weather conditions requires careful consideration.
- Face-to-face communication through managers and peer examples can be as important in motivating and sustaining change as formal written communication of corporate policies. Ongoing but refreshed and varied communications campaigns can help to sustain staff interest.
- Using data to dismantle myths about costs and benefits, ease and convenience of different transport options can be powerful, especially if these can demonstrate time savings to staff. Peer feedback from early adopters of new behaviours can be helpful in persuading more reluctant staff to try out new travel methods.
- Generating enthusiasm for voluntary behavioural change can be challenging if employee engagement has normally relied on compliance with corporate policies. Ensuring that staff are educated about the processes and consequences that follow their actions may be helpful in stimulating behavioural change.
- Providing substitutes which are equal to or better than existing options can reduce individual resistance to change, as in the case of company car options or the use of telepresence facilities as an alternative to travelling to meetings.
- Understanding staff commuting patterns and assessing the feasibility and likely use of different travel options is helpful in negotiating public transport service provision. Building alliances with other local organisations to enhance negotiating power can be very effective.
- Commitment from the senior management team is important to demonstrate leadership, and to show belief in the messages being promoted in relation to change.
- Embedding change takes time but new behaviours can be embedded through natural turnover of staff as new workers have no memory of former routines.



## 10 WILES GREENWORLD

This case study examines how the appointment of a dedicated champion in a senior management role has helped create a holistic approach to carbon reduction within the workplace. Universal values around low carbon working have been embedded in the organisation through the use of entertaining educational tools and attractive and engaging communication materials. These have proved effective at building engagement at all levels in the organisation; from warehouse staff to director level.

### Background

- 10.1 Wiles Greenworld is an office supplies distributor, based in West London. The company is the result of a merger that occurred in September 2006 between Wiles (established in 1935) and Greenworld (established in 1989). The company employs about 50 staff and its customer base is located in central London. Keeping the customer base close to the business location is part of the company's green strategy by reducing the carbon footprint of delivery. Customers outside London account for only about 10 per cent of the business and are serviced through overnight carriers. Wiles Greenworld also offers an environmental consultancy service which helps customers establish an environmental office and reduce waste, through the implementation of environmental management systems. In 2009, the company also set up its own Charitable Trust fund to support greenhouse gas reducing schemes locally.
- 10.2 Given the nature of its business, the primary focus of Wiles Greenworld is on recycling its own waste, and it also provides this service to 40 per cent of its customers, but it has a strong philosophy of environmental education underpinning its low carbon activities with staff, which extend beyond the impact of its own products and services. The company's environmental expertise is evidenced by the large number of green awards they have won over a number of years, including their inclusion in the Sunday Times Best Green Companies List 2011(2nd place) and the Mayor of London's Green 500.
- 10.3 The Chief Sustainability Officer (CSO) believes there are three main drivers for an organisation to 'go green':
- Reputational: There is a moral imperative to engage in low carbon activity and this moral imperative can be translated into reputational benefits for a company, with this recognised through winning and retaining business and staff retention.
  - Financial: It is necessary to find a commercial justification to support the moral imperative and these are often the clear financial benefits that can be achieved in terms of reduction in waste and therefore reduced landfill tax, and in winning new business based on reputation, alongside reduced training costs as a result of low staff turnover.

- Legislative: The third driver is *legislative* as it is necessary to respond to the increasing volume of environmental legislation in order to protect the reputation of the company and avoid any fines for non-compliance.

### **Low carbon initiatives**

- 10.4 The approach to reducing carbon consumption at Wiles Greenworld is holistic. Key elements of Wiles Greenworld's strategy are to minimise waste through evaluation of its operations; minimise toxic emissions through the selection and operation of their fleet, reduce energy usage and improve the disposal of waste; and promote recycling, internally and among its customers.
- 10.5 Within the company, low carbon behaviour is promoted by the Board of Directors, all of whom are committed to sustainable operations. The CSO, who is one of three company directors, is solely responsible for the sustainable development of Wiles Greenworld and it is his leadership which is key to the adoption of low carbon behaviours among staff.
- 10.6 Staff education is considered by managers to be a critical element of changing staff behaviour within Wiles Greenworld through raising awareness and raising the profile of sustainability initiatives sufficiently high so that staff adopt low carbon behaviour. The types of initiatives the company has implemented internally which engage staff include:
- an induction and training programme for all staff on how their actions can help reduce carbon consumption, led by the CSO
  - monthly meetings to provide training for all staff on a breadth of environmental issues
  - converting 70 per cent of its delivery fleet to alternative fuels and promoting fuel efficient driving, for which drivers receive a bonus. The bonus is typically worth £50 and is awarded about twice a year
  - providing recycling facilities and removing personal waste bins from the office
  - working from home – the entire sales team work from home and come into the office once a month for a meeting. Home working is also open to other staff if it is suitable for their role
  - sustainable break out facilities (i.e. no plastic for drinking cups, Fairtrade products).

