

Managing Agents Sustainability Toolkit

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Acknowledgements

The Better Buildings Partnership (BBP) brings together a number of the largest commercial and public property owners in London in one collaborative organisation. All members are working together to improve the sustainability of London's existing commercial building stock and accelerate the reduction in CO₂ emissions from these buildings.

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Introduction



In light of the increasing amount of environmental legislation and growing importance of sustainability and CSR reporting, it is becoming ever more

important, for both property owners and occupiers, that their buildings are managed in a way which reduces adverse environmental impacts and identifies opportunities for improvement.

Managing Agents have a key role to play in this process. They are the conduit linking owners and occupiers and are ideally placed to appreciate and promote the environmental aspirations of both parties and facilitate cooperation. The policies adopted by the Managing Agent for a building can have a dramatic effect on its environmental impact, as well as the drive to reduce CO₂ emissions across the sector.

Commercial property owners often look to managing agents for advice on how to deliver services to their buildings in a more sustainable way. An increasing number of property companies are using sustainability criteria as a KPI for their Managing Agents and I believe this trend is set to continue. A sustainability offer will become increasingly important as more and more clients appreciate the growing risk to their businesses if they fail to consider this key aspect of property ownership.

It is important to recognise, however, the challenge Managing Agents face when offering this new set of skills and services in addition to their existing property management capability. We are at a particularly difficult time in the property and economic cycle and clients are understandably looking to drive down costs for property management services in response to a reduction in their own revenues. At the same time, the business risks associated with property management are increasing.

Engaging a Managing Agent with the relevant skills to incorporate sustainability into the management process, however, should reduce the business risk and the additional costs will often be outweighed by the resultant savings.

This Toolkit sets out a full range of sustainability services which an owner should consider requiring its Managing Agent to provide. It also provides guidance for Managing Agents on how best to meet such requirements, cross referenced to the [Better Building Partnership's Green Lease Toolkit](#) Memorandum of Understanding, which can be found in Appendix 1 for ease of reference.

I hope that the Toolkit will be widely used as a practical reference guide to stimulate change in how agents manage properties on behalf of their clients.

Keith Bugden
BBP Programme Director

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1. Energy

The primary objective for a Managing Agent should be to implement an energy reduction strategy that achieves the combined aspirations of the building owner and occupiers. All businesses, whether they own or occupy buildings, will increasingly feel commercial and regulatory pressures to reduce energy consumption and their carbon footprints. The UK government has legislated to reduce CO₂ emissions by 80% by 2050 and buildings' energy use will have to fall considerably to help meet that target.

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1.1. Produce an energy policy for the building

Discuss with the building owner using [Guidance Note 1.1](#): 'How to write an energy policy' in order to establish the principles to be followed in all aspects of energy management.

1.2. Determine the total energy consumed in the building

Use [Guidance Note 1.2](#): 'Identifying when and where energy is being consumed and how to use the information' and [BBP Sustainability Benchmarking Toolkit for Commercial Buildings](#) to establish appropriate energy benchmarks.

Refer to [Guidance Note 1.4](#): 'What are Display Energy Certificates (DECs) and Energy Performance Certificates (EPCs)?' to establish the building's energy rating.

1.3. Carry out an energy audit of the building

This is key to understanding the current energy use in the building and possible routes to its reduction. See [Guidance Note 1.3](#): 'How to carry out an energy audit'.

1.4. Obtain an energy rating for the building

EPCs and DECs are legal requirements for some buildings. See [Guidance Note 1.4](#): 'What are Display Energy Certificates (DECs) and Energy Performance Certificates (EPCs)?' to determine whether procuring a DEC might help to assess and benchmark the building's energy performance.

1.5. Determine if there are separate meters for individual floors, units, common parts and on the individual services and consider installing advanced meters

Consider sub-metering energy consumption using the Chartered Institute of Building Services Engineers (CIBSE) guidance document: '[TM39 Building Energy Metering Guidance](#)' and [Guidance Note 1.5](#): 'What is advanced metering?' See also [BBP Better Metering Toolkit](#)

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1. Energy

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1.6. Create an action plan to ensure future action and improvement

An action plan that all parties agree on will be the most effective. See [Guidance Note 1.6](#): 'Create an action plan to ensure future action and improvement' and the [Carbon Trust's Action Plan Tool](#). See also [BBP Green Building Management Toolkit](#).



1.7. Involve occupiers in reducing energy consumption

Use [Guidance Note 1.7](#): 'Involving occupiers in reducing energy consumption' and see the Carbon Trust's document: '[CTG001 Creating an Awareness Campaign](#)' for ideas and examples.



1.8. Consider purchasing energy from renewable sources

Overall carbon reductions can be achieved by reducing the carbon intensity of the incoming energy supply. For smaller organisations, use Green Energy Certified suppliers as a guide to ensure they meet the standard. For larger organisations use [Guidance Note 1.8](#): 'What is 'green' or renewable energy and how to procure it?'



1.9. Establish if your building can participate in local and/or communal schemes for energy generation or provision

Although this is still relatively rare, it is becoming an option for more buildings. See [Guidance Note 1.9](#): 'What are local energy schemes?'



1.10. Agree an approach with the building owner for the installation of renewable technologies

Use [Guidance Note 1.10](#): 'Installing renewable technologies' on the possibilities that can arise.



2. Waste

Businesses that generate large amounts of waste can incur significant costs with legislation increasingly penalising waste producers financially. Managing Agents can help building owners and occupiers develop strategies to reduce their waste production and associated costs.

Managing Agents also have legal responsibilities in dealing with waste, which must be fully understood.

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2.1. Understand the waste hierarchy

Understanding the waste hierarchy is essential if waste production is going to be reduced and a suitable strategy devised: See [Guidance Note 2.1](#): 'Understanding the waste hierarchy'. Keep the hierarchy in mind when developing a waste strategy and implementing waste management controls.



2.2. Produce a waste strategy for a building

Discuss developing a waste strategy with the building owner and occupiers and refer to [Guidance Note 2.2](#): 'How to produce a waste strategy for a building'.



2.3. Determine the waste streams and volumes in the building by carrying out a waste audit

Use [Guidance Note 2.3](#): 'Carrying out a waste audit' to map a building's waste streams by source, quantity and type.



2.4. Check your responsibilities under the Duty of Care Regulations

Use [Guidance Note 2.4](#): 'Understanding your duty of care responsibilities' to understand your legal responsibilities when producing, storing, transporting and disposing of waste.



2.5. Control waste during refurbishment and fit-out

Use [Guidance Note 2.5](#): 'How to manage waste during refurbishment and fit-out' to produce a successful Site Waste Management Plan.



2.6. Identify and dispose of hazardous waste

Produce, with the building owner and occupiers, a strategy for controlling hazardous waste on-site. Refer to [Guidance Note 2.6](#): 'Identifying and disposing of hazardous waste'.



Some electrical equipment is also considered to be hazardous waste. Refer also to [Guidance Note 2.7](#): 'How to identify and dispose of electrical equipment'.

2.7. Identify and dispose of electrical equipment

Use [Guidance Note 2.7](#): 'How to identify and dispose of electrical equipment' to establish whether your electrical supplier can dispose of your electrical waste items for you.



3. Water

A Managing Agent has little control over water use in a building but will be expected to help manage and maintain its supply. Sustainable water management may be less publicised and regulated than managing a building's energy use but it is a natural resource which can easily be conserved. Together with strong environmental benchmarks and water efficient technology, managing a sustainable supply of water will ensure a reduction in environmental impacts and create financial savings.

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3.1. Produce a water use policy for the building including targets

Discuss with the building owner using [Guidance Note 3.1](#): 'Benchmarking water usage and setting targets' and [Guidance Note 1.1](#): 'How to write an energy policy', substituting "energy" with "water".

3.2. Determine the baseline water usage and the waste water output of the building

Use [Guidance Note 3.2](#): 'Identifying the building's baseline water usage'.

Consider installing advanced water meters to receive automatic meters readings and half-hourly water consumption profiles. See [Guidance Note 1.5](#): 'What is advanced metering?' See also [BBP Better Metering Toolkit](#)

3.3. Agree an approach with the building owner for the installation of high efficiency plumbing fixtures and control technologies/control systems in the building

This approach should be agreed as part of the water management policy. [Guidance Note 3.3](#): 'High efficiency plumbing fixtures and control systems' provides a summary of current technologies and sources of relevant information.

3.4. Undertake a regular programme of leak inspections at the building

The inspection programme should be agreed as part of the water management policy. Use [Guidance Note 3.4](#): 'Leak inspections at the building' to identify appropriate actions.

3.5. Where possible, use treated and recycled water, captured rain water and grey water, where potable water is not necessary.

Use [Guidance Note 3.5](#): 'Capturing and using treated, recycled, rain and grey water' to identify and implement sustainable water solutions in a building.

4. Alterations & Replacement

This is not an area where Managing Agents are generally able to exert much influence. However, there are important issues to be aware of to ensure compliance with the building owner's objectives and particular building environmental standards. A Managing Agent's role is to ensure changes to a building either retain or enhance its sustainability performance. A Managing Agent should be able to use their position to ensure best practice wherever possible.

4.1. The role of the Managing Agent during refurbishment and fit-out works

Determine how you can influence the sustainability of refurbishment and fit-out works: Use [Guidance Note 4.1](#): 'The role of a Managing Agent in refurbishment and fit-out'.



4.2. Identify environmental measurement targets

Establish how best you can promote sustainability solutions to alteration works and the replacement of building components: Use [Guidance Note 4.2](#): 'Identifying environmental measurement tools'.



4.3. Ensure sustainable sourcing is a considered part of the works

This is likely to be part of lease provisions if a green lease is in place. Use [Guidance Note 4.3](#): 'What is sustainable procurement?' for additional information. See also [BBP Green Lease Toolkit](#).



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5. Transport

Effective travel planning not only helps to reduce an employee's dependency on car travel but can also help reduce global CO₂ emissions, maintain a healthy workforce and provide financial savings. A Managing Agent will have little control over an occupier's travel planning policy but they can help building owners and occupiers ensure suitable facilities are in place at a building in order to support a Green Travel Plan.

5.1. Agree a 'Green Travel Plan'

Green Travel Planning should be a major part of a sustainability strategy; see [Guidance Note 5.1](#): 'What is a green travel plan?'



5.2. Provide space for bicycle storage and shower and changing facilities for cyclists

Essential facilities must be in place to support a Green Travel Plan, see [Guidance Note 5.2](#): 'Sustainable transport facilities'.



5.3. Establish shuttle links where practicable to any local transportation hubs

Promote and/or establish public and/or commercial transport links to and from a building; see [Guidance Note 5.3](#): 'Shuttle buses and public transport service provision'.



5.4. Prioritise parking spaces for sustainable transport options

Minimise car use at a building and assess opportunities for providing charging points for electric vehicles see [Guidance Note 5.4](#): 'What is sustainable car park management?'



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6. Cleaning

The extent to which a Managing Agent has any control over cleaning and procurement will differ from building to building. Cleaning staff can play a role in the success of a sustainability strategy as their day to day activities involve maintaining the building. The Managing Agent's role includes guiding and motivating these contractors and encouraging them to become champions of environmental standards.

6.1. Ensure cleaning contractors support all sustainability measures and follow any sustainable procurement strategy in place

Communicate a building's sustainability strategy using [Guidance Note 6.1](#): 'Cleaning contracts and sustainable cleaning products'.



6.2. Provide awareness raising and training to cleaners

Motivate maintenance and cleaning staff about a sustainability strategy; see [Guidance Note 6.2](#): 'Providing awareness raising and training to cleaners'.



6.3. Programme cleaning times to minimise the use of lighting, heating and air-conditioning resources

Integrate cleaning schedules into a sustainability strategy using [Guidance Note 6.3](#): 'Aligning cleaning schedules and environmental performance'.



6.4. Specify appropriate cleaning and maintenance procedures for specialist 'green' plant, equipment, fixtures or fittings

Involve facilities management teams and cleaning contractors in sustainability strategy planning using [Guidance Note 6.4](#): 'Implementing cleaning and maintenance procedures'.



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7. Sharing Initiatives

A Managing Agent can act as a facilitator for change in a building. Although few occupiers will have the capacity to develop major sustainability initiatives on their own, in collaboration they can achieve much more than they could hope to alone. By establishing Green Building Management Groups (GBMGs) and encouraging the exchange of information, a Managing Agent can help develop a sustainability strategy to meet the needs of both owner and occupiers and assist them in setting collective goals.

7.1. Encourage the building owner and the building occupiers to share and exchange sustainability data and policy target achievements

Communicate and exchange sustainability data using [Guidance Note 7.1: 'Sharing targets and achievements'](#) for advice. See [BBP Green Building Management Toolkit](#) for guidance on how to establish and develop a Green Building Management Group.

7.2. Help run sustainability workshops for the building occupiers to demonstrate how reductions and savings to energy, water and waste consumption can be made.

Environmental training should form part of a full sustainability awareness campaign; See [Guidance Note 7.2: 'Providing or arranging environmental workshops'](#).

7.3. Provide environmental training and education to employees and communicate their achievements when appropriate.

Use [Guidance Note 7.3: 'How to provide training & education and communicate achievements to employees'](#) to identify suitable training and education material to motivate staff. Also see [BBP Green Building Management Toolkit](#) for ideas on how to communicate progress and results.

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8. Service Charge

A Managing Agent can help a building owner to provide maintenance and other services to a property, the costs for which are generally recovered through a service charge. Where energy, water use and waste management provision is shared between multiple occupiers, it is best practice to make sure service charges are both transparent and fairly apportioned. Sub-metering of energy (and ideally water) use for both occupier and owner controlled parts of a building will allow for fairer apportionment.

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8.1. Where practicable, separately identify the cost of sustainability/environmental initiatives within the service charge account



8.2. Consider service charge adjustments to reflect the metered use of energy and water by individual occupiers

Use [Guidance Note 1.5](#) 'What is advanced metering?' See also [BBP Better Metering Toolkit](#) for guidance on metering options.



9. Tenant Handbook

A tenant handbook is a key source of information for occupiers. The handbook should include all appropriate data and documents relating to sustainability aspects of the building.

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9.1 Ensure that occupiers are provided with a handbook or information pack at the commencement of their tenancy.



This should include energy and environmental management information such as;

- any EPC/DEC ratings together with recommendation reports
- energy and utility reduction targets
- details of any energy metering strategy and monitoring data
- an environmental policy
- water strategy and performance data
- waste strategy and performance data

The information in the handbook or information pack must be kept up-to-date by the Managing Agent and reflect shared sustainability initiatives. See [Guidance Note 7.1: 'Sharing targets and achievements'](#) and the [BBP Green Building Management Toolkit](#).

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1. Energy

The primary objective for a Managing Agent should be to implement an energy reduction strategy that achieves the combined aspirations of the building owner and occupiers. All businesses, whether they own or occupy buildings, will increasingly feel commercial and regulatory pressures to reduce energy consumption and their carbon footprints. The UK government has legislated to reduce CO₂ emissions by 80% by 2050 (based on 1990 benchmark levels) and buildings' energy use will have to fall considerably to help meet that target.

Managing Agents need to work with building owners and occupiers if significant energy reductions are to be achieved. The following guidance notes set out how Managing Agents can strive to reduce energy use and the carbon intensity of buildings.



