PLANNING AND POLLUTION CONTROL

DEVELOPING WESTMINSTER'S LOCAL PLAN

Booklet No. 11
Westminster City Plan Revision
July 2014

FOREWORD
CLLR ROBERT DAVIS

Part of what makes Westminster unique is its sheer intensity. Its 22 square kilometres are densely developed. They are home to over 220,000 people and during the day its population grows to over a million. It's a 24 hour city too, with more people out in the early hours of the morning than during the day in some places. When you add in the level of construction activity in the City the importance of controlling problems of noise, air and light pollution which can undermine the health and wellbeing of residents, workers and visitors to the City is clear.

As the City grows, it is important to control these undesirable side-effects of success – if we do not the problems described so starkly in this booklet will only intensify, causing increasing problems for the health, well-being and economic success of all Westminster's people.

As part of our emerging local plan, which will cover the next 15-20 years, the Council is developing new policies to manage and mitigate air, noise and light pollution, as well as construction impacts, construction waste and contaminated land. These policies should secure a better and more liveable environment across the City.

This consultation paper sets out the background to the new policies and recommendations for our policy approach. We are now inviting your comments on our approach and look forward to working with you to ensure that these new planning policies provide an effective means of managing pollution in the City of Westminster.

Councillor Robert Davis DL
Deputy Leader
Cabinet Member for Built Environment
Westminster City Council

Introduction

This booklet sets out the Council's proposed planning policies dealing with pollution control which will be included in the Westminster City Plan. Where it refers to "the City Plan", it means the completed local plan, which will integrate the Strategic and detailed City Management policies adopted as part of the current review.

Specific policies covered include:

Policy S31: Air Quality

Policy S32: Noise

New Policy SXX: Lighting and Light Pollution

New Policy SXX: Construction Impact Management

New Policy SXX: Contaminated Land

Other policies relevant to pollution control can be found in booklets dealing with Basements; and Housing: Need, Delivery and Quality (both already published) and with Health, Safety and Well-being; Transport; Design; Energy ; and Open Space (published alongside this booklet).

We would welcome your views on proposed new policy wording, which is shown as <u>underlined</u> or identified as entirely new policy. Adopted policy is shown in **bold** and is not intended to be altered as a result of this consultation.

Cover page picture credits: Cyclist with mask, www.eaem.co.uk. Grey skies above London, http://2012olympicsblog.co.uk. Construction image, GLA/ TfL Visual Image Services.

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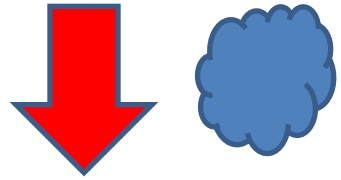
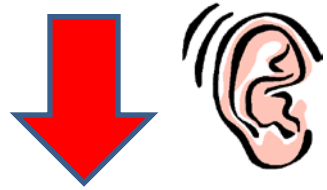
INTRODUCTION

KEY POLLUTION TRENDS

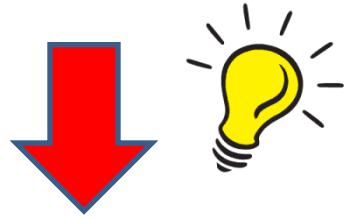
Westminster's dense, mixed use character gives rise to a number of challenges to health, safety and well-being. These include significant local air and noise pollution as well as light and water pollution. The cumulative impacts of already and, increasingly, dense patterns of development, significant construction activity, expanded transport infrastructure (e.g. Crossrail) and increasing flows of people through the City (including at night time) will mean all of these problems are experienced with particular intensity here.



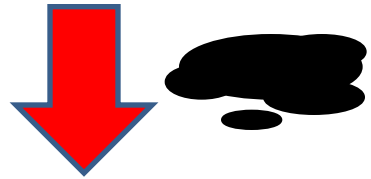
Air quality: Air pollution damages human health causing increased risks of cardiovascular and respiratory diseases and of cancer, exacerbating asthma and shortening life.
Air quality is monitored at several sites across Westminster. While clear trends in pollution levels are difficult to identify, particulate and nitrogen dioxide (NO2) levels regularly exceed targets. Failure to meet air quality targets could lead to the government facing fines of over £300 million from the EU. Through powers in the Localism Act 2011 these could be passed down to the Mayor of London and local authorities; thus Westminster City Council could be required to pay if targets are not met.



Noise pollution: Noise pollution has negative health impacts. In 2012, the City Council had one of the highest percentages of population affected by noise. Noise pollution interferes with sleeping, resting and concentrating. Noise can lead to more serious mental health issues such as tension and irritability. Westminster is significantly noisier than many other parts of London. Like most urban areas, noise levels in the city exceed the guideline levels set by the World Health Organisation. On the other hand it does have a number of open spaces which provide the opportunity for relative tranquility and quieter, predominantly residential neighbourhoods. New technologies including electric vehicles) may also help.



Light pollution: The 24 hour nature of some parts of the City can create problems of light pollution (e.g. light infiltrating bedrooms causing sleep deprivation).



Water pollution: Rainfall runoff from buildings and streets enters the City's combined sewer system. During periods of heavy rain the pipes fill up and overflow outlets release raw sewage into the River Thames, affecting water quality and biodiversity. As the climate continues to change as a result of greenhouse gas emissions more heavy rainstorms are projected, leading to an increased likelihood of raw sewage entering the Thames. However the proposed Thames Tideway Tunnel, a major new sewer under the river, aims to address the overflows and protect the Thames from increasing pollution. The greater use of sustainable drainage measures through the City (see Flood Risk booklet) will also help to reduce water pollution by filtering out contaminants.

Urban overheating:

Future buildings must be designed to promote lower energy consumption to cool occupants, through the use of natural ventilation and 'adaptive comfort' measures, such as enabling the occupants to open or close windows and shutters. While internal temperatures will never be as low as actively air conditioned buildings, designing a naturally managed building which allow occupants to control the internal environment adjusting to external conditions has been found to increase occupant satisfaction. It is how the difference between internal and external conditions is felt that is more important than the actual temperatures achieved. In fact, air conditioned buildings have been associated with decreased occupant wellbeing (Steemers & Manchanda, 2010).

Research has shown that even in mild summers recommended summer comfort temperatures and overheating thresholds (26 C in bedrooms; 28 C in living rooms, offices and schools (CIBSE 2005; 2006)) are already being exceeded by more than 1% of occupied houses studied in London (Beizaee et al, 2013). New buildings need to be future-proofed, ensuring that internal temperatures can be maintained at a healthy, comfortable level for occupants, today and in the future. Design measures to achieve this include avoiding full height glazing or south-facing single aspect flats.

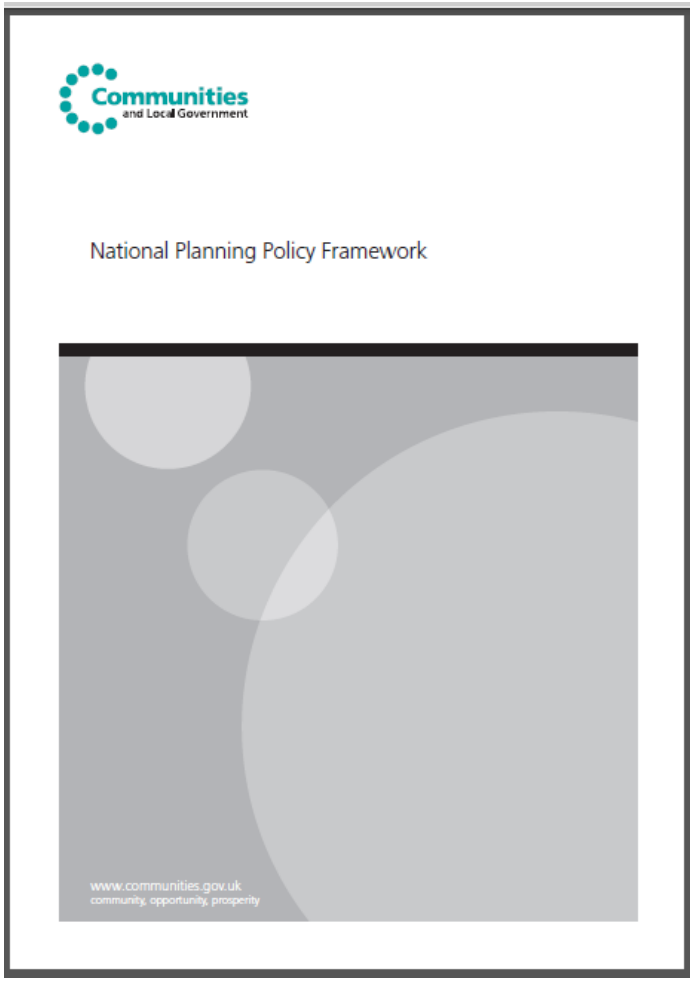
Overheating is not just caused by well insulated buildings, but through a combination of internal heat gains, lack of solar shading, and badly designed or absent ventilation. Incorporating solar shading, combined with good ventilation are crucial adaptation strategies in both new build and refurbishments. While the addition of external shading can cause significant design challenges, other design responses such as the use of low energy practices, such as the specification of energy efficient appliances and improvement of lighting, can also help reduce unwanted internal heat gains. In Mediterranean traditions, taller floor to ceiling heights (greater than 2.7 metres) are useful for allowing the natural stratification. The presence of thermal mass in buildings can also provide summer cooling of 3–5 C, generating significant decreases in summer cooling energy demand (Hacker et al, 2008). This is only possible if secure night cooling is implemented to release built-up heat from the daytime, as failure to do so may cause overheating. When refurbishing, covering up solid walls with insulation can decrease the available thermal mass of existing buildings meaning internal wall insulation upgrades need to be considered carefully to ensure thermal comfort in a warming climate.