### **Process of implementation**

- 10.7 The 'individual' classification of influences on behaviour is demonstrated through the focus on staff education. Education is seen by management as the key to success in encouraging low carbon behaviour at Wiles Greenworld with the education beginning from a staff member's first day at work. Every new member of staff has a half day induction with the CSO, during which they

will watch films such as 'An Inconvenient Truth', 'The End of the Line' or 'Crude'. The CSO explains this approach in that *'it gives an understanding of the bigger picture and why our culture is as it is. This is what we are about as a company and this is what's expected of you as an individual within the organisation to contribute to that.'*

- 10.8 Not all staff recruited by Wiles Greenworld hold positive values and beliefs about the importance of sustainable business upon recruitment, but the interviews with staff showed the organisation seems to be successful in its educational approach to staff engagement. One member of staff reported:

*'Prior to joining the company I had very little knowledge of environmental issues. I originally thought I won't fit into this company as I'm not 'green'. Obviously I knew about recycling but in terms of going deeper than that it was very limited knowledge. When I joined the company a lot of time was spent training me, going through the reasons why it is important to recycle and why you need to use less, where possible.... once you understand that it automatically makes you do things differently for example, every time we print paper, I will recycle it to make a notebook, and that's just one of the things that I would never have considered doing before, but since being in a green company, and having this much exposure to environmental issues it has meant that I do things completely differently than I would in a normal office.'*

- 10.9 The sustainability message is also reinforced at every departmental monthly meeting in which there will be a 'green slot' in which films are shown with a message about environmental sustainability. Whilst these films are unconnected to the core business of Wiles Greenworld, the manager believes that they are fundamental to an understanding of the organisation. These meetings will also include quizzes for staff members on environmental issues. Discussion of topical issues are also encouraged in departmental meetings and the CSO stated:

*'We discuss topical issues that may be out there at the moment and try to actually relate them to the bigger picture; how they affect us as a company; and what's happening in the world; what the UK is doing about it; and what we're doing about it within that. Education is absolutely key and spreading that message as widely as I can allows people to actually take the message home rather than just keeping it in the office.'*

- 10.10 According to management, some simple methods have helped encourage staff to engage in low carbon behaviours at Wiles Greenworld, based on what the CSO described as a concept of 'nudge economics'. For example, recycling bins without lids are provided for staff but the general waste bin provided alongside has a lid, which encourages people to recycle because more effort is required to place rubbish in the general bin. Also in the kitchen area, staff were encouraged to drink Fairtrade coffee. In order to encourage staff to try it, the CSO put a jar of Fairtrade coffee in the kitchen, removed the lid and put a spoon in the jar. He put a lid on the jar of non- coffee and placed

a packet of spoons on top of the tin to make it harder to access. Staff have now started to use the Fairtrade coffee after being nudged in this direction. *'If you make it easy for people to do the right thing, then that's what they should default to'*. Staff themselves recognised this change in habit but only once the actions had been drawn to their attention. They recognised that their habits had been broken because it was less effort to use the Fairtrade blend; it gave them a feeling of 'doing the right thing' and it still 'tasted good'.