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1.1 How to write an energy policy

In order to formulate an energy policy, building owners must first identify what it is that they want to achieve. Asking the following questions will enable Managing Agents to assist building owners in identifying which issues need to be included in an energy policy for a building.

- What are the building owner's overall objectives? Is the aim to save energy, engage with occupiers, help to meet legislation requirements, improve CSR credentials or a combination of these?
- Does the building owner need a policy that covers a whole portfolio or one which is specific to each building?
- What resources are available to implement the building energy policy? Are there skills in-house to meet the policy demands or is additional assistance required?
- Are the building owner and/or occupiers prepared to fund initiatives required to meet the aspirations of the energy policy and share the benefits?

Managing Agents may find that the building owner's approach to energy is already included in a corporate environmental policy.

When developing an energy policy, building owners must also consider what financial resources are available. Answering the following questions will help in the process:

- Does the building owner have a separate energy budget with sufficient funds to be invested in the energy policy implementation?
- Does the budget extend beyond simple maintenance to enable investment in new technology and improvements?
- Are there accounting procedures in place that will enable any energy cost savings to be reinvested in further energy efficiency initiatives?

- Has the building owner identified a realistic payback period for investments?
- Are procedures in place to calculate the life cycle cost of implementing energy-saving technology and practices?

To ensure that an energy policy is suitable, Managing Agents should ensure that:

- The policy identifies what energy management information is required and how it is gathered. The [BBP Green Building Management Toolkit](#) enables a Managing Agent to successfully administer this process and describes how this information can be used to the greatest effect.
- Targets are realistic and achievable and cover both the long-term and short-term (e.g. annual and quarterly – i.e. to cover a suitable period over which the policy's initiatives can be implemented). The energy policy should also consider how different parts of the building may need to have individual targets; specific targets can be set to reflect the individual energy needs of a particular room or floor space. These targets can be designed to take into consideration various plant and electrical equipment energy demands or represent the number of people occupying a workspace. This is particularly the case for self contained rooms or parts of buildings which use separate building services and have separate energy controls to maintain them.
- The building owner and occupiers engage with one another to help put the policy into action. From training and awareness campaigns to occupier suggestion schemes and incentives, the policy should seek to involve all parties who can help to ensure long-term success.
- The Managing Agent is identified as having specific responsibilities to ensure best practice in energy management.

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1.2 Identifying when and where energy is being consumed and how to use the information

It is important to remember that energy data capture is now a key part of a Managing Agent's responsibilities. Furthermore, time spent early on ensuring that data capture is comprehensive will be very beneficial in the long term. Whatever method of data capture is used, it must match the requirements of the building owner, e.g. for CRC Energy Efficiency Scheme reporting, carbon accounting or managing cost savings.

Energy consumption data is best compared over several periods of time, from days to years. In order to be accurate, data collection methods need to be consistent across the periods being measured. If there are gaps in data or the way energy data is collected changes from one period to another it may difficult to compare and contrast energy consumption. Having consistent energy collection methodologies is particularly important when setting energy targets, you need to know what you are measuring before you can successfully improve.

From this information the baseline energy consumption for the building can be established and reduction targets set: these are both fundamental to managing a building in an energy efficient manner. Guidance on data collection methods can be found in the [BBP Green Building Management Toolkit](#), the [BBP Better Metering Toolkit](#) and the [BBP Sustainability Benchmarking Toolkit for Commercial Buildings](#). However, setting appropriate reduction targets may require specialist advice – the building owner may already have an energy manager, sustainability specialist or in-house advisor that the Managing Agent can work with.

There are two basic questions need to be answered in order to understand energy use within a building: when and where is the energy being consumed?



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1.2 Identifying when and where energy is being consumed and how to use the information

When is energy being consumed?

- As a starting point it is important to maintain good records. Simple meter readings (recorded in a spreadsheet) or analysis of energy bills can be used to establish annual and monthly energy consumption data.
- A more efficient way to obtain consumption data is to ensure that meters can log the data on a half hourly basis and be remotely read. This can be achieved through the use of advanced meters or Automatic Meter Readings (AMR). See [Guidance note 1.5: What is advanced metering.](#)
- In the UK, main utility electricity meters in most modern or recently refurbished buildings will normally be advanced meters (see [BBP Better Metering Toolkit](#) for further information). The Managing Agent can request this half hourly data from the utility company.
- Other electricity meters and most gas meters in existing buildings will normally not be advanced meters and these need to be read manually. Equipment can be added to such meters that automatically read them, logs the data half-hourly and then communicates it (usually using mobile phone networks) to electricity companies and/or Managing Agents.
- By analysing the half hourly electricity and gas profiles on weekdays and weekends, a Managing Agent will be able to understand when energy is being consumed and identify whether energy consumption fits with 'normal' use profiles. It may be the case, for example, that there is significant energy demand during unoccupied or out-of-service hours – this may indicate an inefficient use of heating or cooling plant, lighting or other services/equipment.

Where is energy being consumed?

- In addition to half-hourly metering on the main utility meters, further energy savings can be identified by sub-metering different areas of a building (e.g. individual occupier floors) and 'special use' areas/equipment which consume large amounts of energy (e.g. server rooms, trading floors, chillers, kitchens, etc). This will demonstrate where in the building improvements can be made.
- Sub-metering data will clearly be more powerful if recorded on a half-hourly basis, using advanced/AMR metering. This allows the Managing Agent to see when and where energy is being consumed and enabling identification of where improvements can be made.

Transparency of how energy is used by both owner and occupier is important in order to incentivise change and this information should be shared between parties. Where occupiers procure their own utility services collecting utility data at a whole building level can be challenging, as data can only be collected by requesting the occupiers to provide this. The British Property Federation's [Les-Ter Scheme](#) provides guidance on how to collect such information. A simple spreadsheet can be the most useful tool of all.

When analysing half-hourly data from advanced meter systems, specialist software is required and can be provided by specialist suppliers. Further information can be found in the [BBP Better Metering Toolkit](#).

Not all Managing Agents will have buildings with systems that provide the above information easily, such as advanced or sub-meters. It is recommended that a specialist energy adviser is engaged where such systems are absent and/or when such specialist expertise is required.

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1.3 How to carry out an energy audit

Managing Agents should consider arranging a detailed energy audit from an energy consultant. Audits are a good way of identifying low and no cost efficiency improvement options.

With the introduction of the Carbon Reduction Commitment Energy Efficiency Scheme (CRC) in April 2010, this audit can also establish the carbon output of a building for reporting purposes. Further guidance on the CRC is provided by the [Environment Agency](#).

Audits should cover the following:

- Site walkover and interview with Facilities/Property Manager.
- Identification of energy-wasting behaviours.
- Analysis of historic energy consumption data – preferably half-hourly.
- Assessment of the efficiency of the building fabric, and plant & equipment. A detailed assessment may be time consuming and expensive to procure but a 'light touch' opinion can be requested if preferred.
- Potential for the deployment of energy efficient technologies such as passive infrared lighting controls.
- Investigation of use patterns and unnecessary operation of plant and equipment, perhaps using BMS software and/or advanced metering.
- Appliance and plant upgrade recommendations.
- Assessment of the potential for installing renewable energy technologies (such as solar heated hot water).

The output of an energy or carbon audit can also be a Display Energy Certificate (DEC) which will provide a rating (of A to G) on how well a building is being operated and managed (see '[Guidance Note 1.4](#): 'What are Display Energy Certificates (DECs) and Energy Performance Certificates (EPCs)?'). These certificates are required by law for some public buildings but are being increasingly used to report on how well a commercial building is performing. An energy auditor or advisor can provide further information on DECs.

A Managing Agent may also find that a building owner has established performance standards based on the DEC rating so it is important to establish their requirements. This information can be captured in the building energy policy (see [Guidance Note 1.1](#): 'How to write an energy policy').

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1.4 What are Display Energy Certificates (DECs) and Energy Performance Certificates (EPCs)?

Energy certificates describe the energy performance of a building and are useful tools for comparing one building with another. EPCs are required when a building is built, sold or let. Public authority and public institution buildings also require a DEC. Both certificates rate energy efficiency on a scale of A to G, where A is most efficient and G is least efficient.

Both EPCs and DECs are intended to encourage building owners to consider energy efficiency levels when purchasing, selling or letting property. A Managing Agent should understand which energy certificates are required for a building and consequently may be expected to arrange for certification by an accredited energy assessor.

Display Energy Certificate (DEC)

All public authorities and institutions providing public services in a building with a total floor area over 1,000m² must produce a Display Energy Certificate (DEC) for that building. It is likely that from 2012, DECs will be required for buildings over 500m² and from 2015 for buildings over 250m². The Department for Communities and Local Government's '[A guide to Display Energy Certificates and advisory reports for public buildings](#)' describes the key characteristics of a DEC:

- The rating is based on energy used within the building over a 12 month period
- An Operational Rating shows the building's carbon dioxide emissions over the past three years
- An Advisory Report accompanies any DEC and sets out a list of recommendations for improving the energy performance of the building
- The A3-sized certificate must be displayed in a prominent place, clearly visible to members of the public

Energy Performance Certificate (EPC)

Energy Performance Certificates advise owners and potential buyers and occupiers of the potential energy efficiency of a building and are required when a building is built, sold or let. The Department for Communities and Local Government's '[A guide to energy performance certificates for the construction, sale and let of non-dwellings](#)' describes the key characteristics of an EPC:

- The energy rating given on the certificate reflects the energy performance of the building relative to a standard benchmark
- EPCs come with a recommendation report which includes advice on energy efficiency improvements and a potential rating that could be achieved if improvement work is undertaken
- An EPC for a non-dwelling is valid for 10 years or until replaced with a newer one

An accredited energy assessor is the only person who can produce a DEC, EPC and advisory report for a building. The [Non-Domestic Energy Performance Certificate Register](#) can be used to locate accredited assessors.

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1.5 What is advanced metering?

Advanced metering provides the ability to read a meter remotely, automatically and at frequent intervals. Such meters are also often termed AMR (automatic meter reading) meters. The technology is applicable to both the main utility meter and any sub-meters. It is important to note that existing meters can either be replaced with new advanced meters or retrofitted to provide the capability.

In essence, advanced meters:

- Collect and send half hourly consumption data (e.g. electricity, gas, water and renewables installations such as photovoltaic solar panels)
- Communicate via phone lines, SMS messaging and increasingly by using wireless technologies with a storage facility where the data is collected and used for either billing or analysis for management purposes.

Advanced main utility meters allow a utility company to remotely access energy consumption data. Energy readings are typically recorded on a half-hourly basis, providing much more accurate and 'up to date' energy usage data than available through monthly or quarterly bills. This type of meter also removes the need for manual readings. The information from the meter can also be made available on request to the utility provider.

Advanced sub-meters operate in much the same way as AMR main utility meters. They provide more accurate and 'up-to-date' energy consumption data for a sub-meter which measures a specific location or energy load (e.g. single floor of a building or specific server room). Data for these meters is not transmitted to a utility company but is used by the building management and may be transmitted to an automatic Monitoring and Targeting (aM&T) database where performance can be analysed to ensure efficient operation and identify reduction opportunities. If MID (Measuring Instruments

Directive (2004/22/EC)) approved meters are chosen then they can be used for billing purposes. All advanced meter utility meters used by energy suppliers meet this criterion. Further guidance is provided by the [National Measurement Office](#).

Advanced metering provides a number of benefits to support the Managing Agent in efficiently managing a building by:

- Understanding how energy and other utilities are used.
- Identifying wastage and opportunities for improvement.
- Allowing utility bills to be cross checked and the most appropriate tariff for the client to be selected.
- Ensuring fairer apportionment of occupier billing where sub-meters allow.
- Reducing the requirement for manual readings.
- Providing data for carbon/CSR reporting as well as legislative requirements e.g. CRC Energy Efficiency Scheme and Display Energy Certificates.
- Improving behavioural change through the supply of information to all parties. For example, the building owner is able to see an entire property portfolio and drill down to individual properties or even floor areas. The Managing Agent can be set up to view just their building and the occupiers can view information only relating to the area they occupy. Buildings can even have public displays installed in reception areas.

For more information see:

- [BBP Better Metering Toolkit](#)
- [CIBSE TM39 'Building Energy Metering Guidance'](#)
- [Carbon Trust CTV027](#)



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1.6 Create an action plan to ensure future action and improvement

Developing an energy action plan is an essential step to ensure the Managing Agent successfully sets and achieves ongoing and future energy policy targets. This guidance is designed to make the process of writing an energy action plan a straightforward process.

The action plan review process is usually carried out annually when reviewing business planning. Action plans are best reviewed by a team that represents all interested parties, which gives an opportunity to identify team members with knowledge and interest in a particular subject willing to take the lead in developing policy. An ideal energy action planning team consists of members representing the building owner, the Managing Agent, the building occupiers and an external energy specialist.

An action plan usually takes the form of a timetable or programme for completing the following implementation phases:

Phase 1: Review of current practice

Phase 2: Assessing options for change

Phase 3: Agreement of new procedures or policy

Phase 4: Providing training and resources, where necessary

Phase 5: Implementation

Phase 6: Monitoring

Phase 7: Review and revision, if necessary

In a multi-occupied building where shared mechanical and electrical services are provided to occupied areas, a Managing Agent should look to establish a Green Building Management Group to consider all aspects of sustainability in the building.

Green Building Management Groups can ensure action plans covering all sustainability issues are addressed, e.g.:

- Comparing the environmental impact of the building with industry/best practice benchmarks.
- Setting realistic targets for reductions and efficiencies.
- Monitoring progress towards agreed targets.
- Reviewing the effectiveness of measures introduced in the Environmental Action Plan.
- Identifying well performing areas and developing best practices.
- Identifying and addressing poorly performing areas.

The [BBP Green Building Management Toolkit](#) provides detailed advice on establishing and running a successful Green Building Management Group. It also provides a number of templates for developing an action plan for sustainability issues and reporting environmental performance. Additionally, an energy action planning tool is available from the [Carbon Trust](#) which provides users with a choice of recommended energy saving actions that can be combined to produce individual action plans specific to different industries.