If buildings are not able to be easily adapted to extreme temperatures, occupants may resort to ad hoc installation of air conditioning units, generating significant increases in a building's typical energy use (Hacker et al, 2005). Air conditioning units also operate by 'dumping' excess heat outside the building, which only serves to further increase external temperatures and exacerbate the Urban Heat Island effect (Tremeac et al, 2012; Vardoulakis & Heaviside, 2012), these units should therefore be avoided.

INTRODUCTION

THE ROLE OF PLANNING IN POLLUTION CONTROL

The National Planning Policy Framework (NPPF) states that the planning system "*...should contribute to and enhance the natural and local environment by... preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution...*" *(Paragraph 110).*



Within this policy context Westminster City Council has been reviewing the need for specific planning policies covering pollution issues that are significant in Westminster: air, noise and light pollution, construction impacts, construction waste management and contaminated land.

The draft policies presented in this booklet have been developed having regard to the existence of relevant non-planning legislation which is specifically designed to control pollution and its impacts. For example, the council's Environmental Health team enforces noise, vibration and dust issues that are addressed under the Environmental Protection Act 1990 and Control of Pollution Act 1974.

The Council does not wish to duplicate pollution controls provided by other legislation. However it does want to ensure that the right development happens in the right place (the location of development may give rise to pollution) and that the negative impacts of the construction and use of new development are avoided or mitigated via appropriate on site measures.

In addition to the policies focused on in this booklet a range of other planning policies will also help to reduce pollution. For example policies encouraging the uptake of electric vehicles and low energy building design should help to reduce air pollution. Implementation of policies seeking urban greening measures such as new trees will help to mitigate noise and air pollution.

INSIGHT - AIR QUALITY

Westminster has some of the poorest air quality in the country. It regularly exceeds national air quality objectives due to the high numbers of vehicles, emissions from boilers, and the density of roads and buildings which prevents dispersal of the pollutants.

Air pollution damages human health causing increased risks of cardiovascular and respiratory diseases and of cancer, and exacerbating asthma.

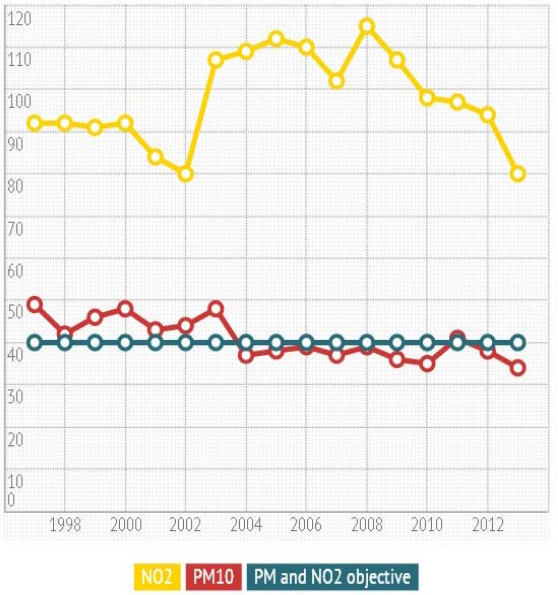
A recent study into the mortality impacts of fine particulate pollution suggests that in 2008, when the air quality was relatively good, the number of premature deaths due to air pollution was likely to have been 4,267, and could have been as high as 8,000.

4267

Number of premature deaths in London attributable to long-term exposure to very fine particulate matter ($PM_{2.5}$) in 2008

11.5

Average loss of life (in years) of those people dying premature deaths in London attributable to long-term exposure to very fine particulate matter



Trends in pollution
Data from monitoring on the Marylebone Road shows levels of particulate matter pollution have fallen slightly, to just below the objective level. For nitrogen dioxide, the picture is worse, with levels remaining very high.

Annual average nitrogen dioxide predicted concentrations for 2015
The highest levels, shown in red, are along the busiest roads and at major junctions. nitrogen dioxide concentrations are predicted to exceed the air quality objective of 40µg/m^3 over large areas of the City in 2015.

"It is my vision for London to be a city that prospers whilst zealously protecting the health and well being of its citizens. Having fresh, clean air to breathe is a fundamental part of this goal."
Boris Johnson (2010) Clearing the air: The Mayor's Draft Air Quality Strategy.

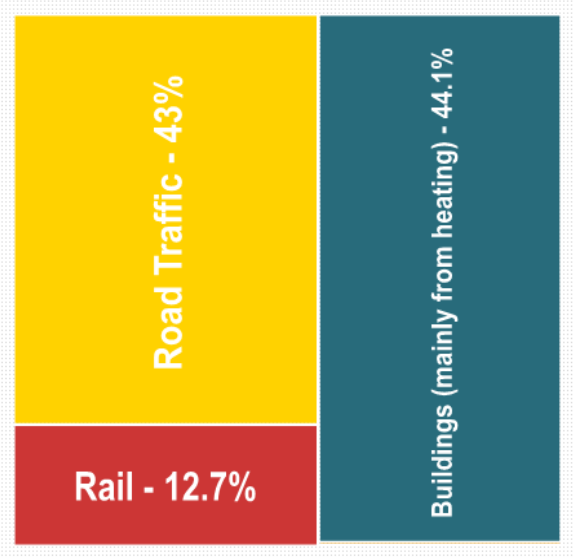
INSIGHT - AIR QUALITY

Key types of air pollution in Westminster include fine particulate matter (PM10) and nitrogen oxide (NO_X).

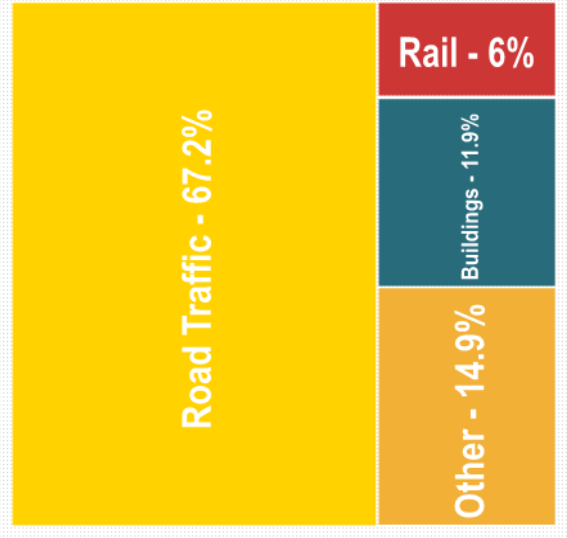
For NO_X, traffic and the built environment (principally from heating buildings) are both significant sources. By 2015 it is predicted that commercial and domestic gas combustion for heating will account for 44% of the NO_X emissions in Westminster.