- 10.11 Whilst both managers and employees believe the social context of Wiles Greenworld is effective at engaging staff in green behaviour, with the CSO acting as the green champion and spending a considerable amount of time with staff advancing their knowledge about the green agenda, it is the material context which drives behaviour in the office through the procedures that are in place. For example, the company has policies on recycling and procedures around fuel efficient driving which rely on compliance with company rules to change drivers' behaviour and recycling behaviours among the wider workforce.
- 10.12 The sales team have taken the fullest advantage of home working; with the whole team working from home and meeting in the office once a month. There is also broader capacity to work from home due to Wiles Greenworld's investment in 'cloud computing'. This is a new way of remote server storage which allows organisations to access their data through an internet connection without the physical servers being located in the office. Cloud computing itself also reduces energy consumption through consolidating servers more efficiently at a third party base. Home working at Wiles Greenworld outside of the sales team is currently performed on an ad hoc basis by the Distribution Manager and the Directors and staff in Finance, but as long as staff can provide adequate cover in the office, they are all permitted to work from home.
- 10.13 Wiles Greenworld also runs an internship programme which has proved to be a source of new ideas for the low carbon agenda in the office. The interns are typically already engaged with sustainability issues and are attracted to Wiles Greenworld due to its low environmental impact business approach and recognition through awards. These interns were described as *'fantastic to bring more of a campaigning spirit into the office environment'*. They work with existing staff on environmental initiatives and sourcing alternative green products. There is a requirement on all staff to find alternative green products and validate its sources for items listed in their catalogue during less busy times. Some 40 per cent of the products Wiles Greenworld sell have an environmental benefit and interns help to identify further products. Interns with expertise in IT were also used to investigate the opportunities in cloud computing.

### ***Building staff awareness***

- 10.14 Management believe a key to sustaining momentum and staff commitment appears to be through simply repeating the messages, albeit with variation and interest through focussing on different topics in each communication. The company uses 'G-mails' or 'Green mails' (see below) which are sent to staff raising awareness of a current environmental issue. It also distributes

'green' newsletters and in departmental meetings staff can expect environmental quizzes based on the content of these newsletters. Staff we interviewed talked positively about these emails and reported that they found them enjoyable to read:

*'They're eye-catching. It looks very different and you want to see something different. I mean, you get normal emails every day, but when you get a newsletter that's bold and colourful you want to read it. If you don't want to read it there and then, just print it off and take it home with you. Sometimes I do that, I just stick it on a USB stick and take it home with me.'* – Warehouse operative

- 10.15 As customers also frequently ask about environmentally friendly products and recycled versions of products, staff need to be sufficiently familiar with principles of sustainable materials and production in order to answer their questions. This therefore provides an additional incentive for staff to read the communications.
- 10.16 Wiles Greenworld has won a number of awards for its activities which are displayed prominently in the office to remind staff and there are posters all over the office highlighting the company's low carbon performance. The firm is now being more selective about the awards it enters in order to avoid 'award fatigue'. It is aware that staff and customers start to lose sight of their value when they are given yet another 'gong' for their low carbon behaviour.

### **Staff responses**

- 10.17 Staff expressed overwhelming support for the green ethos of Wiles Greenworld. Their recent high scores for staff engagement in The Sunday Times 'Green List' Awards illustrated that staff are engaged in low carbon behaviour but interviews we conducted also revealed evidence of staff commitment. One staff interviewee, who prior to joining the company was not environmentally aware, told us they now participate in debates in the office about the environment and sustainability.

*'This morning we were talking about sustainability and giving staff the option of offsetting the carbon when they go on holidays. It was really interesting, thinking about not just the impact, but also the solutions. It really sparks debate. That's the sort of thing I never used to do before. You could tell me to recycle before and I wouldn't question it. It was something that I just did, or I didn't do. But now it's more about I need to do this, because of this reason.'* – Product manager

- 10.18 Other staff have made suggestions including the use of hand dryers instead of paper towels in the staff toilets and kitchen; a more efficient water heating system for boiling water for hot drinks and more extensive use of motion sensor lighting. One member of staff contributed an idea to increase the levels of natural lighting within the offices to improve the working environment and reduce energy consumption through putting windows through into the adjoining warehouse which is lit by skylights. This has been implemented by the organisation.

