



Air Quality Assessment– SITE AT UPPER PARLIAMENT STREET, LIVERPOOL, L8



Wroot Design Ltd

Atlantic House
143 Sefton Street
Liverpool
L8 5SN

Tel: 0151 332 0120
Email fiona@wrootdesign.co.uk

Wroot Design Ltd
Registered in England No: 4872116

0.0	CONTENTS
1.0	INTRODUCTION
2.0	IDENTITY
3.0	HISTORY
4.0	LEGISLATION & PLANNING POLICY
5.0	LAND USE PLANNING & DEVELOPMENT CONTROL
6.0	BASELINE AIR QUALITY CHARACTERISATION
7.0	CONSTRUCTION DUST ASSESSMENT METHODS
8.0	CONSTRUCTION PHASE MITIGATION MEASURE

INTRODUCTION

This Air Quality Assessment has been undertaken for the proposed development of 95 New Build Apartments on land at Upper Parliament Street, Liverpool and demonstrates the potential impacts of the proposed development on local air quality.

All risks have been assessed according to published parameters from the Institute of Air Quality Management (IAQM). Any mitigation measures within this report are based on their findings / recommendations.



IDENTITY

The proposed site is located on Upper Parliament Street and set in and amongst a residential landscape, with good road/public network links. Situated just a short walk south east of the city centre it resides on a piece of land adjacent to the A562, which links directly to the corner junction of Sefton street (South docks) & Chaloner street (runs north up towards the strand). Local amenities consist of Liverpool Women's Hospital opposite, Princes Primary School adjacent to the corner, St Anne Parish Church (325m), Granby Continental Store (376m), Falkner Square gardens (250m), Crown street Park (370m), Liverpool Cathedral (975m) Princes Park (1km). Within reach of Liverpool City Centre (1.65km) as well as being sited 3.3km from Queens Drive.



Site Location Plan: Not to scale



2

The site is currently vacant brownfield land, previously used for housing, but is at present, a grassed area with trees situated along its length.

This proposed application is for 95 apartments spread across 4&5 storey blocks. With an internal arrangement of 40 x 1 bedroom & 55 x 2 bedrooms apartments.



Plan diagram of arterial roads and pathways

- Heavy Usage Roads
- Low Usage Roads
- High usage pathways
- Low usage pathways

HISTORY

Historical Summary

The site was predominantly open land until 1851.

1851 – 1890 was when houses were developed with accompanying streets, this spread across the site. All of the houses were demolished at the end of the 1960's.

The 1970's saw a new housing development replace the existing streets, these were situated in the south and southeast of the site.

Between 1989 & 1993 the site was demolished and has remained this way since.

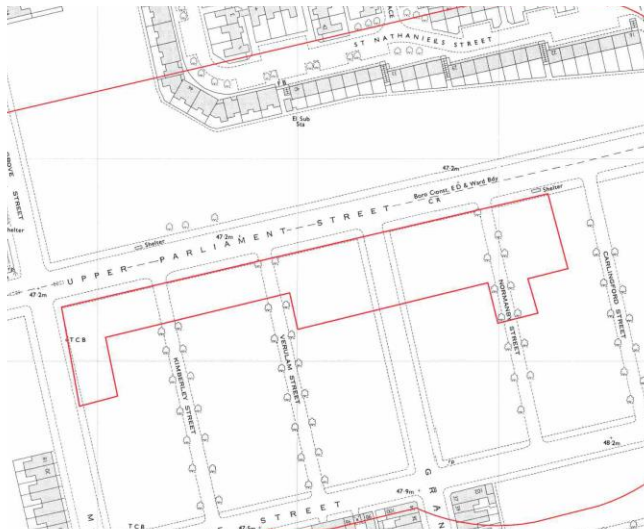
The surrounding area has been predominantly developed with residential properties, with a current hospital to the north, a works to the northeast and a former depot and a works to the east.



3



1848



1975



1893

Air Quality Strategy

The latest *Air Quality Strategy for England, Scotland, Wales and Northern Ireland – Working Together for Clean Air*, published in July 2007 sets air quality standards and objectives for ten key air pollutants to be achieved between 2003 and 2020.

The Air Quality Framework Directive (1996) established a framework under which the European Commission (EC) could set limits or target values for specified pollutants. The publication identifies several pollutants for which limits or target values have been, or will be set in subsequent 'daughter directives'. The framework and daughter directives were consolidated by Directive 2008/50/EC on Ambient Air Quality and Cleaner Air for Europe, which retains the existing air quality standards and introduces new objectives for fine particulates (PM2.5).

Air Quality Standards

The air quality standards (AQSs) in the United Kingdom are derived from EC directives and are adopted into English law via the Air Quality (England) Regulations 2000 and Air Quality (England) Amendment Regulations 2002. The Air Quality Limit Values Regulations 2003 and subsequent amendments implement the Air Quality Framework Directive into English Law. Directive 2008/50/EC and was translated into UK law in 2010 via the Air Quality Standards Regulations 2010.