Road traffic remains the main source of PM10 emissions; however, the council has only limited control over many of the main routes as these strategic roads form part of the Transport for London Road Network which is managed by Transport for London.

NOx Emissions



PM Emissions



Air pollution directly affects ecosystems and the local environment. There are also strong links between local air pollution, maintaining a healthy and comfortable internal environment, and energy use.

"Water and air, the two essential fluids on which all life depends, have become global garbage cans."

Jacques-Yves Cousteau.

RECOMMENDATIONS
AIR QUALITY

Adopted Policy CS31

POLICY S31 AIR QUALITY

The council will require a reduction of air pollution, with the aim of meeting the objectives for pollutants set out in the national strategy[1].

Developments will minimise emissions of air pollution from both static and traffic-generated sources.

The council requires developers to undertake an Air Quality Assessment (AQA) where a development may have negative air quality impacts (examples of cases where an AQA is likely to be required are set out in the box to the right). Where the AQA shows that a new development is likely to have an adverse impact on air quality or sensitive receptors the developer will submit an air pollution abatement and mitigation plan.

Planning permission will be refused unless adequate mitigation measures are adopted to reduce the air quality impact or exposure to acceptable levels[2].

Examples of where an AQA will be required include:

- Proposals that bring sensitive receptors into an area of poor air quality. (Air Quality Sensitive Receptors include schools, day care centres and nurseries, hospitals, care homes for the elderly and other similar institutions.);
- Non-residential development where the proposed floorspace area is 1000 sqm or more, or the net site area is 1 hectare or more;
- Residential proposals where the proposed number of new units resulting from the development (by redevelopment, change of use, extension or conversion) is 10 or more or the site area is 0.5 hectares or more;
- Proposals that will result in a significant increase in vehicle trip generation in the local area, and/or result in increases of traffic volumes;
- Proposals which may result in increased congestion and lower vehicle speeds than is present on the existing road network;
- Proposals which significantly alter the composition of traffic such that adverse air quality impacts may arise, such as an increase in heavy goods vehicles;
- Proposals that introduce or increase car parking facilities by 300 spaces or more;
- Proposals involving biofuel, biomass and/or CHP;
- Development (including plant and equipment, generators, chilling/cooling systems and boiler plant) that has the potential to result in significant emissions of pollutants, such as industrial activities, and including demolition, excavation and/or construction works.

Biofuels

With current abatement technology it may be difficult to achieve acceptable emission levels from biofuel/mass combustion; development using these technologies will be resisted unless adequate abatement measures are adopted to ensure no detrimental impact on air quality.

Footnote 1. The air quality strategy for England, Scotland, Wales and Northern Ireland. 2011.

Air Quality Assessments – Policy Application

Where an Air Quality Assessment (AQA) is required this should be submitted to the council showing the standards that will be achieved. The AQA should:

- Assess the existing air quality in the study area (existing baseline);
- Predict the future air quality without the development in place (future baseline);
- Predict the future emissions and air quality with the development in place;
- Describe the demolition and/or construction impacts;
- Identify mitigation measures; and
- Assess the significance of the development impact on air quality.

RECOMMENDATIONS

AIR QUALITY

'Air quality sensitive receptors' include schools, day care centres and nurseries, hospitals, care homes for older people and similar institutions where occupiers are particularly vulnerable to air pollution

Adopted Policy CS30

Design
Requiring consideration of air pollution in the building design stage and use of appropriate technology is the most effective way of achieving a reduction in non-road transport emissions. This complements policies to reduce emissions from road transport.

POLICY S31 AIR QUALITY (CONTINUED)

All new developments will achieve a standard equivalent to the lowest NO_X emission criteria (as defined in the Code for Sustainable Homes Technical Guidance or appropriate BRE Environmental Assessment Methodology (BREEAM) document). In the case of residential developments, this is currently equivalent to ≤40 mg/kWh dry NO_X. (Where developments connect to district heating (or cooling) systems and/or use space heating or cooling systems powered by off-site generated electricity, these parts of the development's heating provision are exempt from the requirements of this policy due to the delocalised nature of the emissions source.)

Planning permission will be refused unless adequate mitigation measures are adopted to reduce the air quality impact or exposure to acceptable levels.

Developments that include uses and/or receptors that are more vulnerable to air pollution (Air Quality Sensitive Receptors) will minimise the impact of poor air quality on occupants through the design of the building and appropriate technology.

The council requires developers to undertake an Air Quality Assessment (AQA) where the development may expose new Air Quality Sensitive Receptors, such as children or older people, to poor air quality. Where the AQA shows that a new development is likely to expose new Air Quality Sensitive Receptors to poor air quality, the developer will submit a mitigation plan.

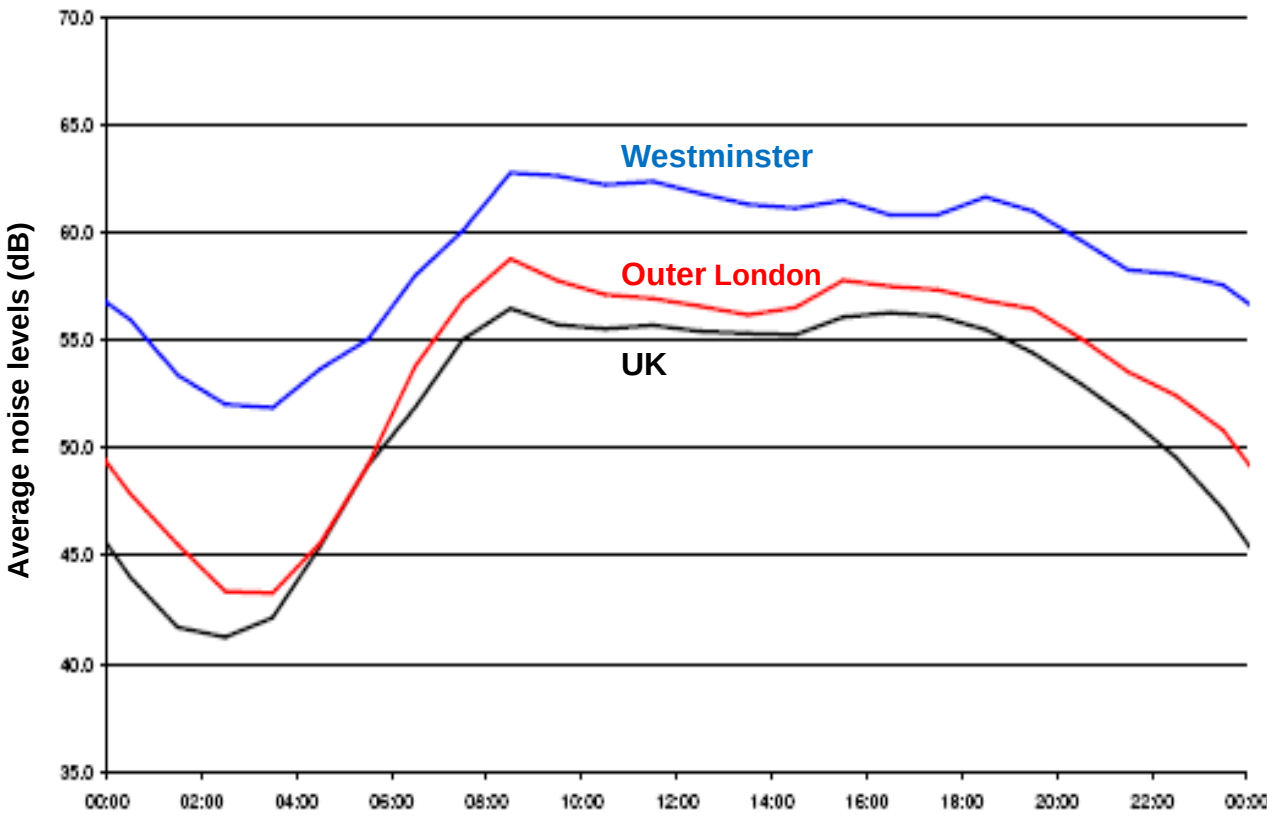
Planning permission will be refused unless adequate mitigation measures are adopted to reduce the air quality exposure to acceptable levels.

