



# Improving Air Quality in the City of London

## A practical guide for City businesses



## SITUATION

Air Quality in parts of the City of London is the worst in the country and amongst the worst in Europe. It may not be as visible as the smog of Victorian London, but it is ever present.

Nitrogen dioxide (NO<sub>2</sub>) is up to three times the recommended level for health and particulate matter (PM<sub>10</sub>) regularly breaches EU limits.

## IMPACT

Poor Air Quality has a significant impact on health, with up to 8,000 premature deaths in London each year attributed to it.

Fine particles have the greatest impact on health. Young children and the elderly are most susceptible.



The UK could face significant fines from the EC for failure to comply with Limit Values.

## SOURCES

The major sources of air pollution are from combustion as a direct result of transportation and heating.

Carbon reduction, energy efficiency and modifying transport policies should therefore go hand-in-hand with improving air quality.

There is a great deal of work already being done by the City of London Corporation, the Government and the Mayor's Office, but targets are not being met.

With the help of City businesses, and the people that live and work in the Square Mile, we can make a difference to our health and the wellbeing of those around us.

## THE FUTURE

There are many measures in place to deal with emissions from new developments including the construction and development phase, but no measures are in place to address existing building stock and how activities associated with them can reduce emissions.

The best practice and communications advice listed below, and in accompanying documents, seek to address this. Some will take time and an investment but all will lead to enhancing employee wellbeing and making our own working environment healthier. There are also some simple quick wins that can be implemented immediately.

**We need your help to improve air quality in the City. It's time to act - it's time to think air quality**



## COMMUNICATION

In the City, the density of people and scale of the problem compounds the impact of poor air quality and it is a problem that is too easily ignored.

A common theme identified by respondents to the initial consultation was that the issue of air quality needs greater visibility and a communication vehicle.

Support is needed with campaigns, to raise awareness of air quality internally, as well as promoting individual initiatives.

A campaign toolkit has been designed to make it as easy as possible for everyone to **'think air quality'**.

### What is being done

- A CityAir 'button' has been developed by the City of London to be used by organisations that work towards improving air quality
- **To use this device please see the campaign toolkit**
- The City of London website has useful guidance, templates and links to make the most of the great work already done
- **The latest news is available on Twitter @\_CityAir**
- Advice is also given on integrating air quality into sustainability communications, making it easy for people to understand the impact of poor air quality and how simple actions can improve the situation
- An annual Sustainable City Award for Air Quality has been established, to reward best practice and encourage innovative ideas that improve air quality
- A useful resource to monitor live air quality information has been developed by King's College London and is available, free of charge, for the iPhone as a downloadable 'app'
- Other applications and tools are referenced throughout the document and in the toolkit below

For more information see the Campaign Toolkit (App I)



Improving air quality  
in the City of London

There can sometimes be a 'disconnect' between asset owners, facilities managers, tenants, service companies and employees. Fixing the 'disconnect' will require working together and understanding the link between sustainability, operations, air quality, health and employee wellbeing.

Strong leadership starts with the Government, Mayor of London and the City of London, but we can all make a difference. If driven from the top any initiative will have the weight it needs to succeed.

**It's about working together so 'whatever you're doing - think air quality'**



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**The Solutions listed in this section are applicable to all businesses and individuals.**

**They are not prescriptive and are designed as a guide to help you identify where you can help to improve your local air quality.**

**Basic changes to existing activities are the easiest and quickest to achieve. Help is given along the way with case study references and online resources for further information.**

The first section focuses on **Corporate Responsibility (CR)**. 

The second section is broken down by the area in which change can be affected:

- **The Built Environment**
- **Transportation**
- **Supply Chain**



The solutions have been developed from an initial consultation exercise across a range of stakeholders. A request was made by businesses for further information and guidance, on implementing measures to help improve local air quality. These details have been added, with input from businesses, to ensure the solutions are achievable and match business, sustainability, health, wellbeing and air quality objectives.

Although great care has gone into presenting the solutions below, improving air quality through innovations and fresh ideas is a collective responsibility. Please get in touch and give your feedback via the web or directly to [cityair@cityoflondon.gov.uk](mailto:cityair@cityoflondon.gov.uk)

## SOLUTION EXAMPLE

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### Solution

- Outline and background
- **What you need to do**

Support information and online resources

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A checklist is provided at the back of the document. A summary document is also available, and can be downloaded from the City of London website.

The City of London Corporation is not liable for the contents of any external internet sites listed, nor does it endorse any commercial product or service mentioned or advised on any of the sites.

**We can do something about poor air quality now – it's time to act**



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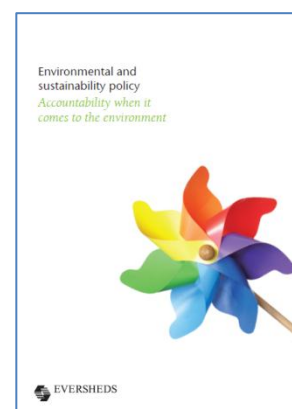
## CORPORATE RESPONSIBILITY (CR)

'Doing the right thing' is now recognised by many organisations as a key competitive differentiator in the marketplace. Whether a long established 'way of doing business' or a new approach in a changing world, the benefits are beyond doubt. Adding air quality to the CR mix is straightforward and addresses both environmental as well as employee health and wellbeing objectives.

### Build Air Quality Into CR Reporting

- Many of your existing carbon reduction and energy efficiency initiatives can have a positive impact on air quality
- **Embed air quality in your CR policies**
- **Highlight the health impact of poor air quality**
- **Don't forget - the CityAir button can be used alongside reporting or communication of these actions**

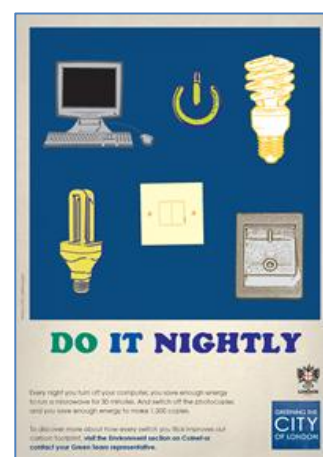
Use the template text to add to your CR Policy (App II)  
See the Air Quality Health Impact sheet here (App III)



### Employee Engagement

- There are many initiatives that could be used, from cycling and walking to waste reduction and consolidating deliveries
- **Build ownership by referencing the health impact of poor air quality**
- **Reward employees that go the extra mile**
- **Engage with other businesses and the wider community to share best practice**
- **In summer and winter turn the heating on and off a month earlier than you had planned and launch a 'Jumper to work month'**
- **Go beyond carbon reduction - a range of CityAir initiatives, relevant to air quality, are referenced throughout the document**

See the Employee Engagement guide (App IV)