10.19 The award recognition the company has been received has been welcomed by staff, particularly the Sunday Times Green Award. Staff told us that the publicity of this award means that their friends and family are now aware of their organisation and they feel a sense of pride about working for a green company and that their efforts have been recognised:

*'It's good, because it shows you're actually doing something, you're actually making a difference. And it's not just because you've got a director saying that it's a good thing to do, because that's what he personally believes. You can actually see the bigger picture, it is a really good thing that we're doing here and it's being recognised.'*

### **Key challenges**

10.20 Due to the holistic approach taken at Wiles Greenworld and the strong leadership demonstrated, managers have some concern that staff believe that the company is already doing everything it can possibly do to reduce its environmental impact. They suspect that some staff may no longer engage in the continuous improvement approach by asking 'what could be done better?' Staff may identify further improvements to make products and processes more environmentally sustainable, but assume that change is not possible, because if it could be done, then it would already have been implemented. Managers want to give their staff the opportunity to think about new ways of working in the office, rather than implementing change 'top down', but the accepted idea among staff that 'that's simply how things are done' is a barrier to implementing new change. The education of staff is seen as a way to overcome this through increasing the awareness of staff and encouraging them to look at ways of working differently.

*'Challenges include actually getting staff generating ideas rather than it all coming from the top. So, absolutely, that's a challenge and a frustration.'*

10.21 Wiles Greenworld does not use environmental champions but management would like to see staff more involved in roles such as this. Currently the CSO faces the challenge of staff expecting him to have made all possible changes to support the company's sustainability agenda, which risks making the potential role of an environmental champion redundant. He regards this type of role as crucial in larger organisations where one manager cannot oversee the activity of all departments stating that '*the more people you can actually buy into beating the drum the better*'.

10.22 Some of the difficulties in persuading staff to take ownership and make suggestions for change may be partly rooted in the organisation's history prior to merger. When Wiles merged with Greenworld in 2006, the companies encountered cultural differences. Greenworld staff were expected to be innovative in a relatively informal culture, whereas the culture of Wiles was far more structured and formalised. Managers perceive that there is difference in the willingness of staff to contribute new suggestions depending on which organisation they used to work for.

## Evidence of impact

10.23 The individual context, in particular the development of genuine attitudes and beliefs about the green agenda, is having a significant impact at Wiles Greenworld. Our interviews with staff supported the suggestion that the staff inductions and regular meetings on environmental issues are impacting staff behaviour, particularly as they are taking their low carbon behaviours home; recycling more items; turning down the heating; and switching off unused lights; conducting minimal car journeys; and using public transport. This behaviour was similar even across the different types of employees; drivers; warehouse and office staff.

*'I've changed my family's views on it as... I've noticed that they've made a lot of changes with their waste as well. So it's like a domino effect I've created, but I've enjoyed doing it' – Warehouse operative with one year tenure at Wiles Greenworld*

*'Consciously I will walk to the shop instead of driving to the shop. We've got a local shopping centre, I would walk there instead of driving now, because it is greener.'* – Sales Manager

*'I've always recycled...but because of the awareness – because you're doing it in the company, you do it at home as well.'* – Finance Manager

10.24 Staff reports suggest that they have engrained low carbon behaviours as habitual and automatic responses that fit into daily schedules. This includes turning off monitors when they go to lunch or leave for the day, reporting that this activity is 'second nature'. We were told:

*'It's become a total mentality change, I think, which you could only achieve if you're working in a green company, and you have a lot of exposure to someone who's got the knowledge and the expertise to tell you about why we do things.'*

10.25 One member of staff has changed his personal vehicle to a lower emission vehicle. He received a contribution towards the cost through the Wiles Greenworld Charitable Trust, as the company includes commuting mileage within its carbon offset.

Another reported behavioural change in how they disposed of waste:

*'I've only been here a year and they've changed the way I look at things. I mean, I've got all the bins at home all lined up. Normally, I would have just thrown everything in one bin and out it goes. Now I've got one for cans, I've got one for bottles, one's for leaves, one for food waste....'*

10.26 The company has achieved ISO 14001; which is the international standard for environmental management and specifies a process to control and improve environmental performance. Wiles Greenworld also measures its carbon footprint quarterly. It has driven its carbon footprint down by 32 per cent since 2008 and now delivers 52 per cent more goods per tonne of carbon than it did three years ago. It is, however, not possible to determine how much of this reduction is attributable to individual behaviour change and whilst management at Wiles Greenworld do attribute some of this carbon reduction to staff; they recognise that they cannot deny that it is the material influences that have made the biggest impact to carbon consumption, in particular the impact of technological innovation.