NO_X emissions
In Westminster the major source of NO_X emissions is from domestic and commercial combustion. The standards required to achieve the criteria set out in the Code for Sustainable Homes and the Building Research Establishment's environmental assessment methods (BREEAM) represent good or best practice, are technically feasible, and can be (and commonly are) delivered by the building industry. An Air Quality Statement should be submitted to the council, demonstrating that the above standards have been achieved. The Air Quality Statement should include:

- Details of the heating system (primary, secondary and flue type)
- Dry NO_X levels and/or boiler class of the heating system(s).
- Calculation methodologies can be found within the Code for Sustainable Homes or BREEAM Assessor Manuals.

INSIGHT – HOW NOISY IS WESTMINSTER?

Average noise levels over a 24 hour period in Westminster[1]



"In 2011 the council received 17,311 noise service requests"

A decibel (dB) measures power or intensity. It is commonly used to say how loud a sound is relative to the threshold of hearing.

[1] The Westminster figures refer to the front of homes and are taken from The Westminster Noise Measurement Survey, 2008.

Noise levels in Westminster are exceptionally high and remain relatively high over a 24 hour period. Common noises heard in Westminster include:

140dB	•Jet Plane •Artillery fire
130dB	•Pneumatic Drill at operators ear
120dB	•Thunder •Police siren
110dB	•Nightclub dance floor
100dB	•Front row at a concert
90dB	•Underground Train
80dB	•Heavy traffic
70dB	•Background traffic noise – Trafalgar Square
60dB	•Big Ben from Parliament Square
50dB	•Outdoor space (centre of Hyde Park)
40dB	•Average living room
30dB	•Art gallery
20dB	•Recording Studio
10dB	•Leaves rustling in the breeze
0dB	•Threshold of hearing

INSIGHT - MAIN NOISE PROBLEMS

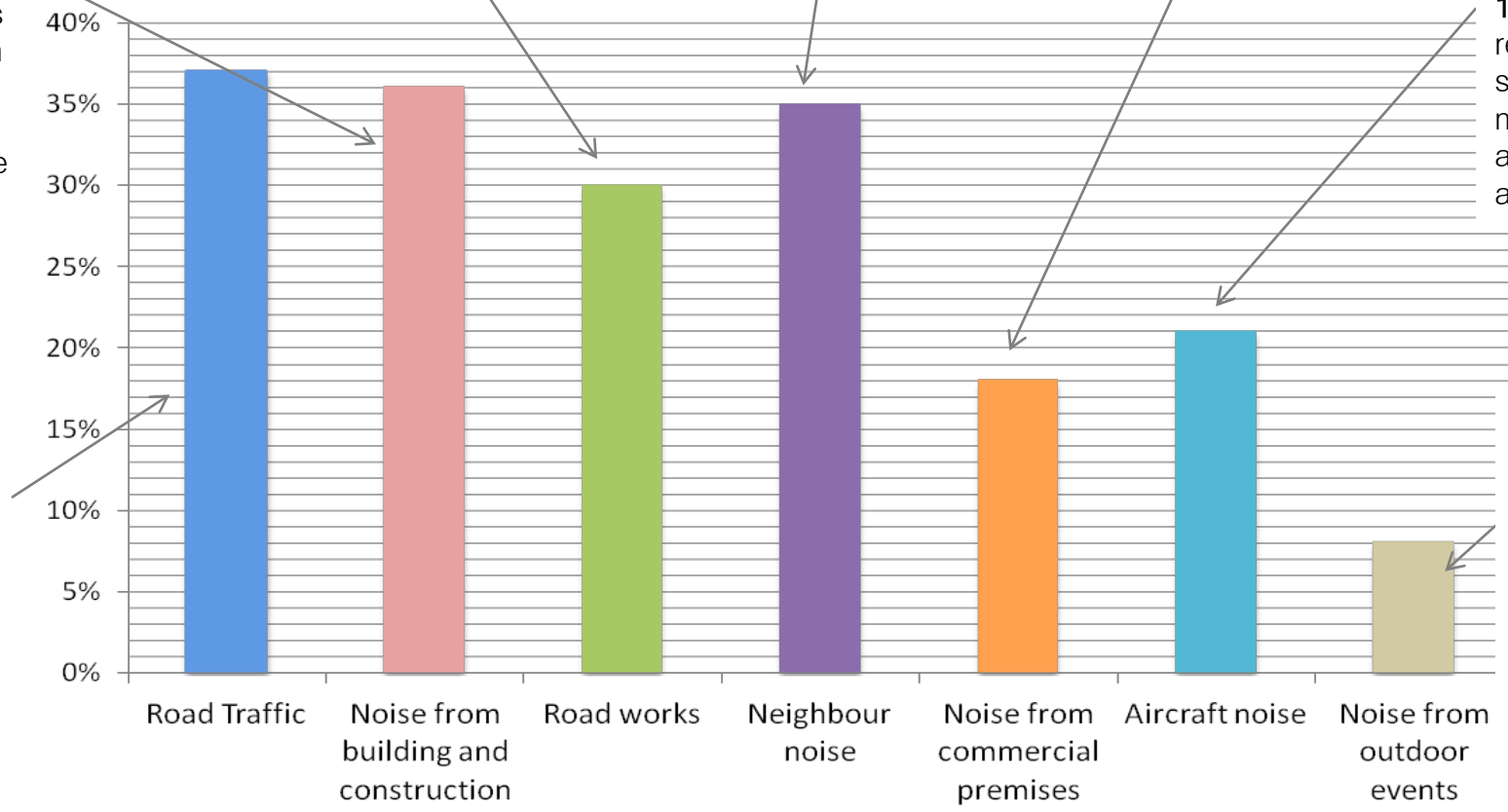
36% of residents have been bothered by noise from building and construction. This is much higher than in other parts of the country; 19% considered this type of noise to be the *most* annoying type of noise (compared to 3% nationally).

Noise from road works was mentioned by **30%** of residents.

Noise from neighbours accounts for almost half of all 'service requests' to the Council's 24 Hour Noise Team.

Second highest number of service requests (**18%**) and significant number of complaints about air conditioning units and noise from pubs, clubs and bars

21% of residents said they had been bothered by aircraft noise. **8-10%** of residents in the south of the city may be highly annoyed by aircraft noise



Road traffic noise is the primary source of noise generated in the City and **37%** of residents identified road traffic noise as bothering them.

Noise from outdoor events (other than in parks) mentioned by **8%** of residents overall but **24%** of residents in St James's ward said they have been affected.

Source: The Westminster Noise Attitudes Survey, 2008

INSIGHTS – NOISE IMPACTS ON PEOPLE

"It is not necessarily the loudest sounds that cause most annoyance. Some sounds, because of their tonal quality, or because they are unpredictable can be disturbing. Noise is therefore as much about perception as measurement. "

Westminster Noise Strategy (2011)

Noise can disturb sleep

Noise can interfere with resting

Noise can lead to cardiovascular disease [1]

Noise at very high levels can affect hearing long term

Noise can lead to minor psychological problems such as tension, irritability and difficulty concentrating [2]

When children learn in noisier classrooms, they have a more difficult time understanding speech than those who learn in quieter settings

Exposure to noisy environments at school can adversely impact on children's learning, affecting performance in reading, attentiveness, concentration, problem solving and memory.