## Working Together

- There can sometimes be a 'disconnect' between Asset Owner, Facilities Manager, Tenant and Employee
- Decisions made, for instance on infrastructure improvements, are usually a committee responsibility
- Fixing the 'disconnect' does not just come down to breaking down the barriers between stakeholder groups, it is about embracing common ground
- Cost is not always an issue, but the fear of disruption can often deter common sense interventions
- Neither should be a barrier and the reality of the intervention should bring benefits with no disruption to the business
- The key is in bringing together individuals across functions in all organisations to understand the impact of sustainability decisions on air quality
- **Set up a Green Building Team**
- **Dedicate an Air Quality Champion to the Group**
- **Formally integrate Facilities Management, HR, Supply Chain, Operations, CR, Marketing, IT and the Board in sustainability and, by extension, air quality decisions**
- **Work with fellow tenants, suppliers and industry partners to make change happen**
- **Join the City Environment Forum to share experiences and ideas to make sustainability and air quality improvements happen**

See the Green Teams summary (AppV)



## Air Quality Monitoring Stations

- Air quality monitoring helps raise the visibility of the issue and, over time, shows how actions are having a positive effect
- **Work in partnership with the City of London to monitor air quality at your premises or at street level outside**
- The live data that results can be fed into any communications strategy

Contact the City of London - [CityAir@cityoflondon.gov.uk](mailto:CityAir@cityoflondon.gov.uk)



- **Current Air Quality**
  - **Monitoring Network**
- NO<sub>2</sub>**  
**PM<sub>10</sub>**



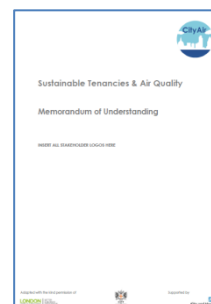
## THE BUILT ENVIRONMENT

There are many measures in place to deal with emissions from new developments. However, there are very few measures in place to address emissions from existing building stock and how activities associated with them can reduce emissions and help improve local air quality.

### Memoranda of Understanding (MoU)

- Asset Owners, Property Managers and Tenants have a shared responsibility in improving air quality
- Get together through Green Teams and make change happen with all stakeholders
- **Sign up to a Memoranda of Understanding**
- **Make change straightforward and implement recommendations in bite size pieces**
- The MoU template below has been developed from documents provided by the Better Buildings Partnership – it includes air quality alongside other sustainability measures

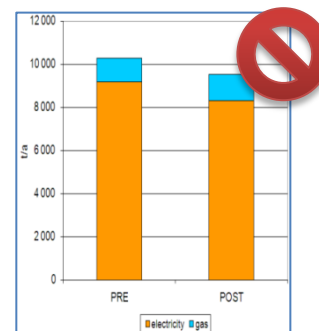
See the MoU template (App VI)



### Building Energy Review

- There are instances where an energy review, although well meaning, can recommend an increase in gas usage, even though overall energy use goes down – **think air quality**
- **Commission an energy review and ask that NO<sub>x</sub> and PM<sub>10</sub> reduction is included in the recommendations**
- **If you have already had an energy review on your building look at the implications to air quality over solely energy efficiency improvements**
- **If you do develop a MoU relating to air quality let the City of London know at [CityAir](#)**

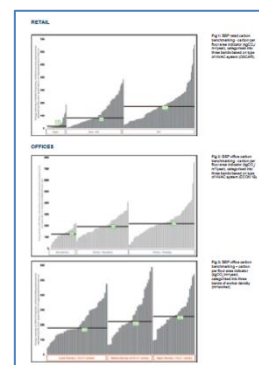
See the Building Energy Review guide (App VII)



### Energy Measurement & Monitoring

- The key to making an impact in this sphere is through measurement and monitoring energy usage, at as granular level as is feasible
- It needn't take long and will save you money
- **Take immediate action to evaluate your position following the Building Energy Review**
  - **Half hourly metering at floor level**
  - **Making Technology Work**
  - **Turn the heating on later and off earlier**

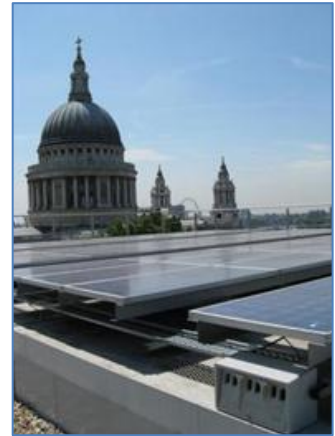
See the Measurement & Monitoring guide (AppVIII)



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### Low Carbon Retrofit

- There are many good reasons for retrofitting buildings with the latest technologies
- It is not just about achieving reduced energy usage and carbon emissions – **think air quality**
- **When replacing boilers source one with NOx emissions less than 40mg per kWh**
- **If sourcing CHP look for low NOx and emission suppressing technologies**
- **If using renewable energy look for non-combustion technology**
- **Biomass and liquid biofuel is not a suitable unless emissions of NOx and PM<sub>10</sub> can be adequately abated**
- **There are a variety of funding routes available**



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### Green Roofs & Walls

- As chilling and not heating is the main energy sink for most buildings in the City, green roofs and walls are an ideal solution as they insulate buildings from external temperatures
- They also absorb airborne pollutants
- The technology is now there to make them easy to install and maintain
- **Install a green roof and wall where practicable**

See the Green Roof case study (App IX)

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## TRANSPORTATION

The main source of emissions in the City, of both NO<sub>x</sub> and PM<sub>10</sub>, is road transport. As a result, the decisions that businesses make on travel, as well as their supply chain can have a significant impact on improving air quality in the City.

Transportation decisions by businesses need to be put in context with what the Mayor of London and City of London are doing. Only then can businesses make the informed choices on how we travel, control deliveries and consolidate the supply chain.

Each can have a massive impact - **think air quality**

### What is already being done

- City of London Corporation
  - Fleet review and driver training
  - Contractor stipulation on vehicle emissions
  - A reduction of 45% PM<sub>10</sub>, 32% NO<sub>x</sub>, 16 % CO<sub>2</sub> were achieved over one year through improved fleet management
  - A range of cycling initiatives including theft reduction campaigns, traffic management and support for cycle safety training
  - Providing an extended network of charging points for electric vehicles in car parks
- The Mayor's office, GLA and TfL are committed to
  - Cleaning up London's bus fleet so that all buses meet Euro IV emissions standards for both NO<sub>x</sub> and PM<sub>10</sub> by 2015
  - Cleaning up London's taxi and Private Hire Vehicle (PHV) fleet by introducing age limits to remove the older, more polluting vehicles from London's roads
  - Including larger vans and minibuses in the Low Emission Zone (LEZ) from January 2012
  - Aiming to introduce a new NO<sub>x</sub> standard for the LEZ from 2015
  - Reducing emissions from freight vehicles by promoting Delivery and Servicing Plans and freight consolidation facilities
  - Working with boroughs to implement action plans at air quality priority locations
    - Trials of dust suppression
    - Better traffic management
- Full details can be found in the Mayor of London's Air Quality Strategy



**MAYOR OF LONDON**



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## Green Travel Planning

- A green travel plan is a package of measures produced by employers to encourage staff to use alternatives to single-occupancy car-use
- In the City that includes avoiding the use of taxis and Private Hire Vehicles (PHVs) for short journeys
- To facilitate ease of travel, improved street signage is being implemented across the City
- **Implement the solutions below and integrate them into a cohesive air quality plan**
- **Launch campaigns to support them**