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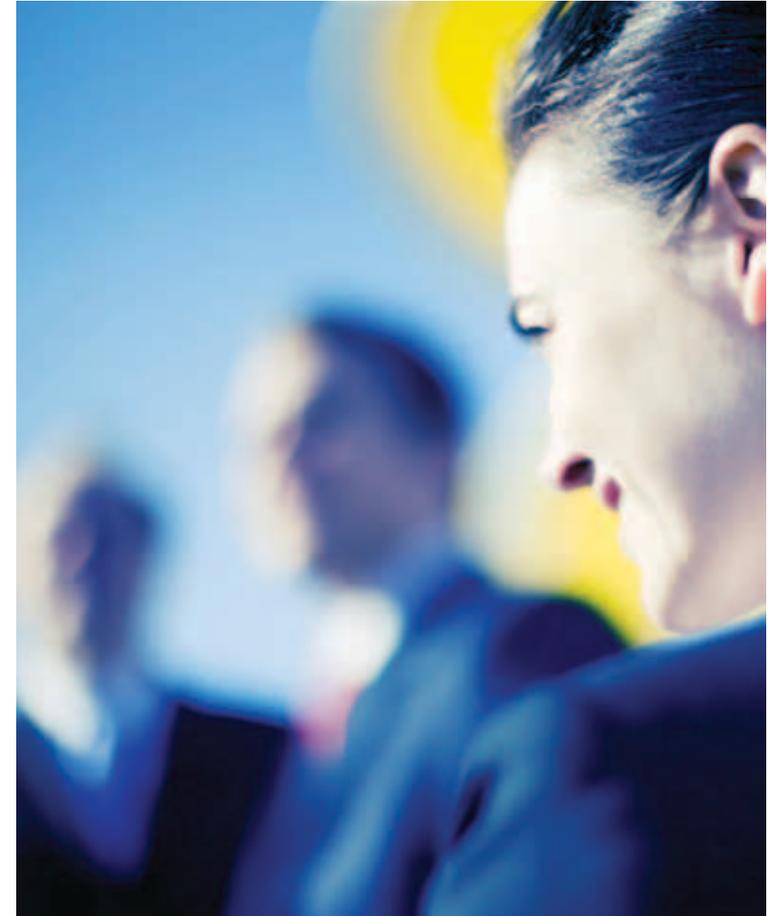
1.7 Involving occupiers in reducing energy consumption

When dealing with occupiers on a day-to-day basis, the Managing Agent has opportunities to encourage them to reduce their energy consumption. The extent to which Managing Agents are successful will depend on many factors; perhaps the most important of which is the willingness of the occupier to support the owner's strategy for energy reduction. If a Green Building Management Group has been established, this is likely to be one of their top priorities (See [BBP Green Building Management Toolkit](#)).

Occupiers will tend to respond more positively if they are convinced that the owner is "doing their bit" to increase energy efficiency and recognises that a partnership approach is required to achieve meaningful improvements. Managing Agents, acting as the interface between owners and occupiers, can help to ensure that a win-win situation is achieved in terms of reducing energy use and the associated reductions in costs and carbon emissions.

Providing that the building owner is evidently adopting a low carbon approach to the ownership of their building, Managing Agents can help occupiers to see the benefits. According to the Carbon Trust's '[Creating an awareness campaign](#)' at least 10% of the total spent by UK businesses on energy is wasted. By avoiding such waste, the Trust points out that:

- Costs will be cut
- Competitiveness will be increased
- Profits will be higher
- Employment will be safeguarded



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1.7 Involving occupiers in reducing energy consumption

Clearly, some occupiers will be more advanced in terms of their move to be energy efficient but as the Carbon Trust's document points out, there are four essential steps to making an organisation aware of its energy efficiency:

1. Planning:

- Senior management support & practical resources – having an energy team, a budget and time allocation.
- Assessing the current situation – knowing current energy consumption and levels of staff awareness.
- Targeting the audience and setting goals – identifying the high energy users, what they need to do and how to motivate them.
- Communicating key messages – selecting motivational themes, creating content and using the right channels.

2. Implementing:

- Getting the timing right – when to start the campaign and how long to run it for (this will be unique for each building and needs to be agreed by all parties, including building owners, occupiers and Managing Agents).

- Assigning roles and responsibilities – having champions and a mix of team members (i.e. from various functional teams and hierarchical levels within the organisation).

3. Checking and reviewing:

- Measuring success – having interim assessments of success and identifying where more work needs to be done.
- Feeding back – ensuring staff ideas have a route into the process.
- Reporting back – choose the right means to report to different groups in the organisation.

4. Maintaining:

- Creating an energy culture – write an organisational policy.
- Inform new employees – ensure induction includes energy awareness.
- Maintain momentum – continue communication and motivation campaigns.

Managing Agents should encourage occupiers to make use of the Carbon Trust's '[Creating an Awareness Campaign](#)' publication. It contains useful advice and offers freely available campaign tools to help organisations become more energy efficient.

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1.8 What is 'green' or renewable energy and how to procure it?

What is 'green' or 'renewable' energy?

The majority of the UK's electricity comes from burning fossil fuels (i.e. coal, oil and gas) which are a major contributor to climate change. Legislation (under the Renewables Obligation) requires electricity suppliers to source a certain percentage of their electricity from renewable sources of power. It is therefore possible to request 'green' energy from these suppliers. There are two categories to consider when it comes to procuring 'green' energy:

A green tariff

This is where the electricity supplier sources a certain amount of electricity from renewable or low carbon sources, such as from a wind farm or hydroelectric power station. Various tariffs are available and the proportion of 'green' energy supplied depends upon which tariff is chosen. Energy suppliers should be able to supply this information on request.

Purchasers should be encouraged to determine whether the renewable energy they are buying is additional to that which suppliers are required to produce by law. Many green tariffs state that a supply is renewable, although the supplier is in fact only assigning some of the renewable energy they are already required to provide, whilst reducing the amount of renewable energy they provide to other customers.

A green fund

This is where the supplier pays money on the customer's behalf to environmental projects or renewable and low carbon energy developments. Under this option, the existing electricity supply continues as normal, but the customer's involvement could help to alter the mix of future energy towards 'green' sources.

How to procure green or renewable energy:

There are many 'green' offerings to choose from and making a switch to a new tariff or fund begins with asking the existing suppliers and their competitors which products they can offer – Managing Agents can either do this themselves or seek advice from an energy consultancy.

Key questions the Managing Agent should ask when considering different tariffs or funds are:

- Does the building owner have policies in place which indicate a preference for a green supply tariff, a green fund or another type of offering?
- What information is available from the supplier about green tariffs and green funds? For example, are they externally verified or audited?
- Will the fund or tariff cost any more than the current tariff? In order to determine an estimate of this, the supplier will need to know:
 - The name of the current supplier
 - The type of tariff
 - The approximate annual consumption
- Will billing arrangements change if a switch to a new tariff or fund is made?
- How quickly can a switch to a new tariff or fund be made?
- What proportion of the green tariff is from renewable sources and how does this compare to the UK average? Is the tariff any greener than the "normal" supply?
- Does the supplier's offer deliver additional benefits (i.e. over and above their legal targets under the Renewables Obligation)?

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1.9 What are local energy schemes?

Local energy schemes are relatively uncommon at present but their number is likely to increase over time with a drive to providing a low-carbon energy supply. They could offer an opportunity for Managing Agents to help building owners to procure 'green' energy supplies for buildings.

Currently, most electricity is generated in large centralised facilities, such as coal, gas or nuclear power stations. The large scale of such plants means that they usually have excellent economies of scale but up to 60% of energy is lost through heat. Additionally, their locations are often a long way from the users meaning that up to a further 10% of energy is lost during transmission.

In local energy schemes (sometimes called decentralised or distributed energy generation) electricity is generated near to where it is consumed, sometimes even in the same building. This means that the amount of energy lost in transmission is reduced and the heat that would otherwise be wasted is provided as hot water through what is often termed a district heating network. Many local energy schemes use renewable energy sources or rely on combined heat and power (CHP) plants.

Many local authorities participate in or own local energy schemes, whereas others are owned by private organisations. Some local energy schemes have been established as commercial entities in their own right. There are essentially three types of local energy scheme:

1. Single site schemes – usually based in a building's plant room and supplying a single consumer or small amount of consumers. Some new large commercial buildings require CHP units to be installed as a condition of planning permission.
2. Multi-site mixed use schemes – often evolve through the connection of a number of existing single site schemes. They benefit from operational and generation efficiencies associated with increased scale and diversity of demand and lower fuel costs.
3. Area-wide heat transmission projects – consist of an extensive network of heat pipes connecting multiple heat producers such as power stations, industrial waste heat and/or energy from waste facilities. Such schemes are major strategic infrastructure projects and opportunities are limited to connect retrospectively to the necessary large-scale heat producers.

In order to identify whether a particular building's energy needs can be met by a local energy scheme, Managing Agents should contact the relevant local authority. Some local authorities have decentralised energy teams, which can be useful for Managing Agents who are interested in identifying opportunities for using local energy sources. Another source of information is the '[Decentralised Energy Knowledge Base](#)', which lists local energy schemes run by local authorities and other organisations and also provides an advisory service.

For further information see:

[Combined Heat and Power Association](#)

[Euro Heat and Power](#)

[London Heat Map](#)

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1.10 Installing renewable energy technologies

Although renewable technologies have existed for some time, for many building owners, occupiers and Managing Agents, it is new territory.

As noted in [Guidance Note 1.1: 'How to write an energy policy'](#), it is important to establish how the building owner approaches renewable energy. As a specialist area, the advice and guidance of a renewable technology expert may be needed. They will be able to provide advice on issues such as the suitability of different technologies, their cost and payback efficiency, maintenance requirements and access arrangements for different elements of a building.

Renewable and low carbon technologies include photovoltaics (PVs), solar hot water systems, wind turbines, ground source heat pumps, wood chip biomass boilers and energy from waste (which can be used to create energy and heat at the same time).

There are essentially four ways to address installation costs:

1. The owner pays and takes advantage of tax benefits and the [Feed in Tariffs](#) (FiTs).
2. The occupiers pay and take advantage of tax benefits and FiTs.
3. The owner and occupier(s) share the cost and mutually benefit from the tax advantages and the FiTs.
4. The owner allows an external party to install the technology for a period of time, say 25 years, and receives cheap electricity in return which can be passed onto occupiers. The costs and FiTs benefits are then entirely with the external party meaning that the owner and occupier have no capital outlay.

There are many issues to consider, including access and maintenance arrangements. For example, who is going to benefit and for how long? Purchasing renewable technology is usually a long term investment and issues can arise if a lease expires before the pay back on such investment has been achieved. It is difficult to involve an occupier in expenditure when they won't get the full benefit unless the installation of renewable technology investment is financed by the building owner and the investment cost is paid for through the building service charge.

Putting aside the return on investment for the building owner or occupier, another issue is ensuring that the renewable energy is appropriate for the building. As a rule of thumb, wind turbines are not ideal for inner city locations as their performance can be poor. PVs need an un-shaded position, so being surrounded by tall buildings may mean they are not suitable. Biomass boilers need a reliable and constant supply of fuel, so delivery and storage of this can be problematic in some circumstances (the environmental credentials of this technology are also currently questionable).

Renewable energy has an important role to play in reducing the carbon footprint of a building and reducing the amount of energy the building uses from the national grid. Appropriate and effective installation of renewable technology can help make a building more attractive to building owners and occupiers by offering lower energy bills and meeting corporate social responsibility (CSR).

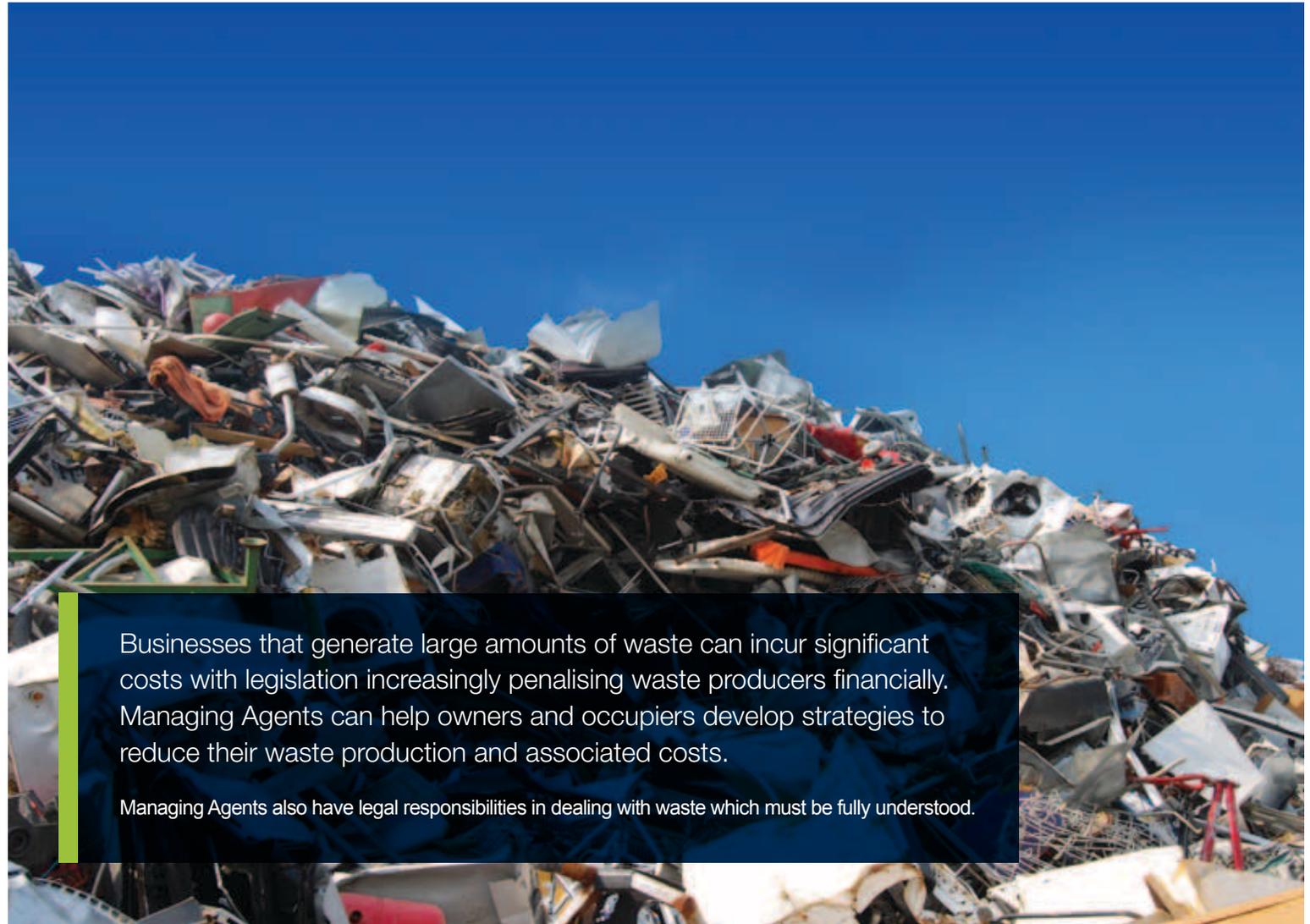
Managing Agents should consult reputable specialists in order to ensure money spent on renewable technology is invested wisely.

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2. Waste



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2.1 Understanding the waste hierarchy

It is important for Managing Agents to understand how waste can be properly managed and to encourage both building owners and occupiers to develop good waste management practices. Waste should be viewed as a resource with both financial costs and benefits associated with its management. When an organisation practices good waste management it can both save money and help protect the environment.

The waste hierarchy concept encourages those responsible for waste management to prioritise waste reduction practices and procedures. It encourages good waste management practice through several steps:



Many organisations will find that they will have to employ a number of different waste management options depending on the different waste streams that they are dealing with. Further information on the waste hierarchy can be found on the [Waste Resource Action Programme \(WRAP\)](#) web site.

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2.2 How to develop a waste strategy for a building

The management of waste in a building can be a complicated issue. Buildings will often contain multiple occupiers who generate different quantities and types of waste. This can be further complicated by occupiers operating different waste management procedures and employing their own waste contractors.

A useful way to reduce the burden of managing waste on individual occupiers is to develop a comprehensive waste strategy for a building. A waste strategy enables the owner and occupiers to develop a plan for minimising and managing waste across a whole building by sharing the resources required.