Noise will /can affect wildlife in the city

Changes in the immune system and birth defects have been attributed to noise exposure[3]

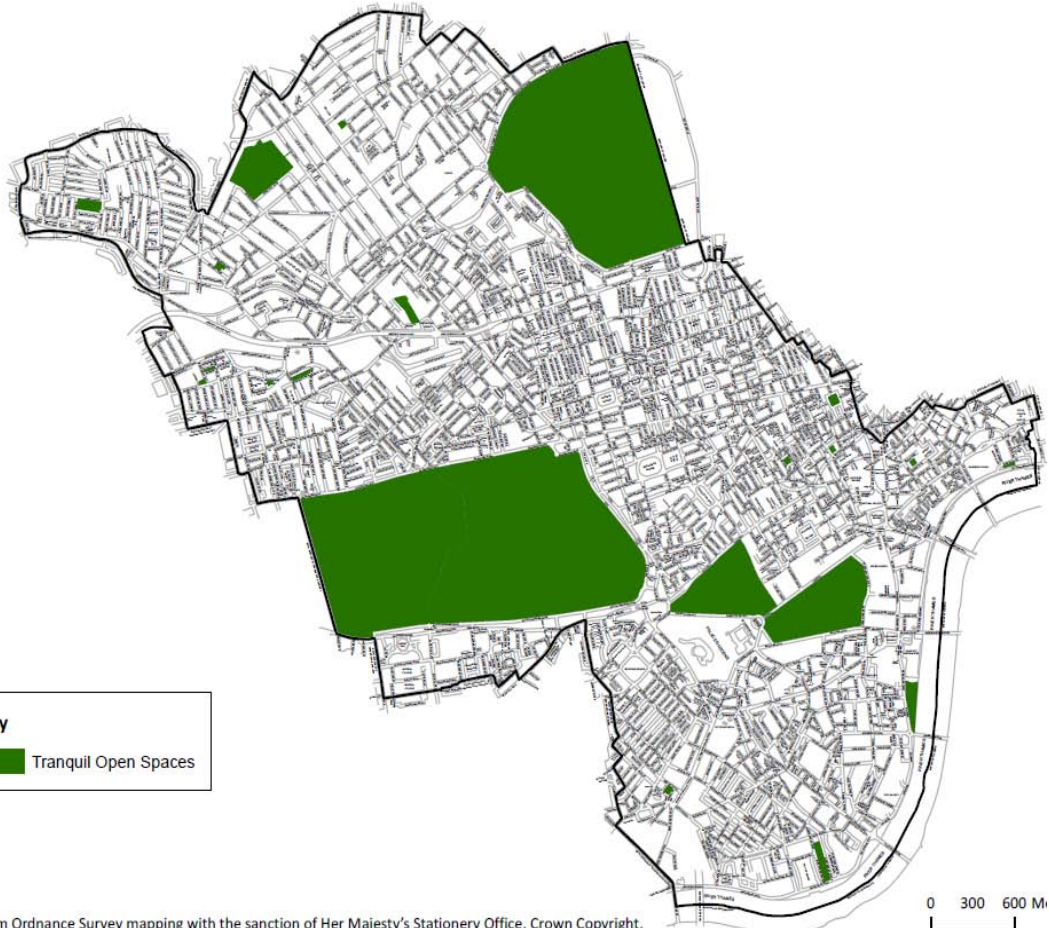
[1] Berglund B, Lindvall T, Schwela DH, Guidelines for Community Noise, World Health Organisation, 1999.
Berry B, Effect of noise on physical health risk in London, 2008. http://www.london.gov.uk/mayor/strategies/noise/index.jsp
[2] London Health Commission, Noise and Health: Making the link, 2003
[3] Passchier-Vermeer W, Peskier WF (2000). "Noise exposure and public health". *Environ. Health Perspect*. 108 Suppl 1: 123–31.
[4] Nelson, Peggy B. (1959). "Sound in the Classroom". *ASHRAE journal* 45 (2): 22–25.

INSIGHT – TRANQUIL OPEN SPACES

Tranquil open paces are relatively peaceful and quiet open spaces where residents, workers and visitors can find respite from the noisy urban environment.

The Westminster Noise Strategy identifies the need to protect and enhance tranquil open spaces and the 2008 Open Spaces Noise Study developed a questionnaire approach for the purpose of assessing the many elements of relative tranquillity in open spaces, such as presence of nature and sense of personal safety, together with an acoustic measurement methodology. The following open spaces have since been defined by the council as Tranquil Open Spaces; however, nowhere in a dense urban environment like Westminster can be tranquil in absolute terms; these Tranquil Open Spaces can only be relatively quiet:

1. Hyde Park
2. Kensington Gardens
3. Regent's Park
4. Green Park
5. St James's Park
6. Victoria Tower Gardens North
7. Paddington Recreation Ground
8. Inigo Jones Gardens
9. Westbourne Estate Canalside Gardens
10. Ebury Square
11. St Mary's Paddington Churchyard
12. Golden Square
13. Soho Square
14. Queen's Park Gardens
15. Edbrooke Road Gardens
16. Shrewsbury Road Gardens
17. St Mary's Paddington Churchyard (north)
18. Porchester Square Gardens
19. St Stephen's Gardens
20. Temple Gardens (Victoria Embankment Gardens)
21. St George's Square
22. St Anne's Churchyard Soho
23. Violet Hill Gardens.



KEY QUESTIONS

1. *Are these the right Tranquil Open Spaces? Is their relative tranquillity a recognised characteristics or value?*
2. *Are there other relatively Tranquil Open Spaces that should be included?*

RECOMMENDATIONS
NOISE

This is the existing adopted policy S32. It will contribute to the broader aim of reducing the impact of noise on health and well-being. This also links to fundamental objectives to provide comfortable and healthy environments designed to minimise adverse environmental Noise pollution.

Policy S32B & Policy S32C: Preventing noise from plant and machinery and internal activities and preventing noise transfer through internal building fabric to inside residential – see next page

POLICY S32 NOISE

The council will work to reduce noise pollution and its impacts and protect Noise Sensitive Receptors from noise by:

- **Requiring development to minimise and contain noise and vibration;**
- **Ensuring development provides an acceptable noise and vibration climate for occupants and is designed to minimise exposure to vibration and external noise sources; and**
- **Securing improvements to Westminster's sound environment, including protecting open spaces of particular value for their relative tranquillity.**

Developments will be required to undertake an acoustic report to demonstrate compliance with the standards set out in policies S32A. S32B, S32C and/or S32D. Where an acoustic report has identified potential noise impacts, appropriate conditions will be applied when granting planning approval to: restrict noise emissions, noise transfer, vibration and hours of operation; and to require acoustic measures to meet these conditions, to be complied with before the development is used.

Noise Sensitive Receptors include not only housing but also uses like educational establishments, hospitals, hotels, hostels, concert halls, theatres, law courts, broadcasting and recording studios.

Policy S32A: Preventing noise intrusion from external sources – see next page

Policy S32D: Protecting Tranquil Open Spaces (for details see Health and Wellbeing policy booklet)

Where the applicant can demonstrate that there will not be an impact without a full acoustic assessment, then a simple desktop assessment may be acceptable. Generally a full survey report will be required where development will generate new noise or contain residential where external noise is high. Where a full report would not be necessary is where the plant produces very low noise level and/ or the sensitive premises at such a distance that the impact will be negligible. Applicants would normally be required to submit an acoustic report unless they could demonstrate compliance otherwise.

Examples of good practice for noise include external and internal walls'sound insulation, high performance acoustic double or triple glazing, locating bedrooms and main living rooms away from the sides of the development most affected by noise, urban greening measures such as planting new trees.

RECOMMENDATIONS
NOISE

This policy protects a residential development from existing ambient noise in the vicinity of a development. The indoor elements of the World Health Organisation (WHO)'s Guidelines are applied within this policy to meet this objective, but it is accepted that in Westminster it will not be possible to achieve noise levels in gardens and outdoor areas of a residential development to meet WHO outdoor standards.

This may be achieved by design measures such as locating bedrooms and main living rooms away from the sides of the development most affected by noise and the use of other measures.

NEW POLICY CM32.1: PREVENTING NOISE INTRUSION FROM EXTERNAL SOURCES

Residential or other noise sensitive development will be designed so that WHO Internal Guideline levels are met as set out below.

For new residential development:
1. indoors 35 dB LAeq 16hrs daytime (07.00 to 23.00hrs);
2. inside bedrooms 30 dB LAeq 8hrs night-time (23.00 to 07.00hrs); and
3. inside bedrooms 45 dB LAmax to be exceeded no more than 15 times per night-time from sources other than emergency sirens.

For buildings to be converted for residential use and where it is demonstrated that the standards for new residential development cannot be met:
1. indoors 40 dB LAeq 16hrs daytime (07.00 to 23.00hrs);
2. inside bedrooms 35 dB LAeq 8hrs night-time (23.00 to 07.00hrs); and
3. inside bedrooms no more than 50 dB LAmax to exceeded no more than 15 times per night-time (23.00 to 07.00hrs) from sources other than emergency sirens.

Compliance with these levels must be demonstrated in an acoustic report.