## Walking

- Walking should form a central part of your air quality plan
- The benefits to health are obvious and you can usually walk around the City more quickly than using public transport or a taxi/PHV
- Walking will form a key component of the communications plan
- **Engage with all staff explaining the benefits**
- **Use the WalkIt service to help you plan a delay-free, healthy and green journey, avoiding pollution**
- **Launch a 'walk to the client' campaign**

See the 'Walk to the Client' case study (App X)



## Cycling

- Cycling is a great way to get around the City and practical issues such as accessibility and safety are being addressed
- **Implement the Government supported Cycle to Work Scheme, which allows employers to loan cycles and cyclists' safety equipment to employees as a tax-free benefit**
- **Employees can group together to set up their own Cycle to Work Scheme**
- **Provide safety training and branded high-vis wrist snaps**
- **Partner with local gyms to make up for the lack of showering and locker space**
- **Lobby TfL to set up company cycle hire accounts**

See the Cycling guide (App XI)



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### Taxis & Private Hire Vehicles (PHVs)

- It is estimated that, by 2015, 50% of PM<sub>10</sub> emissions from vehicles in the City will be from taxis (black cabs)
- This is a significant increase from the current profile of around 38%
- Carbon offsetting by taxi and PHV companies does not help local air quality
- **Change contractor to one using electric vehicles or those meeting the Euro V standard for City use**
- **Request a 'no engine idling' policy across the taxi and PHV contract**



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### Business Fleet

- Much work is already being done and most businesses have seen their fleet drop to a fraction of the size it was five years ago
- More electric charging points are being installed by the City of London Corporation in their car parks
- In some situations a corporate fleet does still have a place, especially with support services
- **Bite the bullet, make a statement and lead by example with a hybrid limousine!**
- **Choose low emission vehicles on replacement or before if possible**
- **Employ vehicle pooling**
- **Invest in driver training**



A range of 'eco' driver training programs are available

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## SUPPLY CHAIN

Every ream of paper for the office and pint of milk for the canteen is most likely delivered by a diesel powered vehicle.

The impact on carbon emissions of the supply chain is well documented, but the resulting emissions of NO<sub>x</sub> and PM<sub>10</sub> are often not considered in procurement policy decisions.

There is a bigger picture involved and it impacts on our health - **think air quality**

### Procurement Policy

- **Incorporate air quality, alongside other environmental targets, into procurement policies**
- **Work with other tenants and coordinate central contracts for more efficient 'business basics' delivery**
- **Modify the cleaning contract to include 'equipment turn-off'**
- **Demand reduced emissions from contractor vehicles**
- **Reduce the number of deliveries per week**
- **Move to pedal bike couriers where possible**

See the Air Quality Procurement guide (App XII)



### Waste & Recycling

- The more waste generated and the less waste segregated increases your cost, especially when considered alongside how it is collected
- **Remove under desk bins**
- **Centralise recycling facilities**
- **Organise better collection regimes, coordinated with other building occupants**
- **Demand reduced emissions from the contractors' collection vehicles, setting targets over time**

See the Waste & Recycling case study (App XIII)



### Deliveries

- A single delivery of personal post to an individual is a journey wasted, as well as an opportunity lost
- We can all make a difference – **think air quality**
- **Set up a building and, at the very least, a business account with the biggest internet retailers**
- Centralising deliveries builds trust in the overall objective of improving air quality
- ...and it has yet another cost benefit too
- Work with partners to implement zero emission 'last mile' distribution

See the Zero Emission 'Last Mile' case study (App XIV)



## AIR QUALITY CHECKLIST

### Corporate Responsibility

Build Air Quality Into CR Reporting	<input type="checkbox"/>
Employee Engagement	<input type="checkbox"/>
Working Together	<input type="checkbox"/>
Air Quality Monitoring Stations	<input type="checkbox"/>

### The Built Environment

Memoranda of Understanding (MoU)	<input type="checkbox"/>
Building Energy Review	<input type="checkbox"/>
Measurement & Monitoring	<input type="checkbox"/>
Low Carbon Retrofit	<input type="checkbox"/>
Green Roofs & Walls	<input type="checkbox"/>

### Transportation

Green Travel Planning	<input type="checkbox"/>
Walking	<input type="checkbox"/>
Cycling	<input type="checkbox"/>
Taxis & Private Hire Vehicles (PHVs)	<input type="checkbox"/>
Business Fleet	<input type="checkbox"/>

### Supply Chain

Procurement Policy	<input type="checkbox"/>
Waste & Recycling	<input type="checkbox"/>
Personal Deliveries	<input type="checkbox"/>

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# APPENDIX I – CAMPAIGN TOOLKIT

Throughout the document there are suggestions and examples of campaigns that can be run in any businesses. The information below describes what is available and how to access it.

## The CityAir button

- An iconic button has been developed to be used by all organisations that work towards reducing their impact on local air quality
- The City would like businesses to use this button alongside air quality improvement projects as well as corporate communications
- Tell employees about steps you have taken that improve air quality
- To apply for high resolution and web ready artwork, please contact us using the links below, giving brief details of the proposed project

To apply contact [CityAir@cityoflondon.gov.uk](mailto:CityAir@cityoflondon.gov.uk)



Improving air quality in the City of London

Walking just five minutes in the City of London

- gets you to your destination quickly
- boosts your health
- saves a taxi journey

Above all it helps improve the quality of the air we all breathe

CityAir logo

**WALK TO THE CLIENT & BREATHE**

cityoflondon.gov.uk/cityair

With the kind support of: A City of London initiative supported by:

## Walking & Cycling

- Engage with all staff explaining the benefits of walking and cycling
- Use the low pollution WalkIt route planner to help you plan a delay-free, healthy and green journey, avoiding pollution hot spots
- Launch a 'walk to the client' campaign (see case study)
- Use TfL's Legible London maps for visibility
- See below to apply to receive all information, including intranet copy, imagery and campaign ideas across a number of initiatives

To apply contact [CityAir@cityoflondon.gov.uk](mailto:CityAir@cityoflondon.gov.uk)

## Campaigning

- There are a range of other campaigns that you can run, alongside walking and cycling
- Visit the website for the latest information

Improving air quality in the City of London

There's a lot that we can do and it starts with our travel choices

**walk and cycle**

- saving time
- reducing pollution
- improving your health

CityAir logo

cityoflondon.gov.uk/cityair

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## APPENDIX II – CR POLICY STATEMENT

The Corporate Responsibility (CR) statements that you make are important in communicating your intent, as well as a yardstick to measure on-going performance.

These statements normally cover responsibilities around four key areas:

- Environment - sustainability and legislative requirements
- Community - those affected in the areas in which you operate
- Workforce - wellbeing and equality
- Marketplace - the impact of supply chain and distribution decisions

Adding air quality to your CR policies is straightforward and addresses environmental, community, workforce and marketplace objectives. Examples are given below.