The process of developing a building's waste strategy will usually be the responsibility of the building owner but its implementation will require the involvement of all occupiers. Managing Agents have the scope to encourage occupiers to support the owner's waste strategy, particularly if a Green Building Management Group has been established (see [BBP Green Building Management Toolkit](#); see also [Guidance Note 7.1](#): 'Sharing targets and achievements').

According to the Business Link's '[How to manage waste effectively](#)' online guide, good waste management provides many benefits when implemented as part of a wider environmental management system (EMS). When waste is managed as part of an EMS, environmental and sustainability issues can be tackled collectively, reducing the need for individual occupiers to implement separate management systems for every single issue. This can save occupiers time and money while reducing the need for additional waste disposal storage space. The Business Link's online guide sets out steps to producing a successful waste management strategy:

1. Examine the relevant legislation and regulations

- Establish what waste plans and procedures are already in place.
- Check that you handle your waste safely and responsibly, ensuring current waste management legislation is carefully considered.
- Check that the correct documentation is maintained.
- Check whether waste is only dealt with by organisations authorised to do so.
- Read [Guidance Note 2.4](#): 'Understanding your duty of care responsibilities' for a summary of some of the obligations Managing Agents are under.

2. Find organisations that can provide information on managing waste

- Government appointed bodies: The Environment Agency, [Waste Resources Action Programme](#) (WRAP, Department for environment, farming and rural affairs (Defra)).
- Professional bodies: [The Chartered Institute of Waste Management](#) (CIWM), [Institute of Environmental Management and Assessment](#) (IEMA), [Environmental Services Association](#) (ESA).
- In London, [Capital Waste Facts](#) provides public and private sector stakeholders with technical information and data about waste reduction, reuse and recycling, including detailed information on all London Borough waste services and analysis of key waste and recycling data. Specialist consultancies and waste management professionals.

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3. Undertake a waste review

- Examine business processes and activities that generate waste in the building.
- Undertake a waste audit (see [Guidance Note 2.3](#): 'Carrying out a waste audit').
- Establish whether adequate storage facilities for waste exist in the building. (see [Guidance Note 2.1](#) 'Understanding the waste hierarchy')
- Develop strategies for reducing and recycling waste based on the waste hierarchy.

4. Create a waste management action plan and policy

- Identify parts of the building that produce the largest quantities of waste and the waste streams with the highest disposal and recycling costs.
- Establish targets, objectives and key actions for reducing levels of waste.

- Create both a waste policy and action plan for the building. The first is a clear written statement which describes a list of principles on how waste should be managed in a building to guide decision making; the second is a plan which describes how this can successfully be achieved ([Guidance Notes 1.1](#): 'How to write an energy policy' and 1.6: 'Create an action plan to ensure future action and improvement' apply equally to waste as to energy).
- Communicate the policy and action plan to the building occupiers, owner and other relevant parties (e.g. contract cleaners, facility managers and waste contractors).
- Employ a waste contractor who is registered with the Environment Agency (see [Guidance Note 2.4](#): 'Understanding your duty of care responsibilities').

An effective waste strategy is one which is supported by a waste policy and action plan. It is most effective when considered alongside other business activities (e.g. when setting budgets and developing training programmes). This will ensure that waste strategy decisions are guided by and reviewed against other management decisions.

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2.3 Carrying out a waste audit

A waste audit is an effective tool for establishing both the type and quantities of waste being produced at a building. Undertaking a waste audit is an important step within a waste strategy and can provide accurate data for setting waste and recycling policy targets. A Managing Agent may use their own staff to collect data or, alternatively, may choose to sub-contract the work (waste contractors will often provide such a service as part of their contract). Whichever option is chosen, successful audits usually consist of the following five steps:

Step 1: Assign a team to carry out a waste audit

Step 2: Collect all waste from the building

Step 3: Weigh and record all waste

Step 4: Collate information

Step 5: Develop strategies for reducing and recycling waste

Once individual waste streams have been weighed and entered into a database, it is relatively easy to create individual waste profiles. Measuring waste by mass rather than volume is the most accurate

approach and considered industry best practise. This is more challenging as there is a need for appropriate weighing equipment, but beneficial in terms of attributing appropriate costs to the client¹. Where a waste contractor provides waste management services the Managing Agent should require its measurement by mass rather than volume. By calculating the percentage of any given waste material present in an audit, a profile can be created for a single bin, area, occupier, or building. Data analysis can also be used to examine the amount of waste being generated over a period of time or during a particular business activity. This analysis can often provide a more visual picture and lifecycle of individual waste streams.

Waste profiles provide a map of the waste streams in a building. With this information a Managing Agent will be able to identify the various opportunities to implement a successful waste strategy (see [Guidance Note 2.2](#): 'How to develop a waste strategy for a building').

¹ Waste management contractors will often measure and bill waste in terms of number of bins (volume) with no distinction between how full the bin is or what is included. Measuring and charging by weight (mass) is a more accurate approach as it relates to a business's actual consumption in weight rather than the number of bins that are emptied.



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2.4 Understanding your duty of care responsibilities

Under Section 34 of the Environmental Protection Act 1990, the producers, disposers and carriers of controlled waste (i.e. household, commercial and industrial waste) have 'general responsibility for waste in their control', which is known as the duty of care responsibility. A Managing Agent may have limited control over how a building's waste is managed but it is important that they help building owners and occupiers to understand the relevant legislation and comply with their duty of care obligations.

The duty of care legislation states that all businesses have a duty of care to ensure that they produce, store, transport and dispose of their waste without damaging the environment, for example:

- Whoever produced the waste is responsible for preventing any other person from keeping, treating or disposing of the waste in a way that could pollute the environment or harm human health.
- Waste producers must also make sure that waste is handled to prevent it escaping and, when waste is transferred, make sure it is only transferred to someone authorised to handle it.
- A written and accurate description of waste must be provided in order to prevent a third party unwittingly committing offences.

The UK Government regulates the movement of all waste streams through the Environment Agency, through the issuing of 'waste carrier licences' and the distribution of 'waste transfer notes'. Other waste materials, including hazardous/special waste and WEEE (Waste Electrical and Electrical Equipment) have further regulations that need to be adhered to but still need to be disposed of through authorised waste carriers.

Waste carrier licences are issued by the Environment Agency to all waste disposal or recovery organisations that transport, recycle or dispose of a third party's waste. A waste carrier may possess a licence but this does not guarantee that waste will be managed in a legitimate way. The business that produces the waste still has a duty of care to ensure that the organisation handling it is doing so correctly and to take action if they are aware that this isn't the case. Managing Agents should liaise with all building occupiers to ensure waste transfer notes are exchanged and duty of care responsibilities are upheld by all parties. A transfer note will be completed by the waste management company collecting the waste and copies should be kept by both the building occupier and the contractor.

Further information on environmental legislation relating to waste, including duty of care, can be obtained from the Environment Agency's [Netregs](#) web site.

Guidance Notes



- 2.1 Understanding the waste hierarchy
- 2.2 How to develop a waste strategy for a building
- 2.3 Carrying out a waste audit
- 2.4 Understanding your duty of care responsibilities
- 2.5 How to manage waste during refurbishment and fit-out
- 2.6 Identifying and disposing of hazardous waste
- 2.7 How to identify and dispose of electrical equipment

2.5 How to manage waste during refurbishment and fit-out

Managing Agents may be required to supervise fit-outs and refurbishments on behalf of an owner or occupier. When doing so, it is important that the Managing Agent ensures good waste minimisation and management practices. Under the 1990 Environmental Protection Act a business has a responsibility for ensuring that they produce, store, transport and dispose of their waste without damaging the environment. Therefore, even if a construction team is employed to fit-out or refurbish a building, the building owner or occupier may still be responsible for any waste generated.

The UK Government has made it a legal requirement for any construction project in England and Wales with an estimated construction cost of over £300,000 to be subject to a Site Waste Management Plan (SWMP). Poor waste management can be expensive: According to Netregs' ['A Simple Guide to Site Waste Management Plans'](#) the average eight cubic yard skip costs around £150 to hire and the average cost of what is being thrown away in that skip is over £1,600.

A good SWMP should provide a construction team with the tools to successfully 'design out' and minimise waste from a construction project while reducing costs and improving resource efficiency at all stages of the project. The Managing Agent should encourage the adoption of SWMPs at an early stage of project planning and monitor adherence to it.

There are two effective tools available online which help businesses to understand and formulate effective SWMPs. The first is the ['Net Waste Tool'](#) developed by WRAP and the second is the ['SMARTWaste Plan'](#) developed by BRE. Both have been produced for the construction and demolition industries but are useful guides for managing refurbishment and fit-out project waste. The SMARTWaste Plan web pages also contain useful benchmarks for measuring waste arising from construction, refurbishment and demolition. The Netregs' ['A Simple Guide to Site Waste Management Plans'](#), also contains useful advice on producing a SWMP and detailed guidance on how to successfully implement one.

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2.6 Identifying and disposing of hazardous waste

Hazardous waste is described by the Environment Agency as waste that may be harmful to human health or the environment. A Managing Agent may not directly handle or deal with hazardous waste, but as an agent for a building they must ensure that individual occupiers are managing their waste responsibly. In an office environment, hazardous waste commonly exists in the form of florescent light bulbs, computer monitors and batteries. The Environment Agency's '[What is hazardous waste?](#)' document is a comprehensive guide that should be used to help identify hazardous waste produced at a building.

Storing hazardous waste

The Hazardous Waste Regulations 2005 require that any business producing or holding more than 500kg of hazardous waste each year must register the address of the business with the Environment Agency. The Environment Agency's '[Do I need to notify my premises?](#)' document explains that these regulations extend to properties that are also occupied by multiple business units:

- Where organisations have multiple premises, the Environment Agency will need to be notified of each, unless exempt, although a central office may do this on behalf of the individual premises if they wish.
- If single premises are occupied by a number of different organisations producing hazardous waste, the parts of the premises occupied by each organisation should be individually registered.
- A separate central waste collection point within a property would also need to be registered as a premise.

Managing hazardous waste is expensive and the best management practice for dealing with it is to eliminate or at least reduce it in the first place. When hazardous waste is unavoidably produced it is important to provide full written instructions for storing and disposing of it alongside an inventory of all hazardous waste stored at a building including where it is stored.

Transporting hazardous waste

The Hazardous Waste Regulations 2005 require that three special conditions are considered when moving any hazardous waste:

- It is transported by a registered or exempt waste carrier.
- It is accompanied by a consignment note.
- It is transferred to a facility that holds a suitable environmental permit (England and Wales) or pollution prevention and control (PPC) permit (Northern Ireland and Scotland).

The law requires that records and copies of consignment notes of all hazardous waste movements are kept for at least three years. Blank copies of these can be found on the [Environment Agency's](#) web pages (see [Guidance Note 2.4](#): 'Understanding your duty of care responsibilities').

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2.7 How to identify and dispose of electrical equipment

Duty of care obligations cover all waste including Waste Electrical and Electronic Equipment (WEEE) (see [Guidance Note 2.4](#): 'Understanding your duty of care responsibilities'). This means any business user who owns or rents electrical or electronic equipment has certain obligations to dispose of it safely and responsibly.

As set out in the Environment Agency's '[WEEE Business User](#)' [fact sheet](#), the WEEE Regulations 2006 have shifted the burden of arranging for the treatment, recycling and disposal of WEEE from end users to producers:

- If equipment bought before 13 August 2005 is replaced with new equipment fulfilling the same function, then the producer of the new equipment is responsible for the collection, treatment and recycling of the old equipment, regardless of whether they were the original manufacturer.
- If the equipment was bought before 13 August 2005 and is not being replaced, then the owner is responsible for financing and arranging treatment in accordance with the WEEE Regulations and existing waste management legislation, including the duty of care and the Hazardous Waste Regulations.

- If the electrical equipment was bought after 13 August 2005, then the producer of that equipment is responsible for its collection, treatment and recycling when it is disposed of.
- If equipment is leased or rented then the producer is usually responsible for its disposal.
- The regulations allow producers and business users to agree 'alternative arrangements', whereby the business user agrees to take on some or all of the future costs of the end-of-life treatment of the equipment bought. This is a commercial decision that needs to be made and is likely to form part of the normal negotiating processes for supply contracts in the future.

Additionally, the Environment Agency fact sheet reminds business users to obtain the producer registration number for any the electrical equipment being supplied so that they know who to contact to arrange disposal at the end of its life. This information can usually be located on a bar underneath the crossed-out wheeled bin symbol on electrical equipment. Further guidance is provided by the Environment Agency's [Netregs](#) web site.

Guidance Notes



- 3.1 Benchmarking water usage and setting targets
- 3.2 Identifying a building's baseline water usage
- 3.3 High efficiency plumbing fixtures and water saving control systems
- 3.4 Leak inspections at a building
- 3.5 Capturing and using treated, recycled, rain and grey water

3. Water



A Managing Agent has little control over water use in a property but will be expected to help manage and maintain its supply. Sustainable water management may be less publicised and regulated than managing a building's energy use, for example, but it is a natural resource which can easily be conserved. Together with strong environmental benchmarks and water efficient technology, managing a sustainable supply of water will ensure a reduction in environmental impacts and create financial savings.



Guidance Notes



3.1 Benchmarking water usage and setting targets

3.2 Identifying a building's baseline water usage

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3.1 Benchmarking water usage and setting targets

A building's water consumption should be benchmarked to demonstrate the efficiency of the building's water usage. Annual water use in m³ can be benchmarked against a range of measurements:

- per employee
- per m² of occupied space
- per tonne of product
- per m³ of product

Service sector organisations usually benchmark on the basis of per employee or per m². Manufacturing companies usually benchmark on the basis of per tonne of product or per m³ of product.

Best practice benchmarks for water consumption in an office building range between c. 6.0 - 7.0 m³ per employee per year.

Organisations that have produced industry standard and best practice benchmarks. Include:

- [CIRIA](#)
- [Environment Agency Watermark Project](#)
- [Envirowise](#)
- [Friends of the Earth](#)
- [Global Reporting Initiative \(GRI\)](#)

Best practice benchmarks can be used in order to set appropriate targets and water management policies for a building. It is far more likely that targets will be met if both the owner and occupiers are striving to achieve them. It is therefore best practice to involve occupiers in the target setting and policy making process and to ensure that they fully understand the implications: Water conservation is another issue which a Green Building Management Group should address (see [BBP Green Building Management Toolkit](#)).

Following agreement of targets and policy, the Managing Agent can play an important role in increasing occupier awareness and good practice, including by providing information posters or displays in relevant areas of the building (see [Guidance Note 7.3](#): 'How to provide training & education and communicate achievements'). The targets should be set based on the process outlined in [Guidance Note 1.1](#): 'How to write an energy policy' (which applies equally to water as to energy), while the water audit guidance referenced in [Guidance Note 3.2](#): 'Identifying the building's baseline water usage' also provides examples of water management policies.

Guidance Notes



3.1 Benchmarking water usage and setting targets

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3.2 Identifying a building's baseline water usage

A Managing Agent can fairly easily identify baseline water usage. Time spent on ensuring comprehensive data capture will be a great benefit in the long term. It is important that whatever method of data capture used works for the longer term and matches the requirements of the building owner (i.e. the information is in an appropriate form for, for example, accounting purposes and/or CSR reporting).