Sound Insulation needs to be of a standard that will offer sufficient protection to the residential occupier so that the internal WHO daytime and night time limits are not increased and are effectively inaudible. (Other sensitive premises may have alternate internal limits as indicated in BS8233 – Sound insulation and noise reduction for buildings code of practice) .

Where an acoustic report has identified potential noise impacts, conditions will be applied when granting planning approval to restrict noise emissions, noise transfer, vibration and hours of operation, and to require acoustic measures to meet these conditions, to be complied with before the development is used.

These standards relate to residential rooms with their windows open. In some circumstances in Westminster it is not possible for these standards to be met with windows open, so, where this is not possible, there are no practicable design solutions to achieve these standards, and the standards can demonstrably be met when windows are closed, a development will be considered for possible approval. This will still be subject to the proposed development complying with development management policies to prevent overheating (policy CM29.1) and noise policies related to plant and equipment (policy S32B) where mechanical ventilation may be required / proposed as part of the solution.

NEW Policy CM32.2: Noise from Plant and Machinery and Internal Activities

Where development will include plant or machinery, or will contain activities that cause noise from amplified music or human voices or unamplified music, it will be designed and operated to achieve the following standards in relation to the existing external background noise level at the nearest noise sensitive receptors, assessed at the quietest time during which the plant operates or when there is internal activity at the development:

(A) where the existing external ambient noise level will exceed WHO Guideline levels - LAeq 55 dB over periods of daytime (07.00-23.00hrs) and LAeq 45 dB at night-time (23.00-07.00hrs), either:

1. where noise emitted from the proposed development will not contain tones or be intermittent sufficient to attract attention, the sound emission level should not exceed 10 dB below the minimum external background noise level; or
2. where noise emitted from the proposed development will contain tones or be intermittent sufficient to attract attention, the sound emission level should not exceed 15 dB below the minimum external background noise level.

In both cases this will be measured at the nearest noise sensitive receptors at the most affected facade over the relevant period or periods. The background noise level should be expressed in terms of $LA_{90,15min}$.

(B) Where the existing external ambient noise level will not exceed WHO Guideline levels of LAeq 55 dB over periods of daytime (07.00-23.00hrs) and LAeq 45 dB night-time (23.00-07.00hrs), either:

1. where noise emitted from the proposed development will not contain tones or be intermittent sufficient to attract attention, the sound emission level should not exceed 5 dB below the minimum external background noise level at the nearest noise sensitive properties over the relevant period or periods; or
2. where noise emitted from the proposed development will contain tones or be intermittent sufficient to attract attention, the sound emission level should not exceed 10 dB below the minimum external background noise level at the nearest noise sensitive receptors over the relevant period or periods.

In both cases, the background noise level should be expressed in terms of $LA_{90,15min}$.

(C) Where it can be demonstrated that noise from the development, at the location of the nearest noise sensitive receptors, will not exceed the WHO Guideline indoor levels a less rigorous standard may be considered.

(D) Where emergency plant or an emergency life supporting generator is to be installed, noise emitted from it must not exceed 10 dB above the lowest background ($LA90_{15\ min}$) noise level within a 24-hour period. Where emergency plant or a generator is installed testing times will be regulated.

Where an acoustic report has identified potential noise impacts, conditions will be applied when granting planning approval to restrict noise emissions, transmission of noise or vibration and hours of operation, and to require acoustic measures to meet these conditions and to require, where appropriate, such conditions to be complied with before new plant is operational or the development is used.

Other than where there would be an impact on Tranquil Open Spaces (see page 14 and the Open Spaces Booklet), emergency plant may be permitted to emit higher noise levels than other plant on the grounds that their use is only for emergency and for limited testing for limited periods of time.

Where emergency plant or a generator is installed the council will permit this to be tested for up to one hour per month between 09.00 and 17.00hrs Monday to Friday and not on public holidays or at weekends. Emergency plant will not be used for any other purpose other than emergency energy generation for the building occupiers or associated plant.

NEW POLICY CM32.3: PREVENTING NOISE TRANSFER THROUGH INTERNAL BUILDING FABRIC TO INSIDE RESIDENTIAL (TO PROTECT NOISE FROM COMMERCIAL ACTIVITIES TO RESIDENTIAL)

A) Design features and operational measures are required in order to minimise and contain transmission of noise and vibration within developments and from adjoining developments, to protect noise sensitive receptors. Where developments will affect existing or new noise sensitive receptors, applicants are required to demonstrate that these will be designed and can be operated to prevent the transmission of activity noise, music and vibration through the fabric of the building or structure at any time.

(B) Sound Insulation needs to be of a standard that will offer sufficient protection to residential receptors so that the internal WHO daytime and night time limits are not increased and noise from activities is effectively inaudible. The maximum limits at any time that should not be increased within all developments that include new or existing residential uses are:

For General Commercial Noise (e.g. offices and retails):

1. indoors 35 LPA dB daytime (07.00 to 23.00hrs); and

2. inside bedrooms 30 LPA dB night -time (23.00 to 07.00hrs).

For Commercial uses including music and entertainment (e.g. restaurants, clubs, and pubs):

1. The design and construction of the separating building fabric should be such that the received noise value in the residential habitable spaces, with music/entertainment occurring, should achieve a value of 10 dB below that measured/assessed without music/entertainment events taking place, at the quietest time of day and night, measured/assessed over a period of 5 minutes and in the indices of Leq & LFMax in the octave bands of 63 Hz & 125 Hz. The limits of NR30 (day) , NR25 (night) and NR40 (LAFMax, night time) should be used to demonstrate that the intrusive noise would be effectively inaudible.

C) Where existing residential units or other noise sensitive receptors could be affected the design of the development must ensure that there will be no increase of noise above existing levels.

Effectively inaudible is indicative of the design level being 10 dB below existing levels so that there will be little or no increase in levels.

Who value of Daytime 35 dB should not increase nor should the night time value of 30 dB which requires incoming noise to be reduced to a level of 10 dB below the 35 & 30 dB limit.

RECOMMENDATIONS
TRANQUIL OPEN SPACES

POLICY CM32.4: PROTECTING TRANQUIL OPEN SPACES

Development must not have a detrimental effect on the relative tranquillity of Tranquil Open Spaces.

Where new development or temporary events in the vicinity of Tranquil Open Spaces include plant or machinery, or will contain activities that cause noise from amplified music or human voices or unamplified music, this will be designed and operated to achieve the following standards:

1. where noise emitted from the proposed development will not contain tones or be intermittent sufficient to attract attention, the **sound pressure level** should not exceed 10 dB below the minimum external background noise level **at the nearest edge of the nearest Tranquil Open Space.**

Or

2. where noise emitted from the proposed development will contain tones or be intermittent sufficient to attract attention, the **sound pressure level** should not exceed 15 dB below the minimum external background noise level **at the nearest edge of the nearest Tranquil Open Space.**

These are in relation to the existing external background noise level at the nearest edge of the nearest Tranquil Open Space, or for plant or machinery within a Tranquil Open Space 5 metres from the noise source (see below), at the quietest day and evening time (07.00-23.00 hrs) during which the plant operates or when there is internal or external activity at the development. The background noise level should be expressed in terms of $LA_{90,15min}$)

For development or temporary events within Tranquil Open Spaces, the relative tranquillity of the open space and any adverse impact on the soundscape will be key considerations when determining applications, to be weighed against the other functions of the open space and benefits of the development or temporary event. In the case of plant or machinery, the standards set out in 1. and 2. above will be applied, measuring at 5 metres from the noise source.

This applies to all open spaces that have been defined as Tranquil Open Spaces and any future update of this list.

The policy seeks to influence development around tranquil spaces to make sure they don't disturb tranquil open spaces. It sets out criteria to be applied to developments, events and activities which have the potential to disturb the tranquillity of those open spaces defined as in need of such protection. The list excludes those open spaces that are already noisy, not because they would not benefit from protection, but because they have already lost a measure of their tranquility, and have to be enjoyed in other ways.

Tranquil open spaces are relatively peaceful and quiet open spaces where residents, workers and visitors can find respite from the noisy urban environment. They are designated following assessment of a variety of elements such as presence of nature, sense of personal safety, and levels of noise (see page 15). However, nowhere in a dense urban environment like Westminster can be tranquil in absolute terms; these Tranquil Open Spaces can only be relatively quiet. It is also noted that parks have many functions, and appropriate development such as new children's' play equipment will reduce the relative tranquillity.