### Air Quality Supplement - Short Version

"Company Name" is committed to reducing its impact on local air pollution through improved building energy management, encouraging employee walking and cycling, requiring suppliers to have clean vehicles and consolidating deliveries.

### Air Quality Supplement - Long Version

Poor air quality can have a significant negative impact on health.

Alongside carbon reduction, every business needs to assess its impact on air quality and implement policies to improve it. "Company Name" is committed to reducing our impact, and aim to achieve this by:

- **Our Buildings**
  - Reviewing the performance of our buildings and implementing technologies to reduce emissions
  - Installing green roofs and walls where practicable
  - Encouraging positive behaviour change on energy usage
- **Transportation**
  - Encouraging walking
  - Encouraging cycling
  - Reviewing taxi and Private Hire Vehicle (PHV) contracts to encourage 'no idling' and the use of the cleanest vehicles
- **Supply Chain**
  - Incorporating air quality, alongside other environmental targets, into procurement policies
  - Consolidating deliveries to reduce the number of journeys made to our offices
  - Demanding reduced emissions from contractor vehicles and reducing the number of deliveries per week



## APPENDIX III - HEALTH IMPACT

Air Quality in parts of the City of London is the worst in the country<sup>1</sup>. We may not be able to see the pollution, unlike in the 1950's when thick smogs blighted the City, but the problem is still ever present.

This information sheet gives an overview of the health impacts of poor air quality.

### Impact

- The table below shows the main air pollutants, sources of these pollutants and potential health effects
- The main impact on health is long term exposure to fine particles



Pollutant	City Sources	Health effects
<b>Nitrogen dioxide</b>	<b>Road transport and boilers</b>	<b>Causes irritation to airways and can increase asthma symptoms at high concentrations and increase response to allergens</b>
<b>Particulate Matter (PM<sub>10</sub>)</b>	<b>Diesel vehicles and boilers</b>	<b>Can cause heart and lung diseases and long term exposure can lead to premature death</b>

### Key Messages

- The Greater London Authority published a report in 2010, which detailed that an estimated 4,267 premature deaths in London in 2008 could be attributed to long term exposure to fine particles (PM<sub>2.5</sub>)<sup>2</sup>
- The Committee on the Medical Effects of Air Pollutants (COMEAP), who advise the government on the health effects of air quality, published a report in 2010 detailing that air pollution makes a significant contribution to mortality in the UK<sup>3</sup>:
  - On analysis of 2008 data, 340,000 years of life were lost across the UK population, as a result of air pollution
  - Every individual has 6 months taken off their life due to poor air quality
  - Poor air quality has a greater impact on mortality than passive smoking or road traffic accidents
- Poor air quality is estimated to cost the country around £15 billion every year; this compares to the cost of obesity which is around £10 billion a year<sup>4</sup>

<sup>1</sup>City of London Annual Air Quality Report 2009

<sup>2</sup>Report on Estimation of Mortality Impacts of Particulate Air Pollution in London, Dr B G Miller, June 2010

<sup>3</sup>The Mortality Effects of Long-Term Exposure to Particulate Air Pollution in the United Kingdom, A report by the Committee on the Medical Effects of Air Pollutants (COMEAP) 2010

<sup>4</sup>DEFRA Air Pollution: Action in a Changing Climate March 2010





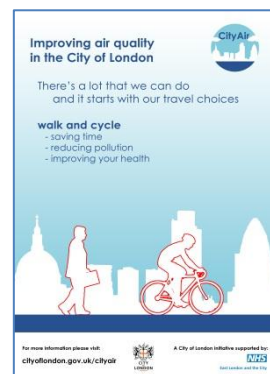
## APPENDIX IV - EMPLOYEE ENGAGEMENT

Running a sustainable office can bring significant business benefits. Embracing air quality, and reducing emissions from operations, brings further benefits, specifically to the health and wellbeing of employees.

Businesses cannot succeed in either objective without an engaged workforce. Employees are the engine room of ideas, the source of innovation and the energy that helps to drive through change and achieve objectives. We're all a part of the problem and we should all be a part of the solution.

### Starting Point

- There are many ways to engage employees and raise awareness, and it starts with communication:
  - Make every campaign and message relevant, clear and easy to implement
  - Use the company intranet to get the message across and update it with progress
  - Embrace and reward the early adopters
  - Reinforce the message with campaign posters at key points around the office



### Maintaining Impetus

- Encourage feedback at all times and stimulate innovation and fresh ideas
- Develop a Green Team, supported from the top, and include representatives that would not normally take part
- Identify advocates and give them real support and the tools to spread the message

### Training & Education

- Many air quality initiatives are best supported by formal training, for example:
  - Safe cycling
  - Optimising building performance
  - Air quality conscious procurement
- Use all media to reinforce your messages



### Keep Communicating

- Constantly update employees on progress
- Develop tips and fact sheets from your experiences
- Recognise ideas and make them happen
- Above all celebrate success and don't give up

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## APPENDIX V - GREEN TEAMS

Collaboration between owners, occupiers and building managers on air quality and environmental issues is best achieved through a Green Team.

Understanding how best to run a building, alongside considering air quality impacts, can realise significant savings as well as health benefits.

Full guidance on how to establish and develop a Green Team, also called a Green Building Management Group (GBMG), to effectively manage, monitor and record improvements is available from the Better Buildings Partnership.

### The Reasons

- Minimises occupancy costs
- Reduces emissions and waste
- Reduces exposure to current and future environmental regulation
- Supports Corporate Responsibility commitments
- Improves working relationships
- A greater understanding of mutual responsibilities
- Celebrating successes and results can help build collective momentum of improvement



### The Constitution

- Focus primarily on minimising the consumption of resources, such as gas or other heating fuels, water and reducing the generation of waste in a building
- Embrace sustainable procurement, travel and biodiversity
- This is useful in multi-tenanted offices where shared services can realise economies of scale with associated air quality impact
- Provide a forum to share ideas and best practise
- Require a shared commitment to meet regularly, to set and agree common objectives, to develop a plan and undertake improvement actions

### Actions

- Review current level of building performance
- Review supply chain, waste and other air quality improvement provisions such as green roofs
- Identify common ground and early 'quick wins'
- Formulate, agree to and adopt a Memoranda of Understanding
- Meet regularly and don't give up



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# Sustainable Tenancies & Air Quality

## Memorandum of Understanding

INSERT ALL STAKEHOLDER LOGOS HERE

# Memorandum of Understanding

This Memorandum of Understanding (MoU) aims to facilitate collaboration between the Asset Owner and its occupants in order to improve the sustainability, air quality and reduce the environmental footprint of buildings and premises that we manage and occupy. It has been developed from best practice guidance set out by the Green Lease Working Group formed by the Better Building Partnership<sup>1</sup> to drive improvement in the environmental performance of existing commercial properties. The MoU can be entered into by the parties at any stage of a lease agreement.