From this information benchmarks can be established for a building's water consumption and targets can then be set to reduce it. The following steps should be followed in order to establish a building's baseline water usage:

1. Obtain the bills and meter readings for the building as supplied by the water company.
2. Locate the water meter.
 - It is usually located by the boundary of the property, often near a road.
3. Check the meter serial number on the bill and make sure it matches the building's water meter.
4. Read and record the actual readings from the building's water meter.
 - In most buildings this will require the meter to be manually read. However, Automatic Meter Reading (AMR) equipment can be added to meters that read them, log the data and communicate it to utilities companies and/or Managing Agents. See [Guidance note 1.5: What is advanced metering](#).
 - [Envirowise](#) provide a free downloadable Excel spreadsheet that is designed to allow easy recording of water consumption data on a daily or weekly frequency.
 - Regular recording of meter readings will allow the identification of trends in water consumption.

5. Verify the water bill readings against the actual meter readings. It is usual for only large users of water, who are predominantly in the manufacturing sector, to receive accurate bills based on meter readings. The water bills for most buildings will be based on estimated readings.

6. As a minimum, the building's yearly usage needs to be calculated, but ideally more frequent usage levels should be calculated, such as monthly or weekly.

Water audits

These provide a more complete picture of a building's water use. A water audit should identify the amount of water coming into the building, where the water is used, any leaks that are occurring from pipes or equipment and the amount of sewerage leaving the building. Free guidance is available on how to undertake a water audit, although it can be a time consuming process and it may be most cost effective to employ a water audit specialist.

- Some water suppliers offer water audits and some may also offer a personalised water management package in order to achieve the best water efficiency for the building. Managing Agents should check with the relevant water supplier to see if this service is available.
- Envirowise have produced a free guide called [Tracking Water to Cut Costs](#) which explains in detail how to undertake a water audit and use it to obtain water and cost savings.
- [The Rippleeffect](#) is a water efficiency initiative run by WRAP for businesses of all sizes across all sectors. Participants have to sign up by specified dates during the year and training modules are then undertaken online across a three month period.

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3.3 High efficiency plumbing fixtures and water saving control systems

As part of a water management policy, a process of ensuring that devices which supply and use water are as efficient as possible should be implemented. This may require some upgrading and retrofitting as well as procuring the most water efficient devices when installing new equipment.

Washrooms account for over two-thirds of water use (and also most of the water discharge) in the average office, with canteen/restaurant areas also using a significant amount. Therefore, significant water savings can be achieved from the installation of water efficient devices in these areas. The most common devices are:

- Water efficient toilets, taps, showers and washing machines. For example, cistern displacement devices, waterless urinals, aerated taps.
- Flow controllers. For example, pressure-reducing valves (PRVs) can be used to control the pressure in the incoming mains or the distribution system. Water is often delivered to taps at a much higher pressure than necessary, which leads to a much higher rate of usage and associated drainage and increases the risks of leakage.

- Meters and monitoring systems. For example, sub-meters and/or flow-meters can be purchased or hired in order to calculate consumption or flow data for key equipment or process lines. Enhanced monitoring makes it easier to identify potential savings.

New products are continually coming to market, but a number of sources provide information on suitable technologies and products:

- [The Water Technology List](#) (WTL) provides information on products that improve water efficiency and which are also liable for Enhanced Capital Allowances, allowing their cost to be 100% offset against taxable profits.
- [Waterwise](#) provides a list of water saving devices, including those awarded the Waterwise Marque, which is awarded to products which set high standards in water efficiency or reducing water wastage.

Good practice procedures implemented by the building's occupiers can also help to reduce use and should be encouraged. Examples include:

- Using soap 'foam' to speed up rinsing hands.
- Ensuring taps are not left running unnecessarily.
- Ensuring dishwashers are full before operating.

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3.4 Leak inspections at a building

Leaks are recognised as an important area of water management and their detection and remediation often bring about considerable financial savings. As part of a water management policy a leak inspection process should be implemented, including frequency of inspections and personnel responsible.

The most common causes of leaks and overflows include:

- Perished/defective tap washers.
- Worn valves in cisterns.
- Corroded pipe work.
- Flooded floats in water break tanks and cisterns.

A number of steps can be taken to identify and avoid leaks and overflows:

- Make sure overflow outlets are visible.
- Know where the supply pipes run and where the shut off valves are.
- Install shut off valves if not present.
- Carry out regular checks on overflows, pipe work and valves.
- Insulate pipes against cold weather as freezing conditions can lead to burst pipes.
- Establish procedures for reporting leaks and faults.
- Install simple level sensors and on/off control systems for pumps.
- Monitor meter readings.

In many buildings water is only used during normal working hours. A good way to check for leaks and other unnecessary water use, therefore, is to check the water meters at the start and end of the period when the building is unoccupied, which is usually over night. The meter readings should be almost the same and if they aren't then this indicates a possible leak, overflow or uncontrolled water use and further investigation is required.

Managing Agents may be able to carry out leak inspection activities themselves, but it may be more cost effective to delegate the inspections to a specialist maintenance team.

Effective building management systems and advanced metering enable the setting of warning levels when usage exceeds normal performance. This can be a highly effective method of controlling water loss through leaks.

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3.1 Benchmarking water usage and setting targets

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3.5 Capturing and using treated, recycled, rain and grey water

Water that is supplied by water companies is required by law to be of a potable standard, which means suitable for drinking. However, it is estimated that around 80% of water supplied to commercial premises is used for purposes for which the energy and chemical input associated with potable water supply is not required. These include:

- Toilet flushing.
- Dishwasher use.
- Car washing.
- Plant watering.

In order to reduce the need for the supply of purchased potable water to a site or building, the following systems can be considered for installation:

1. Rainwater harvesting (capturing rain water at the point it falls, storing it and then using it for non-potable sources).
 - Many roofs of commercial buildings have a high water harvesting potential.
 - The [Water Technology List](#) (WTL) for Enhanced Capital Allowances includes rainwater harvesting equipment.
2. Grey water (water from showers, basins and laundries).
 - This water is usually only used for toilet flushing, as it is not as clean as rain water.
 - Water from showers, basins etc. could, for example, be directed to a water harvesting tank and then fed to the cisterns.
 - Determine where a building's waste water is going and if it can be reused in other areas of the building.

3. Recycled water from sewage and waste water treatment plants
 - This is waste water which rather than going into the main sewer system is collected and treated on site.

The benefits of using rainwater, grey or recycled water include:

- Reducing costs associated with purchasing supplies from a water company.
- Reducing the energy consumption and CO₂ emissions associated with a building's water use.
- Rainwater harvesting reduces flash-flood risk associated with heavy rainfall.
- Use of grey water and recycled water reduces the amount of sewerage discharge and the associated financial costs.

All of the systems described above can usually be installed in either new-build or existing buildings, however due to plumbing and space requirements, installation costs can be high in existing buildings (and maybe impractical). It may be easier to make a case when large scale refurbishment is taking place. An assessment of an individual building's capacity to use any of the above systems should be carried out by a specialist in this area.

It is important that both the building owner and occupiers agree to the use of these systems and they therefore need to understand the benefits that they bring. The Managing Agent can play a large part in this collaborative and educational aspect.

Guidance Notes



- 4.1 The role of the Managing Agent in refurbishment and fit-out
- 4.2 Identifying environmental measurement tools
- 4.3 What is sustainable procurement?

4. Alterations & Replacement



This is not an area where a Managing Agent is generally able to exert much influence. However, there are important issues to be aware of to ensure compliance with a building owner's objectives and particular building environmental standards. A Managing Agent's role is to ensure changes to a building either retain or enhance its sustainable performance. A Managing Agent is able to use their position to help the project team embed sustainable best practice wherever possible.

Guidance Notes 

4.1 The role of the Managing Agent in refurbishment and fit-out

4.2 Identifying environmental measurement tools

4.3 What is sustainable procurement?

4.1 The role of the Managing Agent in refurbishment and fit-out

The most likely role Managing Agents will play in any refurbishment and fit-out is to ensure the scoping of the project is in accordance with good sustainable property fundamentals and to the standards agreed by the owner and occupiers. Ideally a Green Building Management Group will be in place and a Memorandum of Understanding (MoU) signed for this purpose (see the [BBP Green Building Management Toolkit](#)).

Key areas include ensuring the use of energy efficient plant and equipment and overseeing reductions in energy use, particularly if there is an impact on the energy rating of the building.

Sustainable projects can only be delivered if a 'sustainability vision' is agreed at the outset. In this regard, all parties should:

- Understand the current and future way in which the building is being/will be used.
- Understand how current building systems operate and any new requirements of the occupiers.
- Identify key objectives and the desired sustainability outcomes for the project.
- Focus on practical and achievable outcomes that will allow the refurbishment/fit-out to demonstrate the parties' commitment to sustainability.
- Include sustainability requirements in the project manager's/design team's brief and contract tender documents.
- Consider benchmarking against existing industry rating tools such as [BREEAM](#), [RICS Ska Rating System](#) or achieving a specified EPC/DEC rating. For more information on measurement/rating systems see [Guidance Note 4.2](#) 'Identifying environment measurement tools'.



Guidance Notes



4.1 The role of the Managing Agent in refurbishment and fit-out

4.2 Identifying environmental measurement tools

4.3 What is sustainable procurement?

4.2 Identifying environmental measurement tools

As the facilitator between the building owner and occupier and the project team, a Managing Agent's role includes ensuring the owner's sustainability performance requirements are considered in the project process. Managing Agents should ensure that as many good practice environmental measures as possible are included.

Managing Agents should recommend the use of a sustainability rating tool and encourage the building owner to set this as a requirement. This is particularly important when the building fabric and building systems are included in the project scope.

The most common tool is [BREEAM](#) which is appropriate to the UK and the UK planning system. The North American based [LEED](#) scheme may also be considered. Under these schemes, the project team will include an approved assessor and the Managing Agent should be aware that they will need to provide relevant information to them when requested.

For fit-out projects the [RICS Ska Rating System](#) may be more appropriate as it has been developed to measure the impact of fit-out projects and exclude base build elements. It should also be noted that BREEAM and LEED have fit-out related schemes but it is recommended that guidance is sought from an approved assessor for an opinion on their suitability in each case.

Another scheme to consider are Display Energy Certificates (DECs), which measure and certify the operational energy consumption of a building. Currently DECs are only compulsory for public authorities and institutions providing public services in a building with a total floor area over 1,000m², however they can be carried out by private sector organisations on a voluntary basis. An Energy Performance Certificate (EPC) provides information on a building's energy efficiency potential, running costs and environmental impact. The certification process also identifies energy saving improvements that can be undertaken to improve the energy efficiency of the building, reducing the running costs and, in turn, reducing carbon emissions. It is likely that both EPC + DEC ratings of a building will improve following well designed refurbishment works.

Following completion of any works which impact on the occupiers of a building it is recommended that a post project review is undertaken which will help engagement with occupiers about any problems they have with the works. This review should be used in Green Building Management Group discussions (see [BBP Green Building Management Toolkit](#)).

It is also important to ensure that all occupiers understand the environmental features that have been included in any project and how they will benefit from them.

Guidance Notes



4.1 The role of the Managing Agent in refurbishment and fit-out

4.2 Identifying environmental measurement tools

4.3 What is sustainable procurement?

4.3 What is sustainable procurement?

Sustainable procurement is the process of acquiring goods and services while considering environmental and socio-economic factors in the decision making process. It usually involves looking at what the product is made of, where it has come from and who has made it. The ultimate goal is to minimise the environmental and social impacts of purchases.

The most effective sustainable procurement strategy is one which is fully integrated into an environmental management system (EMS), where sustainability and environmental criteria essential to an EMS can be closely aligned to any purchasing decisions that are made, e.g. ISO 14021 for Environmental Labelling. Unfortunately, eco-labelling is a very complicated topic and there isn't a definitive guide that can be applied to all products and services. Particularly useful [sustainable procurement guidance](#), provided by Kirklees Council, suggests that before buying any goods or services, the following questions should be considered:

- Is the product really needed?
- Is the product made in part or wholly from recycled material?
- Is the product made from a material that came from a sustainable source?
- Is the product made from a material that can be recycled after use?
- How energy and water efficient is the purchase?
- Does the product avoid excessive packaging?
- Is the existing appliance upgradeable?
- Is the product easy to dismantle (separating materials is essential for successful recycling)?
- What are the disposal costs for the product?
- Is the product/service available to buy locally?

By closely co-ordinating a procurement strategy with existing contractors and suppliers, a Managing Agent can help them to understand new product specification requirements and may even help them to minimise the environmental impacts of their own goods and services too. Outlined below are a series of sustainable product guides developed by industry bodies and the government, some of which are specific for the property and building industry. They provide good guidance on implementing a procurement strategy and identifying environmentally friendly products:

[The Green Guide to Specification](#), developed by BRE, gives environmental rankings to individual products based on Life Cycle Assessment.

[Green Spec](#) is an alternative construction industry guide to 'green' building design, products, specification and construction, containing information on how to design more energy and resource efficient buildings, using materials and technologies that minimise damage to people and the environment.

Waste Resources Action Programme (WRAP) [Recycled Content Guide](#) is an online, downloadable recycled content guide which helps source construction products with recycled content.

[The Mayor of London's Green Procurement Code](#) for corporate and public purchasers provides an online toolkit with information and guidance to help organisations successfully implement green purchasing strategies.

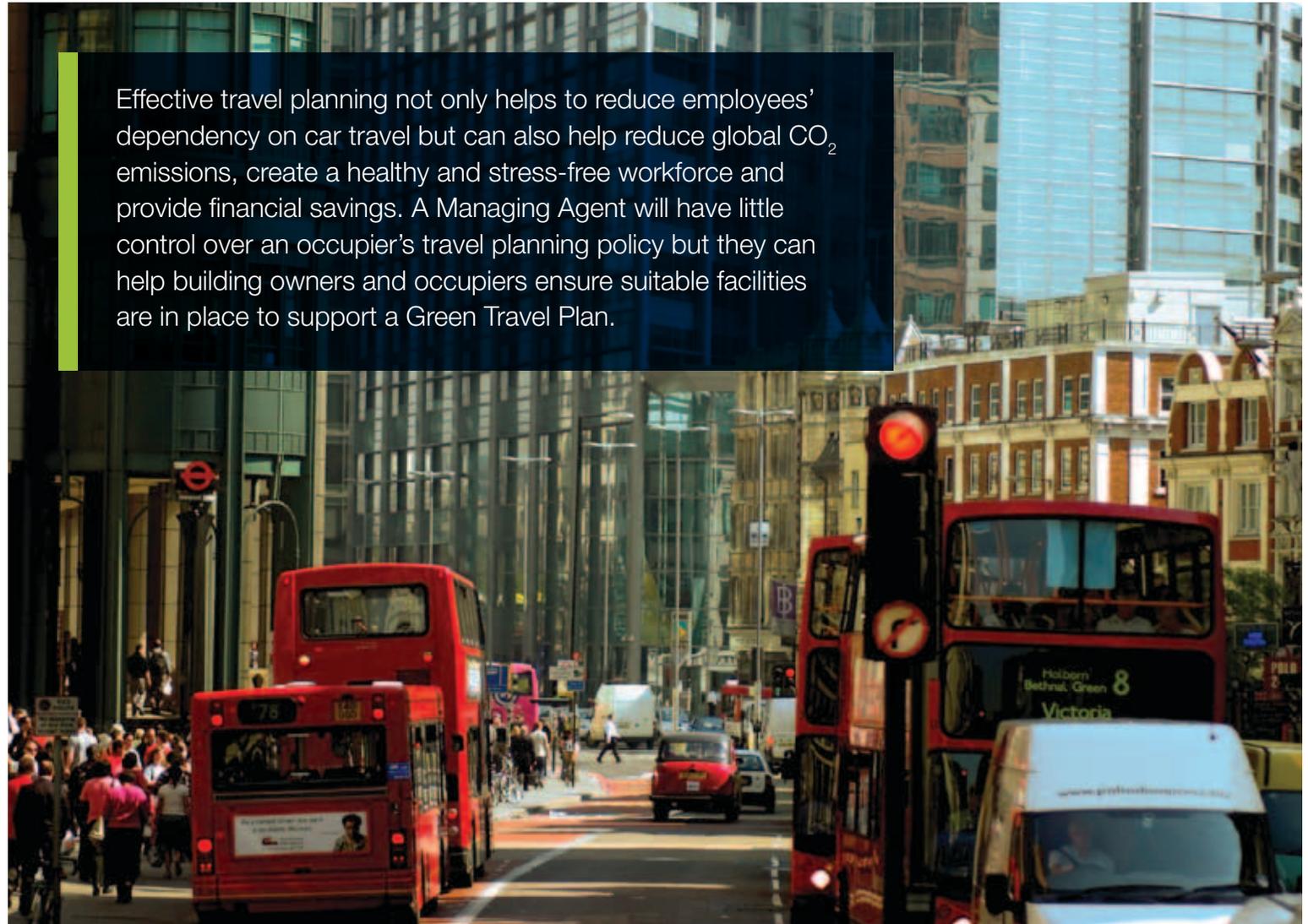
Guidance Notes



- 5.1 What is a Green Travel Plan?
- 5.2 Sustainable transport facilities
- 5.3 Shuttle buses and public transport service provision
- 5.4 What is sustainable car park management?