Sound pressure level (SPL) is the physical intensity of sound. It describes how loud a sound is relative to the threshold of hearing and is measured in decibels.

The requirements for an acoustic report set out in the Policy Application for Policy CS31B apply in order to demonstrate compliance with this policy.

INSIGHT - LIGHT POLLUTION

Obtrusive light, or light pollution, can cause a number of problems. Typical problems arising from obtrusive light can include light infiltrating bedrooms, causing sleep deprivation and stress with one study suggesting a link to breast cancer. It can also lead to nuisance claims, waste money and energy, disrupt nature (e.g. bird migration) and obscure our view of the stars.

Glare can cause discomfort and may be a hazard to road users and pedestrians since it diminishes the view instead of enhancing it.

"Man's invention of artificial light has done much to safeguard and enhance our night-time environment but, if not properly controlled, obtrusive light (commonly referred to as light pollution) can present serious physiological and ecological problems."

Institute of Lighting Engineers (2000)

A photo of London taken from space in 2011, by astronaut Paolo Nespoli. (ESA)

RECOMMENDATIONS

LIGHT POLLUTION

Specific reference to the 2011 version or more recent versions will ensure best practice is adhered to.

Following consultation on the City Management Plan, 'and on the Thames' was added to ensure that the River Thames is treated in a similar way to the Royal Parks, rather than it being just a matter of whether it is that part of the river is adjacent to the Central Activities Zone or not.

Reducing upward light is important to minimise sky glow.

These might include baffles, shields or louvres to reduce unwanted light spill.

NEW POLICY SXX: LIGHTING AND LIGHT POLLUTION

External lighting must:

- be designed to minimise glare and light spill, and to avoid conflict with traffic lighting, road and/or river users, and areas of importance to wildlife;
- use illumination levels that are no more than required for the purpose;
- be energy efficient;
- be visually unobtrusive, using discrete fittings and cabling; and
- be appropriate to the character of the area in design and intensity.

All external lighting (excluding floodlighting) will meet the criteria of the Institution of Lighting Professionals' *Guidance Notes for the Reduction of Obtrusive Light GN01:2011,* or more recent version as appropriate for the relevant Environmental Zone Lighting Area (EZLA) in which the development is proposed, as set out in the table below:

EZLA	City Plan Area	Standard
EZLA 1	Within the Central Activities Zone except within the Royal Parks and on the Thames	ILE Zone E4 standard
EZLA 2	Outside the Central Activities Zone except within the Royal Parks and on the Thames	ILE Zone E3 standard
EZLA 3	Within the Royal Parks and on the Thames	ILE Zone E2 standard

Floodlighting, architectural lighting and schemes which require the deliberate use of upward light will minimise upward waste light by proper application of appropriate directional luminaires and light controlling attachments. External light spill and glare from internal lighting will be minimised, energy efficient, and subject to curfew hours when internal lighting will be substantially reduced or switched off.

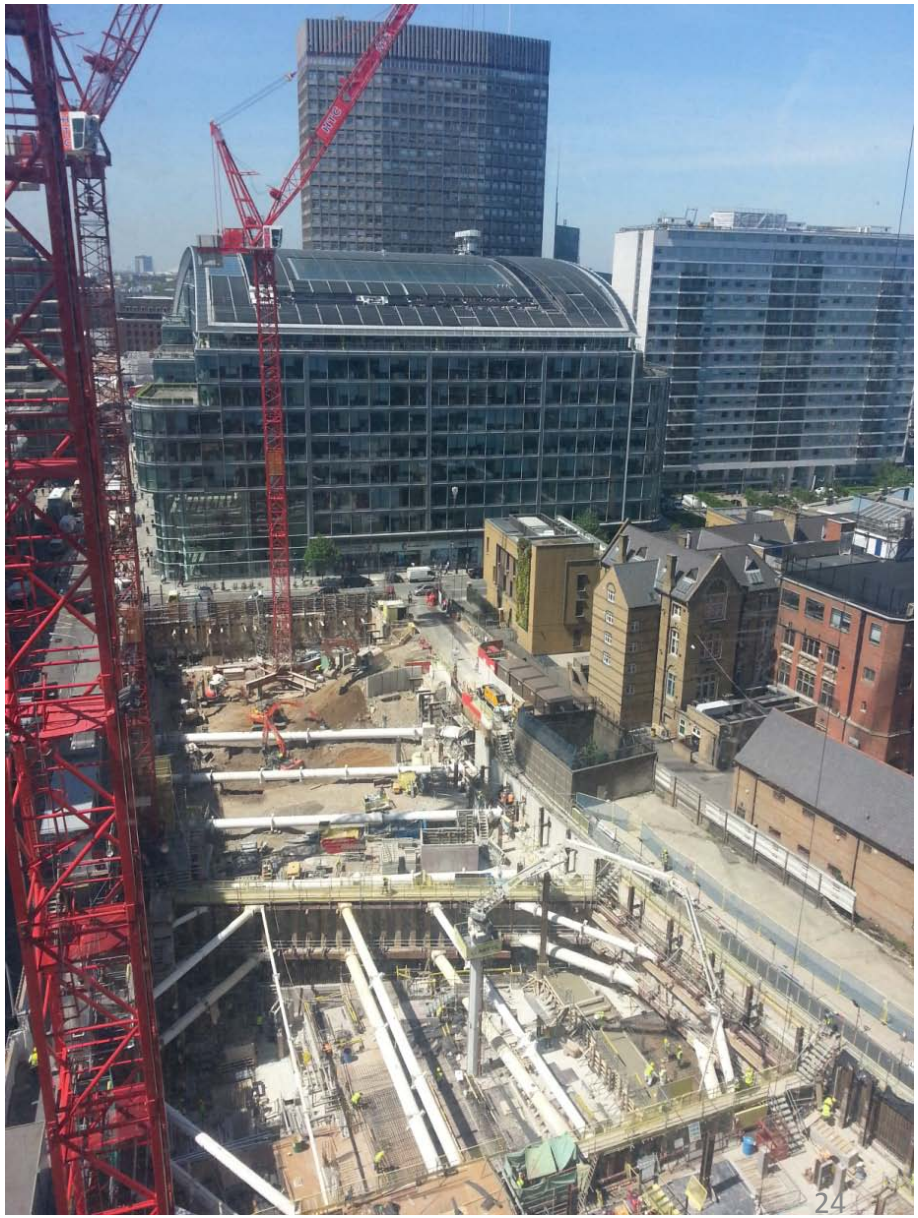
Question: As per recommendations in the ILP Guidance Notes for the reduction of Obtrusive Light GN01:2011, it is proposed that a curfew on internal lighting could apply. This is suggested after midnight in the Core CAZ to be controlled via a planning condition and from 23:00 outside the CAZ. Are these times appropriate?

INSIGHT – CONSTRUCTION IMPACT MANAGEMENT

On an average day, more than 600 building projects are under way in Westminster. The demolition and construction phases of any development can have a significant impact on both residential and business amenity and the environment. ThEY can create noise, vibration, dust, air and light pollution and last for long periods of time. Although not all of these activities are directly controlled by planning legislation and many other areas of legislation are involved with the management of construction and construction sites, the council is keen to encourage developers to manage the impacts of construction and to ensure that any negative effect of such work on the environment and amenity is minimised.

Construction and demolition sites are therefore expected to meet the highest possible standards for mitigating impacts.

The Council is revising its Code of Construction Practice for managing the environmental impacts of construction such as dust, noise, air quality and transport movements. This document is intended to act as a bridge between planning and wider pollution control regimes. Where developments will have significant construction impacts compliance with the Code of Construction Practice, including active monitoring and managing of impacts where appropriate, will be secured via conditions and/or a legal agreement as part of the planning approval.



INSIGHT – CONSTRUCTION, EXCAVATION AND DEMOLITION WASTE

Waste produced in London is forecast to rise to approximately 34 million tonnes by 2031. The London Plan reported that the most recent figures available showed that 47% of all waste produced (22 tonnes) came from construction excavation and demolition (CE&D) waste. Continuation of this trend would mean that almost 16 tonnes of CE&D waste could be produce in London come 2031.