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<b>DATE</b>									
<b>PARTIES</b>	[	]	of		(the Landlord)				
	[	]	of	[	]	(the Tenant)			
<b>PREMISES</b>									
<b>BUILDING</b>									
<b>LEASE</b>	dated	[	]	between	[	]	and	[	]

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## 1 Memorandum of Understanding

- 1.1 The Landlord currently owns the Building and the Tenant currently occupies the Premises under the Lease.
- 1.2 The Parties agree to work together collaboratively to improve the environmental performance of the Building and mitigate our impact to local air quality.
- 1.3 The Parties agree to consider and where appropriate implement the measures set out below and in the Schedule of Options.
- 1.4 The Landlord will encourage any other occupiers in the Building to enter an MoU on the same terms as this MoU in order to improve the overall environmental performance of the Building.
- 1.5 This MoU is not legally binding (save where expressly stated to be so). However, the Parties agree to work together in good faith (but without legal obligation) from the date of this MoU to implement the aims and objectives which are set out below.

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<sup>1</sup> The Better Buildings Partnership is an initiative by the London Climate Change Agency to improve the sustainability of London's existing building stock. Its members comprises of commercial property owner organisations that own large property portfolios in London and who are committed to take on a leadership role in the sustainable retrofit of buildings.

## 2 Data Sharing

- 2.1 The Parties agree to share with each other all data and relevant information they have in relation to the Building and the Premises (in as much detail as is available to them) in respect of:
- Electricity consumption
  - Gas consumption
  - Other fuel consumption
  - Water consumption
  - Waste generation, management and recycling
  - Maintenance of plant and equipment used in connection with the above
  - Company transport, supply chain and other air quality impact areas
- 2.2 Such data and relevant information will be provided annually as a minimum in a form or methodology which the Parties agree upon as being appropriate for the purpose.
- 2.3 All such information will be provided in a form which produces meaningful and useful data.
- 2.4 An industry accepted methodology, agreed by the Parties, will be used to ensure consistency of data.

## 3 Building Management Committee

- 3.1 Where a Building Management Committee has already been established (customer liaison meeting), an agenda item will be introduced to review progress on environmental and energy efficiency measures. Where an appropriate forum does not already exist, the parties will set up a Building Management Committee which will meet regularly.
- 3.2 The Building Management Committee will comprise representatives of the Landlord, the Tenant, any managing agent employed by the Landlord or Tenant and other persons involved from time to time in the operation or management of the Building and the Premises as the Parties deem appropriate.
- 3.3 The Building Management Committee will:
- (a) review;
- the data and other information shared by the Parties under paragraph 2;
  - the environmental performance of the Building generally;
  - any changes to the Building, the Premises or its operation which may affect the environmental performance of the Building or the Premises in the future;
  - any forthcoming changes in law or practice which may be relevant to the environmental
  - performance of the Building and the Premises.

- (b) seek to agree an Environmental Management Plan (EMP) for the premises and agree upon annual targets for:
- the reduction of energy consumption, carbon emissions, NOx and PM<sub>10</sub> emissions, water use and waste at the Building and the Premises;
  - the increase, where possible, in the use of plant and equipment based on renewable technologies, renewable energy, recycling of waste, recycled water and captured rainwater for the Building and the Premises;
  - other measures which it is practical to adopt in order to improve the environmental performance of the Building and the Premises.
- (c) produce an annual statement<sup>2</sup>, where data is available, which:
- (i) contains a summary of the building's energy and water use, NOx and PM<sub>10</sub> emissions and the waste generated by the Building and the Premises
- (ii) sets out the targets agreed pursuant to (b) above
- (iii) sets out progress towards achieving the targets agreed for previous years and identifies any other achievements (e.g. reductions in fossil fuel consumption).
- 3.4 The Parties will provide each other with the names of the person(s) within their organisations and in any managing agents' organisations who should be contacted on issues relating to the environmental performance of the Building or the Premises.

## 4 Building Management System

- 4.1 Where the Landlord controls the hours of operation of any heating, lighting or air conditioning services to the Building and/or the Premises, the Tenant will provide to the Landlord details of its hours of occupancy of the Premises and its requirements for heating, lighting and air conditioning services for the Premises and will keep the Landlord informed of any changes in such requirements.
- 4.2 Where a Building Management System exists for the Building, the Landlord will:
- (a) where appropriate, explain to the Tenant how the system works;
- (b) ensure that, wherever practicable, the settings of the system are adjusted and regularly reviewed with a view to minimising unnecessary provision of heating, lighting or air conditioning services to the Building and the Premises and to reflect the information provided by the Tenant under paragraph 4.1 above.

<sup>2</sup> Note the Carbon Reduction Commitment Regulations (which are not yet in force) contain reporting requirements and this report should have regard to the timetable for CRC reporting.

## 5 Reinstatement of Tenant's Alterations

The Landlord will give reasonable consideration to:

- (i) waiving any entitlement it may have to require reinstatement of alterations carried out by the Tenant; and
- (ii) not including reinstatement requirements on the grant of any Licence for alterations where such alterations improve the environmental performance of the Building and/or the Premises and the Landlord considers that it will not need to remove or reinstate such alterations at the end of the Lease.

## 6 Co-operation on Schedule of Options Measures

- 6.1 The Parties will work together to consider and seek to implement, if appropriate, the measures against which a tick has been placed, set out in the Schedule of Options.
- 6.2 The Parties will co-operate with each other in complying with the requirements of any Carbon Reduction Commitment scheme to which either of them may be subject and which affects the Building and/or the Premises.

## 7 Managing Agents

The Parties will require their respective managing agents, if appointed, to implement the principles and objectives set out in this MoU.

## 8 New Owners and Occupiers

- 8.1 This MoU is personal to the Parties and will apply only for so long as the Landlord owns the Building and the Tenant occupies the Premises.
- 8.2 If the Landlord disposes of its interest in the Building, the Landlord will encourage the new owner to enter into a similar MoU with the Tenant and with other occupiers of the Building.
- 8.3 If the Tenant disposes of its interest in the Premises or sublets them, the Tenant will encourage any new occupier of the Premises to enter into a similar MoU with the Landlord.

## 9 Renewal of this Memorandum of Understanding

The Parties will review the progress which has been made in improving the environmental performance of the building on an annual basis based on the normal financial year. The MoU will continue to apply but can be terminated at any time by either party subject to a three month notice period on either side.

## 10 General

- 10.1 It is acknowledged that this Memorandum is not supplemental or collateral to the Lease and is not to be taken into account when construing the provisions of the Lease and that the provisions of the Lease shall prevail over anything in this Memorandum.
- 10.2 Each Party agrees that information provided to the other pursuant to paragraph 2 of this Memorandum shall be used only for the purposes of implementing this Memorandum and for no other purpose whatsoever and that they shall keep all such information confidential and will not disclose it to any other person (save their agents, consultants or contractors who need to have such information for the purposes of this Memorandum) other than if required to do so by law or with the written consent of the other Party. Notwithstanding this confidentiality requirement, we may disclose information relating to the energy use or environmental performance of the building as a whole so long as the energy use or environmental performance of the Premises is not separately identified.
- 10.3 The Guarantor has signed this Memorandum by way of approval of its terms.
- 10.4 The Parties agree that this paragraph 10 is legally binding [and is governed by English Law].