5. Transport

Effective travel planning not only helps to reduce employees' dependency on car travel but can also help reduce global CO₂ emissions, create a healthy and stress-free workforce and provide financial savings. A Managing Agent will have little control over an occupier's travel planning policy but they can help building owners and occupiers ensure suitable facilities are in place to support a Green Travel Plan.



Guidance Notes 

5.1 What is a Green Travel Plan?

5.2 Sustainable transport facilities

5.3 Shuttle buses and public transport service provision

5.4 What is sustainable car park management?

5.1 What is a Green Travel Plan?

The Department for Transport's (DfT) '[Essential guide to travel planning](#)' describes a travel plan as a strategy that aims to reduce an organisation's environmental impact through the promotion of sustainable transport methods, including walking, cycling, public transport and car sharing. A green travel plan will enable an occupier to action any commitments they have made in their sustainable transport policy.

As different buildings and their occupiers will be subject to different circumstances, it is not possible to provide a definitive list of tasks which will apply to all. However, the DfT's guide describes a number of tasks that are common in most successful green travel plans:

- Conducting a staff travel survey
- Setting up a car share register
- Negotiating better public transport with operators and local authorities
- Installing better cycling and walking facilities
- Setting up an incentive scheme to encourage sustainable travel
- Communicating the travel plan and encouraging people to change habits
- Running special initiatives to boost awareness of the plan
- Introducing a car park management system and enforcing it
- Monitoring progress against targets

It is important that baseline information on current trip mode data, local transport infrastructure and car-parking provision is available before implementing any further measures in a green travel plan and Managing Agents can play an important role in providing access to this information.

A Managing Agent should encourage occupiers to make use of the DfT's 'Essential guide to travel planning' publication. It contains useful advice on implementing a travel plan and offers tools and strategies for launching a sustainable travel campaign to help organisations reduce their dependence on car travel. In a multi-occupied building, the establishment of a Green Building Management Group can be an ideal forum in which to ensure a consistent approach by all occupiers to addressing their travel planning. (see [BBP Green Building Management Toolkit](#))

Guidance Notes 

5.1 What is a Green Travel Plan?

5.2 Sustainable transport facilities

5.3 Shuttle buses and public transport service provision

5.4 What is sustainable car park management?

5.2 Sustainable transport facilities

If a green travel plan is in place, it is important that a Managing Agent works together with occupiers and owners to ensure that there are suitable provisions in place to support it (see [Guidance Note 5.1](#): 'What is a green travel plan?'). A green travel plan is most effective if there are suitable facilities to support occupiers who wish to cycle, walk or run to work. These facilities include:

- Bicycle storage
- Showers
- Changing rooms
- Locker storage
- Drying areas for clothes

If these facilities are not available, a Managing Agent should work together with the building owner and occupiers to review existing provisions. If it is deemed necessary to create new facilities, a Managing Agent can work with the building owner to find suitable space for them. Any new facilities should support a building's sustainability strategy, e.g. installing equipment and amenities that are both energy and water efficient. For further information see [Guidance Notes in Section 1: Energy](#) and [Section 3: Water](#).

The Department for Transport's (DfT) '[Essential guide to travel planning](#)' explains that providing other on-site services can also help promote sustainable travel by reducing the amount of travel needed to reach amenities such as:

- Cash points
- Staff restaurants
- Dry cleaners
- Crèches
- On-site shops

If infrastructure obstacles (such as poor cycle paths and cycle lane signage) on site or on the local transport network discourage people from walking and cycling, a Managing Agent should pass this information onto the building owner and the relevant Highways Authority. Managing Agents should encourage occupiers to make use of The DfT's 'Essential guide to travel planning', which contains useful advice on developing a travel plan and implementing a sustainable transport campaign.

Guidance Notes 

5.1 What is a Green Travel Plan?

5.2 Sustainable transport facilities

5.3 Shuttle buses and public transport service provision

5.4 What is sustainable car park management?

5.3 Shuttle buses and public transport service provision

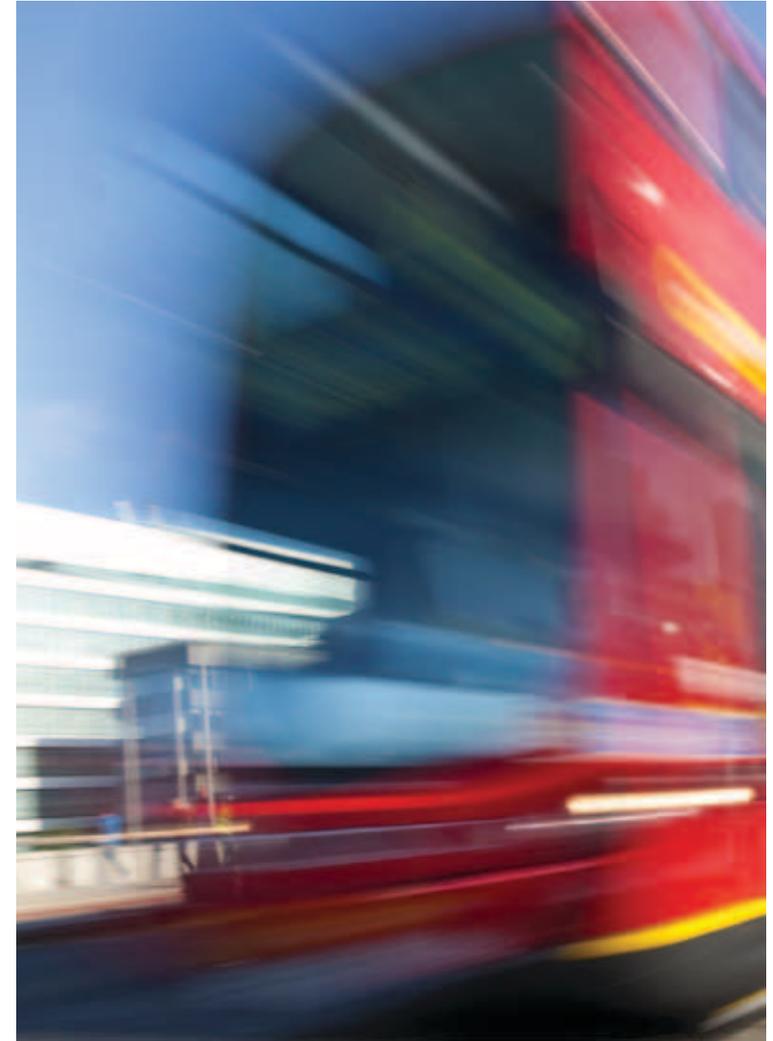
A Managing Agent should encourage occupiers to draw on the support of their local authority, officers of which can act as intermediaries between local organisations and public transport operators in seeking to achieve suitable public transport provision in an area. They can also help secure discounts on public transport services and sometimes offer small grants to assist with travel plan measures. Some local authorities can also provide practical travel planning advice and help organisations to develop green travel plans.

The Department for Transport's '[Essential guide to travel planning](#)' explains that public transport operators will want to do their best to make their schedules fit staff journeys and shift patterns, particularly if a property represents a large number of potential passengers. In this case, they could be willing to offer a discount ticket.

If a property is located in a remote area, there are several public and commercial transport options available:

- Ask public transport operators to provide additional services to and from local transport hubs.
- Organise a commercial "shuttle service" which is run exclusively for the building's occupiers.
- Organise a shuttle service which is subsidised and shared between other properties and businesses in the area.
- Provide a commercial shuttle service that is both subsidised by the building's occupiers and available at a cost to members of the public.

If a shuttle service is unavailable, Managing Agents should provide real-time public transport information and timetables. The Highways Agency has developed a detailed traffic information service specifically designed for businesses called [Atlas Pro](#). Additionally, Transport for London, the AA and RAC all offer live travel news updates on their web pages. Having access to these services means people are able to check train and bus times remotely and reduce the risk of missing a particular service home.



Guidance Notes



5.1 What is a Green Travel Plan?

5.2 Sustainable transport facilities

5.3 Shuttle buses and public transport service provision

5.4 What is sustainable car park management?

5.4 What is sustainable car park management?

A Managing Agent should encourage building owners and occupiers to examine measures for reducing their dependence on car travel to and from a building. They may find this easiest to achieve where parking is limited or becoming an issue at or in the vicinity of a building. The Department for Transport's '[Essential guide to travel planning](#)' explains that there are some very effective strategies for minimising car use, which include introducing parking restrictions, permit parking and parking charges.

It should be noted that the implementation of parking restrictions, permits and/or charges can be an emotive issue for some car park users, particularly where no such system has operated previously. It is easier to implement a sustainable car park regime if all occupiers of the building are signed up to it, so that it can be applied to all parts of the car park; such a regime needs the full commitment from all car park users. The adoption of a green travel plan and a sustainable car park management regime by a Green Building Management Group will help in this regard. (see [BBP Green Building Management Toolkit](#))

If an occupier decides to implement parking restrictions on their employees, this is best done in conjunction with a needs-based permit system. This kind of permit system is often seen as the fairest by users, thus simplifying their adoption. The DfT travel guide recommends using the following priority criteria for issuing permits to groups of car users:

- Personal mobility difficulties.
- Car sharing.
- Out-of-hours work responsibilities.
- Caring responsibilities that necessitate a car on the journey to or from work.
- Home address too far to walk or cycle to the office or too far from public transport routes to the site (although points should be quite limited for this criterion, otherwise an incentive for staff to live in remote locations can be created, exacerbating a current social trend).

Special parking spaces can also be provided for fuel efficient vehicles such as small cars, mopeds or motorbikes and "hybrid" vehicles. The installation of charging points for electrically run vehicles is also another option for promoting sustainable transport, particularly given the current Government's drive towards the promotion of such vehicles. Priority parking can be enforced by smart card operated barriers, staff controlled entrances or regular spot checks.

Implementing a sustainable car parking regime is more difficult where the majority of car park users are visitors rather than employees, such as at a shopping centre. Nonetheless, aspects of such a regime, such as special parking spaces and electric charging points, can of course be provided.

The income generated from any parking charges generated can be re-invested to finance other travel plan measures.

Guidance Notes



- 6.1 Cleaning contracts and sustainable cleaning products
- 6.2 Providing awareness raising and training to cleaners
- 6.3 Aligning cleaning schedules and environmental performance
- 6.4 Implementing cleaning and maintenance procedures

6. Cleaning



The extent to which a Managing Agent has any control over cleaning and procurement will differ from building to building. Cleaning staff can play a major role in the success of a sustainability strategy due to the fact that their day-to-day activities involve maintaining the building and its infrastructure. The Managing Agent's role includes guiding and motivating these contractors and encouraging them to become champions of environmental standards.

Guidance Notes
 

6.1 Cleaning contracts and sustainable cleaning products

6.2 Providing awareness raising and training to cleaners

6.3 Aligning cleaning schedules and environmental performance

6.4 Implementing cleaning and maintenance procedures

6.1 Cleaning contracts and sustainable cleaning products

A Managing Agent should ensure that any sustainability strategy that is agreed between the building owner and occupiers is also communicated to any third party cleaning contractors and that they fully understand their responsibilities. Cleaning contractors can play a significant part in ensuring the success of a sustainability strategy and will contribute directly to the environmental performance of a building on a day-to-day basis. A Managing Agent will also have to facilitate and communicate any changes or amendments to a strategy between the parties, if and when they occur. This can perhaps best be achieved through the Green Building Management Group, if established. (see [BBP Green Building Management Toolkit](#))

The British Association for Chemical Specialities (BACS) and the UK Cleaning Products Industry Association (UKCPI) have published a [sustainable cleaning user guide](#) which describes best environmental practice with regards to sustainable cleaning. The user guide sets out three key steps for ensuring sustainability in cleaning:

1. Choose products that are designed for sustainability as well as for safety
2. Work with suppliers so that they responsibly manage their manufacturing impacts
3. Minimise the environmental impacts that arise during cleaning operations

It is recommended that a cleaning contractor should adopt a building's sustainable procurement strategy, if available, which will determine the specification requirements for purchasing new environmentally friendly cleaning products (see [Guidance Note 4.3](#): 'What is sustainable procurement?').

Many cleaning product organisations will already have in place an Environmental Management System (EMS) in order to achieve ISO 14001 compliance. In addition to having an accredited EMS in place, the International Association for Soaps, Detergents and Maintenance Products has developed a '[Charter for Sustainable Cleaning](#)' across Europe and its logo can be found on all member organisations' products.

Additionally, the International Council of Chemical Associations' (ICCA) [Responsible Care Initiative](#) demonstrates a chemical company's commitment to sustainability which is also supported by the European Chemical Industry Council (CEFIC).

Managing Agents can adopt the presence of an up-to-date EMS and membership to either the Sustainable Cleaning Charter or Responsible Care Initiative as qualifying criteria in a sustainable procurement strategy for cleaning products.