10.27 Managers also report that efforts invested in staff education at the company affects the behaviour of individual employees at home but also leads to some staff acting as ambassadors with their wider families and friends. Although the company has only 50 staff, it emphasises that its influence can extend much more widely than these 50 individuals. This was described as the 'pebble in the pond effect'.

### **Critical success factors**

10.28 Critical success factors identified from analysis of the case study findings are:

#### ***Leadership***

10.29 Whilst the focus at Wiles Greenworld is on staff education, the message that is communicated from the top of the organisation is considered to be the most crucial factor in engaging staff with low carbon activity. Evidence from Wiles Greenworld's green consultancy illustrates the importance of this top level support:

*'With the consultancy we do for our customers, there are so many organisations where we go in and there's a green champion who has formed a committee, which may have set up a recycling scheme and other initiatives. But the whole approach is very fragmented and that'll only get things so far. It won't change the way the whole company is operating. The drive has to absolutely come from the top, unequivocally. The message to everybody from the top needs to be - this is happening.'*

10.30 The example set by senior management is also considered to be key to getting staff engaged with the low carbon behaviour. The staff members we interviewed described the CSO as the 'Green Guru' and this Officer himself expressed that 'you can't expect staff to believe in the activities if you don't'. He stressed the need to give staff the time out to engage in low carbon behaviours, stating there is no greater demonstration of senior management's commitment than giving staff time to engage in the behaviours.



## **Education**

10.31 Education of staff plays its part in actually getting staff to understand what is being done within the organisation and why. Embedding universal values in the organisation through staff education is seen as key by management to ensuring the low carbon behaviours are not only displayed within the organisation but also at home.

## **Social norms**

10.32 Helping staff to break and change habits is also considered to be very important by management, which Wiles Greenworld has attempted to do through very simple and practical 'nudge' techniques to help influence and shape staff choices.

10.33 A further helpful factor in embedding behaviour is likely to be low staff turnover: Ten per cent of staff have been with the company for over 25 years and around 50 per cent have been employed by the company for over 10 years. This has helped to support the development and embedding of a low carbon culture in the company.

10.34 The company has also been successful in changing staff behaviours by applying the principles of autonomy, mastery and purpose to implementing the company's initiatives. Staff told us that the Wiles Greenworld sustainability ethos gives them a sense of purpose and a belief that they are operating responsibly and 'doing the right thing'. It was evident from interviews with employees working in lower skilled jobs which may provide limited intrinsic interest or job satisfaction, that knowing that the way they worked had a meaningful function in contributing to a wider purpose was a source of pride and enjoyment.

## **Communication**

10.35 The presentation and use of attractive media to communicate messages appears helpful in generating a high level of engagement with staff, evident in behaviours such as taking material home to read in leisure time.

## **Future plans**

10.36 In response to the challenge of getting staff to think about environmental innovations for the workplace, Wiles Greenworld intends to launch what it has termed the 'Big Green Ask', through its 'G mail' communications. A G mail (see Figure 5 below) has been designed which will be sent out to staff in the coming weeks, asking staff to come up with new ideas for environmental savings.

10.37 Wiles Greenworld also plans to invest heavily in redeveloping the existing site which will allow it to expand its level of recycling. A sustainable building design is being used including a south facing roof with solar panels, rainwater harvesting, bio-diesel tanks and insulation. Wiles Greenworld has a vision of

becoming a zero carbon organisation and every department has an environmental Key Performance Indicator to support that direction.

Figure 5: Big Green Ask G mail communication to staff



### Key learning points

- The very clear and consistent support from the top of the organisation with the appointment of a dedicated champion in a senior role is worth considering. However, the prominence of a single dominant individual may reduce some sense of individual responsibility for initiating change among staff members and measures are need to counteract this.
- Taking an approach which focuses heavily on education appears to be an effective way of 'changing hearts and minds', through embedding universal values in the organisation and appears to lead to positive spillover of low carbon behaviours from work to home.
- Education processes can be built into social, team-based contact time with enjoyable dimensions eg sharing pizzas while watching films on environmental topics and quizzes at team meetings.
- Use of attractive and engaging communication materials on a variety of topics, not all of which are directly related to the organisation's core activities, can help both educate and engage staff.

- Making time available in working hours to understand the reasons why an organisation commits to low carbon behaviour is essential to make education effective.

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