### Signed on behalf of the Landlord

Name

Position

Company

Date

### Signed on behalf of the Occupier

Name

Position

Company

Date



## Schedule of Options

The following items are a list of possible areas of collaboration or improvement initiatives for both Parties to consider in the development of a Building and Premises specific EMP. Tick boxes are provided to indicate the items which Parties here agree to consider. It is recommended that the options are reconsidered at the end of each reporting year to see if additional measures can be added to the agreed list going forward.

### 1 Energy

1.1	Commission an energy review and insist that air quality is included in the recommendations. If you have already had an energy review on your building look at the implications to air quality over solely energy efficiency improvements.	<input type="checkbox"/>
1.2	When replacing boilers source one with NOx emissions less than 40mg per kWh.	<input type="checkbox"/>
1.3	If sourcing CHP look for low NOx and emission suppressing technologies.	<input type="checkbox"/>
1.4	If using renewable energy look for non-combustion technology.	<input type="checkbox"/>
1.5	Implement separate metering facilities for individual utilities for the Premises and the common parts and for other occupiers and special uses.	<input type="checkbox"/>
1.6	Purchase energy from renewable sources wherever possible.	<input type="checkbox"/>
1.7	Ensure boiler servicing is to the highest possible standard and consider a burner upgrade.	<input type="checkbox"/>
1.8	Look at improving generator maintenance and review the frequency of testing.	<input type="checkbox"/>
1.9	Apply air filtration to boiler and generator vents.	<input type="checkbox"/>
1.10	Install a green roof and wall.	<input type="checkbox"/>
1.11	Landlords give reasonable consideration to requests by the Tenant for the installation of plant and equipment based on renewable technologies (including roof mounted equipment).	<input type="checkbox"/>
1.12	Where appropriate participate in local and/or communal schemes for energy generation or provision.	<input type="checkbox"/>

### 2 Waste

2.1	Landlords 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.	<input type="checkbox"/>
2.2	Organise better collection regimes, coordinated with other campus occupants.	<input type="checkbox"/>
2.3	Demand reduced emissions from the contractor's collection vehicles.	<input type="checkbox"/>
2.4	Evaluate and implement appropriate recycling arrangements for printer cartridges, fluorescent bulbs, batteries and similar items.	<input type="checkbox"/>
2.5	The adoption of sustainable procurement codes with a regard to air quality (e.g. purchase of environmentally friendly office consumables and the adoption of "take back" and "re-use" schemes with suppliers for products and packaging).	<input type="checkbox"/>
2.6	On refurbishment and fit-out, require contractors to make adequate waste segregation and recycling provisions and to re-use redundant materials wherever practicable.	<input type="checkbox"/>
2.7	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.	<input type="checkbox"/>

---

### 3 Water

- |     |  |                          |
|-----|--|--------------------------|
| 3.1 | The installation of high efficiency plumbing fixtures and control technologies in the Building and the Premises.                   | <input type="checkbox"/> |
| 3.2 | Use filtered mains water rather than the bottled water delivered daily.  | <input type="checkbox"/> |
| 3.3 | A regular programme of leak inspections at the Building and the Premises.  | <input type="checkbox"/> |
| 3.4 | Where possible, the use of treated and recycled water, captured rain water and grey water, where potable water is not a necessity. | <input type="checkbox"/> |
| 3.5 | The use of relevant water saving control systems.  | <input type="checkbox"/> |

---

### 4 Transport

- |     |   |                          |
|-----|---|--------------------------|
| 4.1 | The provision of space for bicycle storage, shower and changing facilities for cyclists. Alternatively partner with a local gym to mutual benefit.                | <input type="checkbox"/> |
| 4.2 | Implement the Government supported Cycle to Work Scheme, which allows employers to loan cycles and cyclists' safety equipment to employees as a tax-free benefit. | <input type="checkbox"/> |
| 4.3 | Agree a 'Green Travel Plan' and engage with all staff explaining the benefits   | <input type="checkbox"/> |
| 4.4 | Launch a 'walk to the client' campaign  | <input type="checkbox"/> |
| 4.5 | Change contractor from a 'green' taxi company to one using hybrid vehicles or those meeting the Euro V standard for City use                                      | <input type="checkbox"/> |
| 4.6 | Enforce a 'no idling' policy across the taxi contract   | <input type="checkbox"/> |
| 4.7 | Choose low emission vehicles on replacement cycle or before if possible   | <input type="checkbox"/> |
| 4.8 | Employ vehicle pooling  | <input type="checkbox"/> |
| 4.9 | Invest in driver training   | <input type="checkbox"/> |

---

### 5 Alterations and 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. | <input type="checkbox"/> |
| 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).          | <input type="checkbox"/> |
| 5.3 | Avoiding alterations which have an adverse impact on the energy performance of the Building or the Premises.   | <input type="checkbox"/> |
| 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.                     | <input type="checkbox"/> |
| 5.5 | The Parties to give reasonable consideration to alterations that reduce the need for air conditioning and other energy consumption.  | <input type="checkbox"/> |
| 5.6 | Agreeing a target BREEAM rating prior to either party carrying out alterations for which a BREEAM rating would be available.   | <input type="checkbox"/> |
-

---

## 6 Cleaning

- |     |  |                          |
|-----|--|--------------------------|
| 6.1 | 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. | <input type="checkbox"/> |
| 6.2 | Specifying appropriate cleaning and maintenance procedures for specialist "green" plant, equipment, fixtures or fittings.  | <input type="checkbox"/> |
| 6.3 | Programming cleaning times to minimise the use of lighting, heating and air-conditioning resources.  | <input type="checkbox"/> |
| 6.4 | Providing awareness raising and training to cleaners.  | <input type="checkbox"/> |

---

## 7 Supply Chain

- |     |   |                          |
|-----|---|--------------------------|
| 7.1 | Incorporate air quality, alongside other environmental targets, into procurement policies           | <input type="checkbox"/> |
| 7.2 | Work with other tenants and save on central contracts for more efficient 'business basics' delivery | <input type="checkbox"/> |
| 7.3 | Demand reduced emissions from contractor vehicles   | <input type="checkbox"/> |
| 7.4 | Reduce the number of deliveries per week  | <input type="checkbox"/> |
| 7.5 | Move to pedal bike and zero emission couriers where possible  | <input type="checkbox"/> |

---

## 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.   | <input type="checkbox"/> |
| 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. | <input type="checkbox"/> |
| 8.3 | The provision of training and education and the communication of achievements to employees.  | <input type="checkbox"/> |

---

## 9 Tenant Handbook

- |     |  |                          |
|-----|--|--------------------------|
| 9.1 | On the Landlord's part, the provision to the Tenant of access to a portal or information pack which includes energy, air quality 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). | <input type="checkbox"/> |
|-----|--|--------------------------|



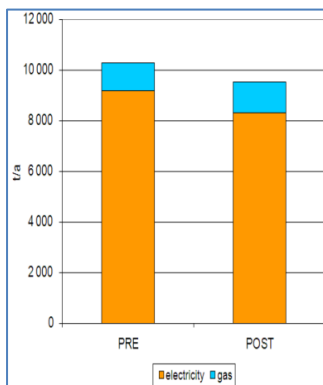
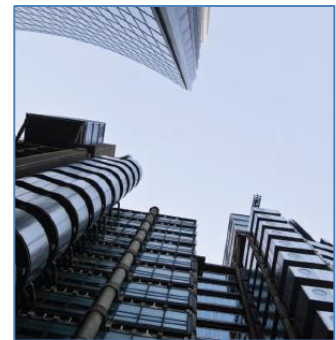
# APPENDIX VII – BUILDING ENERGY REVIEW

Undertaking an energy review is the starting point for any businesses wanting to reduce emissions. All too often organisations embark on sustainability programmes without fully understanding how their buildings operate and where savings can most effectively be made.