Guidance Notes



6.1 Cleaning contracts and sustainable cleaning products

6.2 Providing awareness raising and training to cleaners

6.3 Aligning cleaning schedules and environmental performance

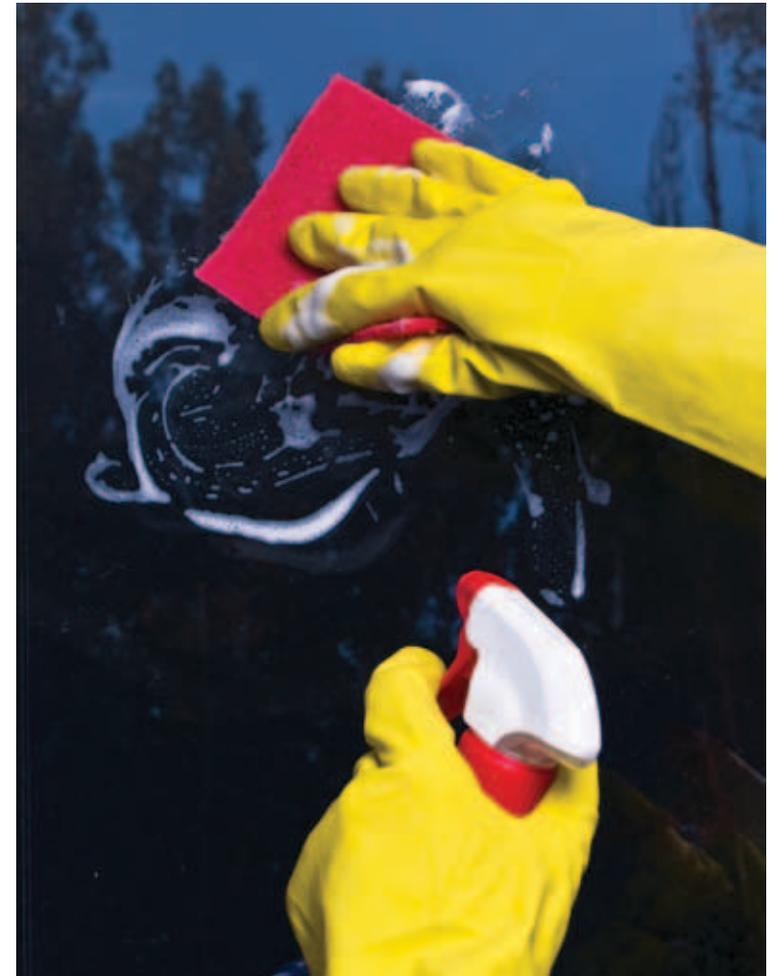
6.4 Implementing cleaning and maintenance procedures

6.2 Providing awareness raising and training to cleaners

A Managing Agent should work with the cleaning contractors for a building in order to reduce their cleaning staff's energy and water consumption and waste generation. These are all areas of sustainability that cleaning staff can affect directly at a building, so awareness raising and training is very important. Any environmental training and awareness raising should be implemented as part of a wider strategy (see [Guidance Note 7.3](#): 'How to provide training & education and communicate achievements to employees').

Key aspects of awareness raising and training for cleaners relates to:

- Their use of cleaning products (see [Guidance Note 6.1](#): 'Cleaning Contracts and sustainable cleaning products').
- Their use of equipment (see [Guidance Note 4.3](#): 'What is sustainable procurement').
- Their use of the building's lighting, heating and air-conditioning resources (see [Guidance Note 6.3](#): 'Aligning cleaning schedules and environmental performance').
- Appropriate cleaning procedures for specialist "green" plant, equipment, fixtures and fittings (see [Guidance Note 6.4](#): 'Implementing cleaning and maintenance procedures').



Guidance Notes



6.1 Cleaning contracts and sustainable cleaning products

6.2 Providing awareness raising and training to cleaners

6.3 Aligning cleaning schedules and environmental performance

6.4 Implementing cleaning and maintenance procedures

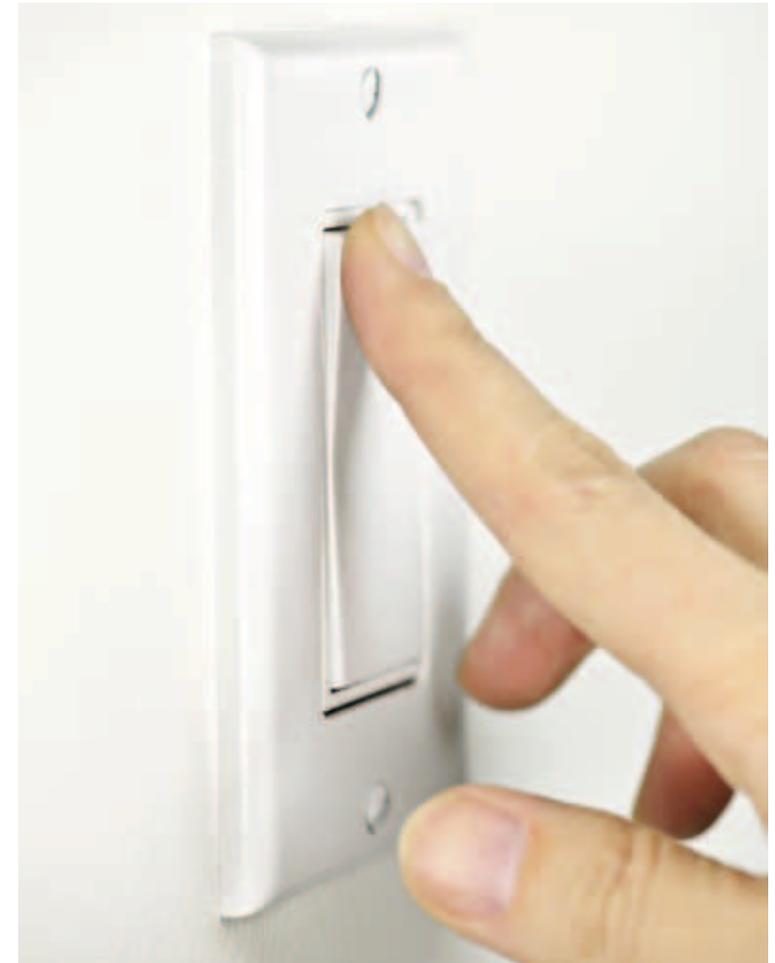
6.3 Aligning cleaning schedules and environmental performance

Securing and enhancing a building's environmental performance involves working with staff at all levels to minimise their environmental impacts and this includes the cleaning contractors for a building.

In many buildings, cleaning staff operate outside of normal office hours and consideration should be given to minimising the use of lighting, heating and air-conditioning resources used by cleaning staff while they undertake their duties at these times. A Managing Agent should liaise with both the building owner and occupiers to discuss how cleaning schedules can be best managed and examine how they can be aligned to any sustainable waste, water or energy strategy.

It is important that heating, ventilation and cooling systems in a building operate at hours that match the times when they are required; these needs will vary throughout the day and in different seasons. If cleaning staff operate outside of the main office hours, the system controls need to be adjusted to reflect the change in demand for these essential services. It may not be necessary to heat or ventilate a whole building if cleaning is isolated to certain areas and staff are cleaning in rooms for a limited period of time.

In many buildings, lighting and heating often remain on much longer than is necessary. A good first step is to use inexpensive time controls to automatically switch off the heating at the end of a normal working day and ensure cleaning staff are trained to minimise their energy usage when working outside these hours. It may also be necessary to observe the working patterns of the cleaning staff and align their cleaning schedules to certain times of the day where energy savings can be made. For further information on identifying when and where energy should be used please see guidance notes in [Section 1: Energy](#).



Guidance Notes



- 6.1 Cleaning contracts and sustainable cleaning products
- 6.2 Providing awareness raising and training to cleaners
- 6.3 Aligning cleaning schedules and environmental performance
- 6.4 Implementing cleaning and maintenance procedures

6.4 Implementing cleaning and maintenance procedures

A Managing Agent should ensure that facilities management teams and cleaning contractors are brought on board early during the planning phase of a sustainability strategy. These managers and cleaning staff, along with the building occupiers, have a vital role in ensuring that resource-saving features and equipment are being used as designed and are delivering a high quality service.

In many buildings energy consumption and cleaning needs can be minimised simply by maintaining equipment properly, calibrating energy controls and ensuring that plant/ equipment is serviced regularly. It is advisable to draw up an action plan with a facilities manager or building occupier which details a schedule of maintenance and housekeeping duties that need to be made and when, along with who will be responsible for them. The following list describes a series of low or no cost maintenance measures that should be addressed as part of an action plan for maintaining equipment:

- Conduct regular housekeeping walk rounds.
- Minimise unnecessary running of equipment.
- Practice good equipment control and calibration.
- Perform regular equipment maintenance checks.
- Maintain the integrity of the building envelope (e.g. walls, floors, roof, windows and doors).

These simple checks will help to identify any maintenance issues and can avoid expensive problems later on, particularly with regards to specialist green plant, equipment, fixtures and fittings. For these, it may be possible to implement maintenance and cleaning measures in-house but some specialist technologies may require expert assistance.

A Managing Agent will need to liaise with both the building owner and occupiers to ensure that maintenance and cleaning schedules are agreed upon and that the action plan reflects each party's needs (see [Guidance Note 1.6: 'Create an action plan to ensure future action and improvement'](#)). Furthermore, Managing Agents should ensure that all actions reflect the decisions made by the Green Building Management Group (see [BBP Green Building Management Toolkit](#)) where one is in place.

Guidance Notes



- 7.1 Sharing targets and achievements
- 7.2 Providing or arranging environmental workshops
- 7.3 How to provide training & education and communicate achievements to employees

7. Sharing Initiatives



Guidance Notes



7.1 Sharing targets and achievements

7.2 Providing or arranging environmental workshops

7.3 How to provide training & education and communicate achievements to employees

7.1 Sharing targets and achievements

A Managing Agent can encourage building owners and occupiers to exchange data about a sustainability strategy and can help communicate and publish this information when it is required. Sharing information about a successful sustainability strategy is important for several reasons, as it:

- Is an opportunity to report on progress.
- Demonstrates compliance with environmental regulation.
- Highlights areas for improvement.
- Is an opportunity to celebrate success.
- Enables knowledge, expertise and advice to be shared.

People expect to hear about the success of a sustainability strategy and it is important to communicate the progress made at appropriate milestones, such as upon achievement of individual targets or in regular reports. When publishing and sending out information or documents about environmental progress it is important to select the most appropriate delivery routes for sharing data about a strategy. These will vary depending on who is being communicated to. Key communication routes could include the following:

- Emails
- Presentations
- Posters
- Staff newsletters
- Meetings
- Word of mouth
- Letters

It must be remembered that some information should be considered confidential and will be protected by the Data Protection Act 1998. A Managing Agent must be responsible for maintaining the confidentiality of all individuals, including the data on both the building owners and occupiers. Any information must be disclosed with consent from all the parties involved.

The [BBP Green Building Management Toolkit](#) recommends communicating and exchanging data through Green Building Management Groups which comprise representatives of the building owner, the occupiers and the Managing Agent and if appropriate also include other representatives, such as a building's energy managers, facilities managers and energy specialists. Data exchange can also be included as part of a green lease or a Memorandum of Understanding (MoU) where the parties agree to share and use sustainability data and other information (see [BBP Green Lease Toolkit](#) for further information).

Guidance Notes



7.1 Sharing targets and achievements

7.2 Providing or arranging environmental workshops

7.3 How to provide training & education and communicate achievements to employees

7.2 Providing or arranging environmental workshops

A building owner may feel it is necessary to provide occupiers with a workshop where information regarding a new sustainability strategy or programme can be shared. A Managing Agent could be asked to help facilitate or arrange this. This kind of workshop will involve the participants learning new skills, particularly manual, communication and/or decision-making skills. Some of the points below may help make a workshop successful:

- Use an environmental expert or specialist to run the workshop or conduct practical environmental skills training.
- Establish how environmentally aware the participants are at the beginning of the workshop.
- Use set environmental standards, benchmarks and best practice measures when describing goals and targets.
- Give participants time to practice the new skills they have learnt and give them feedback and time for discussion.

A workshop is a good starting point for generating action and launching environmental strategies and initiatives but to be most effective they must be part of a long-term programme. Managing Agents communication to occupier organisations can be significantly enhanced by means of Green Building Management Groups. These provide an ideal forum for face-to-face communication where knowledge, expertise and advice can be openly shared. (see [BBP Green Building Management Toolkit](#))



Guidance Notes



7.1 Sharing targets and achievements

7.2 Providing or arranging environmental workshops

7.3 How to provide training & education and communicate achievements to employees

7.3 How to provide training & education and communicate achievements to employees

A building will often accommodate many different groups and individuals, all with varying levels of environmental awareness. As part of a successful sustainability strategy it is important that all individuals understand how they can help reduce energy and water consumption and waste production in their own work environments. This challenge can be overcome with the implementation of suitable environmental education and training. A Managing Agent will not usually be required to provide this training but should have the scope to encourage occupiers to consider training their own staff.

Environmental education can come in many formats, from literature and books, through to electronic and online resources, whereas practical training can be delivered in workshops, seminars and conferences. Whatever training methods are chosen, it is recommended that a third party organisation or specialist is consulted. They will have the most appropriate skills to give advice on the best communications and will be able to deliver any training that is necessary. For a full list of accredited environmental and sustainability specialists a searchable database is available from the [ENDS Directory](#) website.

The Carbon Trust's '[Creating an awareness campaign](#)' explains that progress reports can be powerful motivators for change. It is important to periodically measure the success of a programme and communicate achievements when certain targets and goals have been met. There are many communication channels for broadcasting success, these could include:

- Emails.
- Displays.
- Posters.
- Stickers.
- Promotional materials.
- Word of mouth.
- Staff newsletter/magazine.
- Incentives.
- Competitions.
- Meetings/presentations.
- Internal communications.
- External publicity and support.
- Letters.

Managing Agents should encourage occupiers to make use of the Carbon Trust's 'Creating an awareness campaign' publication. It contains very useful advice and offers freely available campaign tools to help organisations make progress.

Glossary

Advanced/AMR meters

In addition to traditional metering functionality (measuring and registering the amount of energy which passes through it), AMR or advanced meters are capable of one-way communication allowing the automatic transmission of meter readings remotely, typically on a half hourly basis.

BREEAM

An environmental assessment method for measuring a building's environmental performance in terms of sustainable design. The assessment measures buildings against set criteria and best practice which then provides an overall environmental rating. BREEAM assessments cover nine broad categories:

- Management
- Health & well-being
- Energy
- Transport
- Water
- Materials
- Waste
- Land use & ecology
- Pollution

Carbon footprint

A measure of the impact human activity has on the natural environment, and in particular climate change. The carbon footprint is a measurement of all greenhouse gases individually produced and which is recorded in units of tonnes (or kg) of carbon dioxide.

Carbon Reduction Commitment (CRC Energy Efficiency Scheme)

A UK-based carbon emissions trading scheme for large public and private sector organisations. It is a mandatory scheme which aims to both improve energy efficiency and regulate the amount of greenhouse gases that are released from the burning of fossil fuels by an organisation.

CSR – Corporate Social Responsibility

A concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis.

Cycle to work scheme

A tax exemption which allows employers to loan cycles and cycle safety equipment to employees as a tax-free benefit in order to promote healthier journeys to work and to reduce environmental pollution.

Display Energy Certificate (DEC)

A certificate which shows the energy performance of a building based on its annual energy consumption and the associated CO₂ emissions. This is shown as a rating from A to G, where A has the lowest CO₂ emissions (best) and G the highest CO₂ emissions (worst).

Eco-management and Audit Scheme (EMAS)

A voluntary European environmental management system (EMS) which is designed to improve a company's environmental performance by recognising and rewarding those organisations that go beyond minimum legal compliance and continuously improve their environmental performance.