Although re-use and recycling rates for construction, excavation and demolition waste in London are already high, there is still potential for an increased level of re-use and recycling. The London Plan contains a policy to exceed recycling and composting levels in construction excavation and demolition waste by 95% by 2020.

There are also clear benefits to a developer who can achieve a standard of resource efficiency and sustainable waste management. The outcomes can be:

- reduced purchasing costs for raw materials
- reduced handling and transport costs
- reduced waste disposal costs
- increased revenue for recovered materials
- compliance with environmental legislation
- improved market position through increased competitiveness and better public image.

The council will therefore use its planning powers to facilitate the maximisation of recovery and reuse of demolition, excavation and construction waste, for example through providing facilities on construction sites, subject to this being achieved without unacceptable environmental effects, such as noise, dust, vibration, and pollution, or subject to site constraints.

Picture credit: GLA / TfL Visual Image Services.

RECOMMENDATIONS
CONSTRUCTION IMPACT MANAGEMENT

NEW POLICY SXX: CONSTRUCTION IMPACT MANAGEMENT

A) Site owners, developers and contractors will mitigate the negative impacts of construction and construction sites through appropriate site management and monitoring and in particular will:

1. keep disturbance to surrounding areas to a minimum;
2. ensure safe and clear access is maintained for all users of the public highway and the surrounding public space;
3. provide appropriately designed hoardings, including use of acoustic screening and security measures; and
4. provide suitable and timely information to those likely to be affected by the construction works.

B) Major development or other development that could cause significant disturbance due to its location or the anticipated length of the demolition, excavation and/or construction period will adhere to Westminster's Code of Construction Practice, or another Code of Construction Practice agreed by the Council. A Site Environmental Management Plan will be produced to demonstrate how demolition, excavation and construction activities (as relevant) will be managed in accordance with the Code of Construction Practice.

C) The council will require the production of a site waste management plan when appropriate, to ensure the efficient handling of construction, excavation and demolition waste.

The Code of Construction Practice (CoCP) sets out the Council's minimum standards and procedures for managing and minimising the environmental impacts of construction projects within the City of Westminster. Compliance with the CoCP is secured via a planning condition. The Council is currently developing a new version of its CoCP. It is intended that this will apply to a wider range of development types, including certain forms of basement development, rather than just to large scale developments.

Contractors should separate waste on site where possible in order to maximise reuse of construction and demolition waste within the development.

The City Council seeks efficient resource management including waste minimisation, reuse and recycling. The government has announced its intention to revoke the Site Waste Management Plan Regulations 2008, which require a site waste management plan (SWMP) to be produced for projects with a cost greater than £300,000. However the council will continue to require contractors to produce a site waste management plan for all construction and demolition projects with a cost greater than £300,000. This is consistent with the Council's Code for Construction Practice.

In keeping with the London Plan, the council will encourage the recovery and reuse of demolition, excavation and construction waste and materials where appropriate. Wherever practicable this should be done on site, but where recovery and reuse is not possible, the council will require the recycling of demolition, excavation and construction waste.

INSIGHT - CONTAMINATED LAND

The Home Office, Marsham Street – built on contaminated land, the former Chartered Gas Works of the Westminster Gas Light and Coke Company

Why have a policy

Land cannot be assumed to be free from pollution since no accurate records exist for industrial processes and waste disposal in Westminster before circa 1965. Contaminated land can endanger health and the environment. The presence of contamination may restrain future land use options and impact on the health and safety of workers during the demolition and building phases, and on end users. Appropriate development presents an opportunity to deal with these risks successfully.

What is contaminated land?

'Contaminated land' is used in general terms to describe land polluted by heavy metals, oils and tars, chemical substances and preparations, gases, asbestos, and radioactive substances.

Legal definition

Contaminated land has a legal definition as land where substances could cause significant harm to people or protected species or significant pollution of surface waters or groundwater. This definition refers to contamination caused by past uses of a site.

280 Approximate number of hectares of brownfield or contaminated land regenerated for the Olympics.

Special sites

Some types of contaminated land are classed as 'special sites'. This includes land that:

- seriously affects drinking waters, surface waters (for example lakes and rivers) and important groundwater sources
- has been, or is being, used for certain industrial activities, such as oil refining or making explosives
- is being or has been regulated using a permit issued under the integrated pollution control or pollution prevention and control regimes
- has been used to get rid of waste acid tars
- is owned or occupied by the Ministry of Defence
- is contaminated by radioactivity
- is a nuclear site

Once a local council has decided that an area is a special site, it is regulated by the Environment Agency.

England has an industrial history of which we are all rightly proud, but one of the legacies of industrial enterprise is land that often needs skilled and methodical recovery work to bring it back into everyday use.

Rt Hon Richard Benyon MP, Parliamentary Under-Secretary for Natural Environment and Fisheries (2012) Contaminated Land Statutory Guidance

RECOMMENDATIONS

CONTAMINATED LAND

Contaminated land is defined by the Environment Act 1995 in terms of substances in, on, or under land where significant harm is or would be caused. Examples of land uses that may have caused contamination include gas works, sewage installations, landfill, railways, scrap yards, riverside wharves and industrial processes. If land has a history of any of the above uses, developers must conform with the Contaminated Land (England) Regulations 2000, made under Part II of the Environment Act 1995. The Environment Agency must be consulted and the site investigation must meet the water, ecology and general requirements outlined in 'Contaminated land, a guide to help developers meet planning requirements' – which was produced in October 2003 by a group of London boroughs, including Westminster.

Developers will apply to receive council approval for the following phases prior to any demolition or excavation work starts and when the development has been completed:

- Phase 1: Desktop study – full site history and environmental information from the public records.
- Phase 2: Site investigation – full investigation of both surface soils and underlying groundwater and any adjacent surface waters to assess any contamination and the possible effect it could have on human health and damage to property and the environment.
- Phase 3: Remediation strategy – details of this, including maintenance and monitoring to protect human health and prevent pollution.
- Phase 4: Validation report – summarises the action you have taken during the development and what action you will take in the future, if appropriate

NEW POLICY SXX: CONTAMINATED LAND

Planning applications for the development of land which is contaminated will be encouraged.

Where land for development is, or has been, used for purposes such as gasworks, sewage installations, landfill, railways, scrap-yards, riverside wharves, industrial processes, or petrol stations, or is adjacent to land that is or has been used for these purposes, developers must carry out a detailed survey . Where contamination is identified, a strategy and measures for the remediation of the site must be provided to the council.

Where a site may have contained oil-storage or other hydrocarbon-storage tanks or asbestos from existing or previous developments, or the development will involve excavation works where previous uses are unknown, a preliminary contaminated land risk assessment must be provided by the developer, to establish whether there may be existing contamination in the soil, groundwater or surface waters of the site and whether a full site investigation will be necessary. Where planning permission is subsequently granted it will, if appropriate, be subject to planning conditions and/or legal agreements requiring a further detailed survey and a strategy and measures for remediation of the site.

Have Your Say

This booklet is part of the informal consultation for developing the statutory policies in Westminster's local plan. It builds on previous consultation on the City Management Plan. Further information can be found at westminster.gov.uk/planning-policy.

This booklet only includes the proposed policy. However, Westminster's local plan will include supporting text based on text within this booklet. This includes:

- Introductory text, setting out the background to the topic.
- Policy application: guidance as to how the policy will be applied, including details of how things will be measured or calculated etc.
- Reasoned justification: this is an explanation required by law to accompany a policy, setting out why a policy is applied.
- Glossary definitions: the statutory definitions used for terms that are included in the policies.

If you wish to discuss the issues raised in this booklet, please telephone 020 7641 2503.

To comment on anything in this booklet, please email planningpolicy@westminster.gov.uk or write to us at:

City Planning
11th Floor
Westminster City Hall
64 Victoria Street
London SW1E 6QP

Your comments will form part of the statutory record of consultation and will be made available on our website and to the public. Your contact details will not be made available, but we will use them to stay in touch with you about future policy development. If you do not want us to stay in touch, please let us know in your response.

Reading List

Westminster's Air Quality Action Plan (2013)

Westminster's Code of Construction Practice (2007; revised version under development)

Westminster's Noise Strategy 2010 - 2015 (2009)

Health Profile Of the City of Westminster (2012)

Mayor's Air Quality Strategy (2010) Mayor of London