There are numerous benefits that can be realised. Assessing performance trends gives a real understanding of the rhythm of the building. By identifying where action is most appropriate and setting realistic targets, great savings can be made.

## Context

- Whatever your objectives in commissioning a building energy review – **think air quality**
- Basic components include:
  - Building energy usage
  - Building Management System review
  - Technology Review
  - Engineering Capacity
  - Financial and value implications
- It can be a daunting process, especially if the building has not been 'tuned' since commissioning
- Start simply and build up complexity as your understanding of the building grows



## Air Quality

- In a recent energy review conducted for a building in the City, the recommendations would have resulted in a reduction in electricity usage but an increase in gas consumption – therefore increasing local air pollution
- Reducing energy usage is only one part of the picture – **think air quality**
- Addressing supply chain, transportation and behavioural change are also covered elsewhere in the document but all elements are linked

## Outcomes

- A benchmark against which all future performance can be measured
- An action plan for the implementation of recommendations from the building energy review
- The possibility of integrating results and actions with an awareness campaign for staff

Area	Net Carbon Footprint (tCO <sub>2</sub> e)	Net Carbon Footprint (tCO <sub>2</sub> e)	Net Carbon Footprint (tCO <sub>2</sub> e)	Total Carbon Footprint (tCO <sub>2</sub> e)	Net Carbon Footprint (tCO <sub>2</sub> e)	Green Internal Carbon Footprint (tCO <sub>2</sub> e)
Air conditioned	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Occupancy	Number of people	Full time employees	Hours of occupancy	Number of occupied hours	Number of occupied hours	Number of occupied hours
Power rating (kW)	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Number of floors	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Number of floors	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Renovations	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Area	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Main electricity	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Oil	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Gas	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No



## APPENDIX VIII - MEASUREMENT & MONITORING

While dependence on energy is unavoidable, effective energy management can result in significant cost and emission reductions. Good metering practice is a powerful tool forming the basis of effective energy management with timely and detailed information leading to better decisions.

### Understanding Usage Levels

- With regards to local air quality, monitoring should focus on gas usage
- Large consumers of gas generally receive bills based on daily meter readings
- These bills include details of consumption and price according to time of use
- Accurate readings lead to accurate bills and, when analysed, can lead to a real impetus for change

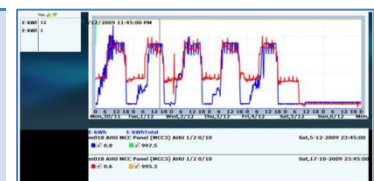


### Metering Techniques

- Meters vary greatly, but in essence they are all designed to measure volume flow or power
- The best system of monitoring and measurement are facilitated by half-hourly metering
- Some meters are not capable of recording pulses, which is an essential feature for collecting half-hourly gas data
- In this case the meter must be replaced
- Once the meter has been changed, the data can be collected and made available to the organisation or a company specialising in metering data analysis

### Metering Options

- Consider devices that supplement the data from the site's existing meter
- Extra data could highlight areas where savings can be made
- In particular consider:
  - Advanced Metering
  - Sub-metering especially on boilers
  - Meter scheduling
  - Data acquisition & communications





## APPENDIX IX - GREEN ROOFS

### Case Study - A Green Roof in the Shadow of St. Paul's

Eversheds is an international law firm with a clear vision of the future. It is a firm that is adapting to new demands and business pressures as well as embracing their sustainability commitments.

Originally installed as a simple sedum blanket/mat system, Eversheds wanted to maximise the green roof for biodiversity.

### The Benefits

- Green Roofs and Walls are widely recognised as a means of improving air quality
- They contribute to the reduction of airborne particles as well as enriching the air with oxygen
- Green roofs reduce the heat island effect
- They can also provide a valuable space for other biodiversity and employee wellbeing activities



### The Practicalities

- The initial system consisted of an inverted roof with insulation on top of the waterproofing element
- A sponge element acts as a drainage and protection layer was added
- A green roof substrate was then laid onto the drainage layer and a blanket, consisting of a range of sedum species was laid out
- This not only covered the main roof but was one of the first to be installed beneath window cleaning runners around the perimeter of the roof

### Best Practice

- A series of mounds with a maximum height of 150mm above the sedum blanket
- Creation of wood/log elements across the roof
- The use of dried wildflower hay bundles
- Seeding of new substrate areas sand mounds with a native seed mix
- Bird boxes, areas for food growing and bee hives alongside a flower rich habitat



Developed with the kind permission of Eversheds and the Green Roof Consultancy Ltd in association with the Grass Roof Company

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East London and the City



## APPENDIX X - WALKING

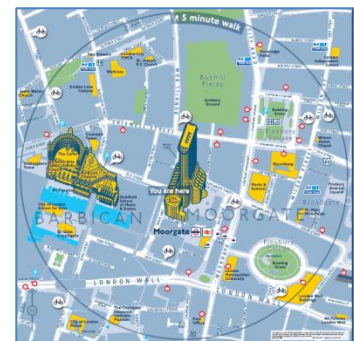
### Case Study – ‘Walk to the Client’ initiative

Simmons & Simmons is a City law firm with international reach and an acute understanding of their responsibilities. Behavioural change in even the most forward thinking organisations, however, can still prove difficult.

The ‘Walk to the Client’ Initiative was a bold step, especially within an organisation where client journeys are often accompanied by large volumes of paperwork.