Energy from waste/Energy recovery

The process of converting waste material into electrical (and sometimes heat) energy from burning waste material in industrial incinerators.

Energy Performance Certificate (EPC)

A certificate which shows a property's energy efficiency potential, running costs and environmental impact rating (carbon emissions). The certification process also identifies energy saving improvements that can be undertaken to improve the energy efficiency of the property, reducing the running costs and, in turn, reducing carbon emissions.

Environmental Management System (EMS)

An organisational management system that is used to develop and implement an environmental policy and to manage a company's interaction with the environment. A process which usually involves collecting information on the environmental performance of the organisation in order to track its progress against set environmental objectives, targets and standards. EMS's are often accredited to the ISO14001 standard.

Feed-in Tariffs (FiTs)

A government energy scheme that ensures that energy suppliers pay consumers for the electricity they generate from renewable or low carbon sources which is supplied back into the national grid. The scheme applies to most sustainable energy installations up to 5 mega watts.

Green tariff electricity

An electricity rate which is based on the supply of electricity from renewable energy sources to a property by a utility company.

[Continue](#) 

Glossary

ISO 14001

An international standard used by organisations to help them to measure the success of their environmental management systems and assists in reducing their environmental impact. Often used as a guide for adhering to both environmental legislation and regulatory requirements.

Leadership in Energy and Environmental Design (LEED)

An international green building certification system which measures a building's design against a set of performance categories, including: energy savings, water efficiency, CO₂ emissions reduction, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts. LEED assessments examine innovation & design and regional priority and cover five broad categories:

- Sustainable sites
- Water efficiency
- Energy & atmosphere
- Materials & resources
- Indoor environmental quality

Materials recovery facility (MRF)

A recycling factory which separates co-mingled (recyclable) material into their individual material streams using a variety of mechanical and manual processes. After processing, the materials are sorted into categories which are then prepared for sale into the commodity markets.

Rainwater harvesting

The concept of capturing rainwater and storing it for later use.

Renewable energy

Energy that is generated from sources that are naturally and easily replenished, as opposed to non-renewable energy supplies such as the burning of fossil fuels. Sources of renewable energy include: solar, wind, tidal, geo-thermal heat and biomass sources.

Renewable Heat Incentive (RHI) Scheme

A government initiative that provides financial support to individuals and organisations that install renewable heating technology in their properties.

Site Waste Management Plan (SWMP)

A plan that sets out how resources will be managed and waste controlled at all stages during a construction project. A legal requirement for all construction projects in England with an estimated construction cost of over £300,000.

Ska Rating

An environmental labelling method owned by the RICS which is designed to rate and compare the environmental performance of fit-out projects initially for office buildings in the UK.

Smart meters

See Advanced Meters

Sustainable procurement

'Green purchasing' or 'sustainable procurement' is the consideration of environmental, economic, ethical and social factors when making a purchasing decision. It may involve investigating what the product is made of, where it has come from and who has made it. Ultimately the aim is to minimise the environmental and social impacts of the purchases made.

Travel plans

A system used by employers to encourage staff to use alternatives to single-occupancy car use. Plans may include car sharing schemes, improving cycling facilities, a dedicated bus service or a restricted car parking allocation. A plan might also include the promotion of flexible-working practices such as remote access and video conferencing.

Waste hierarchy

A waste minimisation concept which aims to reduce the amount of waste produced by maximising the waste materials' inherent value. The hierarchy encourages good waste management practice through several steps, starting with the prevention of waste, followed by the refurbishment of goods, then value recovery through recycling and composting with waste disposal being the final and least preferred step along the hierarchy.

Waste Electrical and Electronic Equipment (WEEE)

This term describes all electrical and electronic waste and is governed in the UK by the WEEE Regulations (2006). There are ten categories of waste, which include all equipment with a voltage of up to 1000 volts for alternating current or up to 1500 volts for direct current.

Useful Links

General

BBP

Better Buildings Partnership

www.betterbuildingspartnership.co.uk

BIFM

The British Institute of Facilities Management

www.bifm.org.uk/bifm/knowledge/sustainabilityinfm

Business Link

A free business advice and support service

www.businesslink.gov.uk

Carbon Trust

A not-for-profit company with the mission to accelerate the move to a low carbon economy

www.carbontrust.co.uk

CIBSE

Chartered Institute of Building Services Engineers

www.cibse.org

Environment Agency

UK Government public body for the environment

www.environment-agency.gov.uk

Energy

BBP

Better Metering Toolkit

www.betterbuildingspartnership.co.uk/working-groups/sustainability-benchmarks/better-metering-toolkit

BBP

Sustainability Benchmarking for Commercial Property Toolkit

www.betterbuildingspartnership.co.uk/working-groups/sustainability-benchmarks/sustainability-benchmarking-toolkit

Business Link

Energy and carbon emissions

www.businesslink.gov.uk/bdotg/action/layer?topicId=1079432186

Carbon Trust

A not-for-profit company with the mission to accelerate the move to a low carbon economy

www.carbontrust.co.uk

CHPA

Combined Heat and Power Association

www.chpa.co.uk

CIBSE

Chartered Institute of Building Services Engineers

www.cibse.org

Department for Communities and Local Government

Guidance on EPCs and DEC's

www.communities.gov.uk/planningandbuilding/sustainability/energyperformance

Energy Institute

The professional body for the energy industry

www.energyinst.org/home

Green Energy Supply Certification Scheme

Providing transparency and clarity on Green Electricity Tariffs

www.greenenergyscheme.org

LES-TER

British Property Federation's Landlord's Energy Statement and Tenant's Energy Review

www.les-ter.org/page/home

National Measurement Office

Guidance on the legislation of gas and electricity meters

www.nmo.bis.gov.uk/content.aspx?SC_ID=289

Continue 

Useful Links

Waste

Business Link

Waste Management

www.businesslink.gov.uk/bdotg/action/layer?r.l1=1079068363&r.s=tl&topicId=1086048456

Capital Waste Facts

Provides information and data about waste reduction, reuse and recycling, including details on all London Borough waste services.

www.capitalwastefacts.com

Chartered Institution of Wastes management

The professional body for the wastes management sector

www.ciwm.co.uk

CIWM

Chartered Institute of Waste Management

www.ciwm.co.uk

ESA

Environmental Services Association

www.esauk.org

ICER

Industry Council for Electronic Equipment Recycling

www.icer.org.uk

IEMA

Institute of Environmental Management and Assessment

www.iema.net

NetRegs

Environmental guidance for small and medium-sized businesses

www.netregs.gov.uk

NetRegs Waste Directory

Directory of licensed recycling and waste disposal sites in England and Wales

wastedirectory.netregs.gov.uk

Recoup

The UK's leading authority on plastics waste management

www.recoup.org

WRAP

Waste Resources Action Programme: A government body which helps businesses and individuals reduce waste, develop sustainable products and to use resources in an efficient way

www.wrap.org.uk

Water

Environment Agency

A table of typical and best practice water consumption benchmarks for a range of public sector buildings, including offices

www.environment-agency.gov.uk/business/topics/water/34866.aspx

Friends of the Earth Scotland

Greening the Office Audit: contains advice on measuring and reducing water use, including benchmarks

www.green-office.org.uk/audit.php?goingto=factsheet5

Water Technology List (WTL)

Provides information on products that improve water efficiency and are liable for Enhanced Capital Allowances

www.eca-water.gov.uk

Watersave UK

The network for Water Conservation and Recycling

www.watersave.uk.net/Home/index.html

Waterwise

An independent, not for profit organisation which provides information and assistance to households, businesses, media and the government on water efficiency

www.waterwise.org.uk/reducing_water_wastage_in_the_uk/house_and_garden/saving_water_in_business.html

WRAP

Waste Resources Action Programme: Water

envirowise.wrap.org.uk/uk/Topics-and-Issues/Water.html

Continue 

Useful Links

Alterations & Replacements

BBP

Better Buildings Partnership: Low Carbon Retrofit Toolkit
www.betterbuildingspartnership.co.uk/working-groups/sustainable-retrofit/low-carbon-retrofit-toolkit

BRE: The Green Guide to Specification

www.bre.co.uk/greenguide/podpage.jsp?id=2126

BREEAM

BRE Environmental Assessment Method (for Buildings)
www.breeam.org

Green Spec

Construction industry guide to 'green' building design, products, specification and construction
www.greenspec.co.uk

LEED

The US Green Building Councils green building certification system
www.usgbc.org/DisplayPage.aspx?CategoryID=19

Ska-rating

The environmental assessment tool for sustainable fit-outs
www.ska-rating.com

The Mayor of London's Green Procurement Code

www.greenprocurementcode.co.uk

WRAP: Recycled Content Guide

www.wrap.org.uk/construction/tools_and_guidance/recycled_content

Transport

Department for Transport: Work Place Travel Plans

www.dft.gov.uk/pgr/sustainable/travelplans/work

Highways Agency

Services for Businesses
www.highways.gov.uk/business/13592.aspx

Cleaning

A.I.S.E: Charter for Sustainable Cleaning

A voluntary initiative of the European soaps, detergents and maintenance products industry
www.sustainable-cleaning.com/en.home.orb

BACS: Guidance on Sustainable Cleaning

The British Association for Chemical Specialities
www.bacsnet.org/news/sustainable-cleaning

Responsible Care

A Sustainable Initiative from the International Council of Chemical Associations
www.icca-chem.org/en/Home/Responsible-care

Sharing Initiatives

BBP

Better Building Partnership: Green Building Management Toolkit
www.betterbuildingspartnership.co.uk/working-groups/owner-occupier-partnerships/green-building-management-toolkit

BBP

Better Building Partnership: Green Lease Toolkit
www.betterbuildingspartnership.co.uk/working-groups/green-leases/green-lease-toolkit

Carbon Trust

Creating an awareness campaign
www.carbontrust.co.uk/publications/pages/publicationdetail.aspx?id=CTG001

ENDS directory

Environmental Data Services guide to environmental consultancy
www.endsdirectory.com

Appendix: Extract of Schedule 1 of the model form Memorandum of Understanding from the [BBP Green Lease Toolkit](#)

		Sustainability Checklist Reference
1 Energy		
1.1	Separate metering facilities for individual utilities for the Premises and the common parts and for other occupiers and special uses.	1.5
1.2	Where appropriate, the use of advanced (smart) or automatic metering technology in the Building and/or the Premises.	1.5
1.3	Where appropriate and available at acceptable rates, the purchase of energy from renewable sources.	1.8
1.4	On the Landlord's part to give reasonable consideration to requests by the Tenant for the installation in or upon the Building or the Premises of plant and equipment based on renewable technologies (including roof mounted equipment) provided such installations do not adversely (in the opinion of the Landlord) affect the value or appearance of the Building.	1.10
1.5	Where appropriate participate in local and/or communal schemes for energy generation or provision.	
2 Waste		
2.1	On the Landlord's part, to develop and agree with the Tenant and other occupiers of the Building a waste strategy for the Building including, where practicable, the sharing of recycling and other waste facilities by the occupiers and joint waste strategies with neighbouring buildings.	2.2
2.2	Appropriate recycling arrangements for printer cartridges, fluorescent bulbs, batteries and similar items.	2.6
2.3	The adoption of sustainable procurement codes (e.g. purchase of environmentally friendly office consumables and the adoption of "take back" and "re-use" schemes with suppliers for products and packaging).	4.3
2.4	On refurbishment and fit-out, require contractors to make adequate waste segregation and recycling provisions and to re-use redundant materials wherever practicable.	2.5
2.5	All electrical equipment in the Building or the Premises which is to be disposed of will be disposed of by the equipment owner in accordance with the WEEE Regulations 2006.	2.6
3 Water		
3.1	The installation of high efficiency plumbing fixtures and control technologies in the Building and the Premises.	3.3
3.2	A regular programme of leak inspections at the Building and the Premises.	3.4
3.3	Where possible, the use of treated and recycled water, captured rain water and grey water, where potable water is not a necessity.	3.5
3.5	The use of relevant water saving control systems.	3.3

[Continue](#)

Appendix: Extract of Schedule 1 of the model form Memorandum of Understanding from the [BBP Green Lease Toolkit](#)

		Sustainability Checklist Reference
4 Energy Audit		
4.1	On the Landlord's part, to develop and agree with the Tenant and other occupiers of the Building a waste strategy for the Building including, where practicable, the sharing of recycling and other waste facilities by the occupiers and joint waste strategies with neighbouring buildings.	1.3
5 Alterations & Replacement		
5.1	The reasonable consideration of sustainable sourcing, the use of energy efficient and sustainable products and materials, recycling and the environmental performance and impact of all replacement of plant and equipment and of all alterations.	4.3
5.2	When replacing plant and equipment, the use of energy efficient plant and equipment and reasonable consideration of reductions in energy use and for improvements in energy rating (including any rating contained within an EPC or DEC).	4.1
5.3	Avoiding alterations which have an adverse impact on the energy performance of the Building or the Premises.	4.1
5.4	On the Tenant's part the provision to the Landlord of sufficient information in relation to the environmental impact of proposed alterations, on the making of any application for the Landlord's consent to such alterations.	4.1
5.5	The Parties to give reasonable consideration to alterations that reduce the need for air conditioning and other energy consumption.	4.1
5.6	Agreeing a target BREEAM rating prior to either party carrying out alterations for which a BREEAM rating would be available.	5.6
6 Transport		
6.1	The provision of space for bicycle storage, shower and changing facilities for cyclists.	5.2
6.2	The provision of spaces for small cars, mopeds or motorbikes.	5.4
6.3	The establishment of shuttle links where practicable to any local transportation hubs.	5.3
6.5	Agreement of a 'Green Travel Plan'.	5.1

[Continue](#)

Appendix: Extract of Schedule 1 of the model form Memorandum of Understanding from the [BBP Green Lease Toolkit](#)

		Sustainability Checklist Reference
7 Cleaning		
7.1	Requiring cleaning contractors to comply with any waste strategy or any energy or water reduction strategy agreed by the Parties and to maximise the use of natural solvent free and hydrocarbon free cleaning products.	6.1
7.2	Specifying appropriate cleaning and maintenance procedures for specialist “green” plant, equipment, fixtures or fittings.	6.4
7.3	Programming cleaning times to minimise the use of lighting, heating and air-conditioning resources.	6.3
7.4	Providing awareness raising and training to cleaners.	6.2
8 Sharing Initiatives		
8.1	Without breaching the confidentiality of information as required by paragraph 10.2, the Parties will be free to share with others their targets and achievements under this MoU.	7.1
8.2	On the Landlord’s part, to provide or arrange for workshops for the Tenant and other occupiers on their sustainability initiatives to demonstrate how reductions and savings to energy, water and waste consumption can be made.	7.2
8.3	The provision of training and education and the communication of achievements to employees.	7.3
9 Service Charge		
9.1	On the Landlord’s part, where practicable, the separate identification of the cost of sustainability/environmental initiatives within the service charge account.	8.1
9.2	On the Landlord’s part, the consideration of service charge adjustments to reflect the use of energy and water by individual occupiers.	8.2
10 Tenant Handbook		
10.1	On the Landlord’s part, the provision to the Tenant of a handbook or information pack which includes energy and environmental management information about the Building (including any EPC/DEC ratings and recommendation reports, reduction targets, energy metering and monitoring data, an environmental policy and water performance data and waste strategy data).	9.1

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