### Setting the Scene

- It is not widely known that it takes less than ten minutes to walk from Moorgate to St Pauls
- Taking a taxi or public transport can take longer
- Using TfL Legible London mapping, pictured, the feasibility of walking is clear
- **Breaking down habitual behaviours takes time and needs supporting with compelling messages**

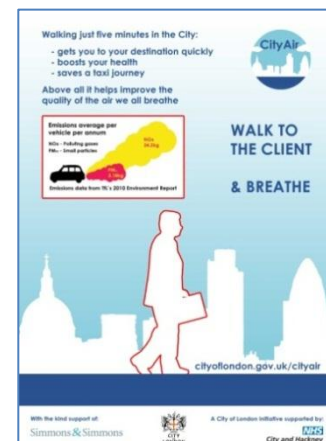


### Communications

- Introduced through the company intranet, the campaign was backed by:
  - High impact communal area graphics, as shown here
  - Travel bags provided for transportation of large volumes of paperwork
  - Displaying walking journey times
- **Walking is good for you and your employees**
- When put in the context of the equivalent emissions of a taxi ride, it is a straightforward and logical choice for many journeys, especially in the City

### The Benefits

- A staggering amount of time and money is spent on taxi and Private Vehicle Hire journeys
- Assist employees in making a choice and help improve local air quality
- **Simmons & Simmons hope to reduce short journeys by as much as 50% and remove approximately 60 unnecessary taxi miles from their carbon footprint throughout May 2011**





## APPENDIX XI - CYCLING

There is no doubt that cycling in the City is by far the quickest way to get about. Cycling improves your health, is an efficient and cost effective mode of travel but, there are a number of barriers that are now being systematically broken down.

The Government and Mayor of London has committed a great deal to cycling, working alongside delivery partners such as the City of London and Transport for London (TfL) to make cycling an attractive proposition for any potential user.

- Cycle to Work Scheme
- Barclays Cycle Hire scheme
- Cycle training
- Barclays Cycle Superhighways

More details can be found in the Mayor of London's Air Quality Strategy.

### Practicalities

- To promote healthier journeys to work and to reduce environmental pollution, the Government introduced an annual tax exemption, which allows employers to loan cycles and cyclists' safety equipment to employees as a tax-free benefit
- There really is no reason why companies should not sign up to this scheme however, should this be the case, employees can group together to set up their own scheme
- **Sign up to the Cycle to Work scheme**
- Further information on this and other great practical ideas are available on the TfL website



### Safety

- A major concern of the potential City cyclist is safety
- **Work with TfL and the City of London to provide safety training**
- **Communicate the benefits and run a cycling campaign including branded high-vis wrist snaps**

### Reality

- **Partner with local gyms to make up for the lack of showering and locker space for a fitter and more included workforce**
- **Keep up to date with latest developments at the City of London's Cycling Pages**



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## APPENDIX XII – PROCUREMENT



Procurement decisions have a direct impact on air quality. Consolidation of deliveries, collaboration with fellow businesses and working with suppliers to drive down emissions is a partnership commitment that should support strategic objectives.

By creating and managing best in class, diverse and innovative supply chains an organisation can realise significant cost, efficiency and reputation benefits.

### Procurement Policy

- Support growth with innovative and flexible supply chain solutions
- Ensure that all suppliers add value through streamlined operational processes, innovative solutions and an appreciation of air quality impact
- Be proud of the development of procurement policies to embrace air quality
- Contract and relationship management should be maintained and best practice shared with clients and customers



### Collaborate

- Develop cross-functional project teams internally and with other businesses to work together to minimise the number of daily deliveries made
- Centralising deliveries builds trust in the overall objective of improving air quality
- For all deliveries and contracts that include the use of vehicles, insist that those vehicles are, at a minimum, Euro V compliant
- Include taxis and Private Hire Vehicles (PHVs) in the application of modified policy to supply chain decisions

### Innovate

- Work with fellow businesses to implement zero emission 'last mile' distribution (see the Zero Emission 'Last Mile' Delivery case study)
- Consolidate waste collection at a building level, even for confidential waste
- Only by working with suppliers can innovative solutions be found to mitigate the impact of activities on air quality
- Every supply chain decision is different but in every situation - **think air quality**



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## APPENDIX XIII – WASTE & RECYCLING



### Case Study – ‘Binning the Bin’

Simmons & Simmons is a City law firm with international reach and an acute understanding of their responsibilities. Behavioural change in even the most forward thinking organisations, however, can still prove difficult.

“Simmons & Simmons has always taken a proactive position on recycling, with varying levels of success. We arranged for plastic cup, aluminium can, glass, paper and compost recycling bins for our people to use, but we encountered some issues with the streams becoming contaminated with the wrong type of waste,” said James Clark, office services manager.

### Challenges

“Under-desk bins are a pain. We have 900 people in our London office, each with their own bin, usually only a quarter full of mixed waste. It’s frustrating, as most of the waste is recyclable, but as it’s mixed with non-recyclables, it goes into the stream for incineration as well as thousands of unnecessary bin-liners. Someone had to grasp the nettle and sacrifice the convenience of under-desk bins for the benefit of our environment.”



### The Solution

Help arrived from the CityPoint landlord's managing agent, who changed to a waste contract with a materials reclamation facility (MRF) in 2009. No longer did general office waste have to be separated into a variety of streams; it could be divided into two simple “recyclable” and “non-recyclable” groups; the MRF did the sorting for them. Backed by a positive campaign, more than 140 under-desk bins were collected over a weekend and replaced with three bins for recyclables and three bins for non-recyclables strategically and sympathetically placed in the pilot area.

### Outcomes

“The results were great, with a 4,000% increase in recycling and a 60% reduction in waste for incineration. There has been some negative feedback, but if employees claim they don’t have the time to take their waste to a bin, then they don’t have time to use the toilet or the vending machine either!”





## APPENDIX XIV – ZERO EMISSION ‘LAST MILE’

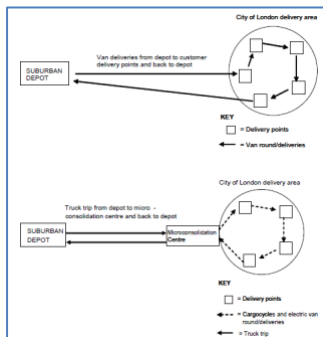
### Case Study – ‘The Cargocycle & Electric Van’

Light Goods Vehicles (LGVs) are responsible for 18 % of PM<sub>10</sub> emissions in the City. Research into the application of Euro standards has highlighted that the higher standards do not deliver the expected improvements in emissions of NO<sub>x</sub>, especially for diesel cars and LGVs.

The solution is simple – to improve air quality and our health, in the congested City, we need zero emission ‘last mile’ delivery of as many goods and services as possible. This case study shows what can be done, even on a small scale.

### Challenges & Opportunities

- Gnewt Cargo evaluated the existing Office Depot deliveries to the City of London using diesel vans against a system of Cargocycles and electric vans for the final stage of delivery
- A trial was conducted focussing on total distance driven, road space occupancy and emissions
- This trial is now ongoing best practice



### The Solution

- In the new system a diesel truck is used to transport goods from the suburban depot to the City of London microconsolidation centre for onward delivery by Cargocycles and electric vans
- The logistical implementation is not complex, based merely on an understanding of a new delivery methodology

### Impact & Business Reality

- Zero local air pollutant emissions were generated
- The amount of space taken up by delivery vehicles dropped by 50%
- A tightening of the Low Emission Zone (LEZ) will push up the price of the ‘standard’ delivery model
- Gnewt Cargo won the 2010/2011 Sustainable City Award for Transport and were runners up in the Air Quality category
- Work with fellow tenants and across your sector to make a real difference – **think air quality**