National Planning Policy Framework

The National Planning Policy Framework (NPPF) was published in March 2012, superseding the bulk of previous Planning Policy Statements. The National Planning Policy Framework was intended to simplify the planning system and includes a presumption in favour of sustainable development.

Section EP11 of the National Planning Policy Framework deals with Conserving and Enhancing the Natural Environment, and states that the intention is that the planning system should prevent

'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 or land instability' and goes on to state that *'new development [should be] appropriate for its location'* and *'the effects (including cumulative effects) of pollution on health, the natural environment or general amenity, and the potential sensitivity of the area or proposed development to adverse effects from pollution, should be taken into account.'*

'Planning policies should sustain compliance with and contribute towards EU limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative impacts on air quality from individual sites in local areas. Planning decisions should ensure that any new development in Air Quality Management Areas is consistent with the local air quality action plan.'

LAND-USE PLANNING & DEVELOPMENT CONTROL: PLANNING FOR AIR QUALITY

Environmental Protection UK (EPUK) and the Institute of Air Quality Management (IAQM) jointly published a revised version of the guidance note 'Land-Use Planning & Development Control: Planning for Air Quality' in 2017 to facilitate the consideration of air quality in the land-use planning and developmental control process. It provides a framework for air quality considerations within local development control processes, promoting a consistent approach to the treatment of air quality issues within development control decisions.

The guidance includes a method for screening the requirement for an air quality assessment, the undertaking of an air quality assessment, the determination of the air quality impact associated with a development proposal and whether this impact is significant.



5

Emissions to Air from Construction Traffic and Plant

Exhaust emissions from construction phase vehicles and plant may have an impact on local air quality adjacent to the routes used by these vehicles to access the application site and in the vicinity of the application site itself. An impact assessment has been undertaken considering the following factors:

- The likely duration of the construction phase;
- The potential number and type of construction traffic and plant that could be required;

POSSIBLE IMPACT ON EXISTING LEVELS OF AIR QUALITY IN THE IMMEDIATE AREA

Following the indicative criteria as laid out in IAQM Guidance on land-use planning and Development control Planning for air quality 2015v1.1 –

There will be less than 100 AADT (58 maximum) caused by the LDV traffic for the new development.

There will be no change in the HDV flows on local roads apart from those that are addressed in the construction phase of the development.

There are no realigning of roads or changes in the proximity of receptors to traffic lanes for the existing residents. In fact, by the erection of the new proposal the existing residents will have a higher degree of protection from Upper Parliament Street than they currently enjoy.

For the proposed new residents, although they will be closer to Upper Parliament street, we are proposing acoustic treatment to the front façade which will in turn require a 'whole house ventilation' system to compliment the acoustic treatment and so there should be no adverse effect from the proximity of Upper Parliament Street. We do not have at this stage detailed M&E designs for this system.

There are no new junctions proposed near to relevant receptors.

There is no introduction of or changes to existing bus route provision.

There is no underground car park proposed.

There are no substantial combustion process or any combustion processes of any size proposed.

In addition to the potential impact of this proposal on the local air quality, the building has been designed so that in future, the end user may 'bolt on' a number of green energy elements to run the building effectively making it carbon neutral.

At present we and the end user have allowed for the communal areas and the external lighting requirements to have their energy produced via solar panels on the roof of the new building.

The required area of solar panels for this is approximately 18m long and will provide enough energy for all communal needs.

In the future the solar panel provision can be extended along the whole of the 100m length of block 1, that will be able to provide enough energy to power the proposed apartments and to have excess energy that can then be used to create a new 'community energy hub' and therefore provide energy to the surrounding existing properties and the external lighting for the surrounding green areas. All these solar panels would be located on the roof of the building and, due to the design of the building, be hidden from public view therefore not giving any negative outlook for existing or new residents.

As part of this renewable energy production we would be looking in the future (subject to the relevant permissions) to facilitate the car parking areas and with the introduction of a public art sculpture wind turbine tree (newwind.fr) within the upgraded green space (on the corner of Mulgrave Street) we could add more energy to the community energy hub and then provide more energy for the local residents.



BASELINE AIR QUALITY CHARACTERISATION

Local Emissions Sources

The application site is located in an area where the main source of air pollution is likely to be roads. The application site is approximately 7m south of the westbound carriageway of A562 (Upper Parliament Street) and 26m south of the eastbound carriageway.

There are no known industrial pollution sources in the immediate vicinity of the Application Site that will significantly influence the local air quality.

Local Authority Review and Assessment of Air Quality

The application site is located within the city wide LCC AQMA which was implemented due to predicted exceedance of the annual mean nitrogen dioxide (NO₂) concentration objective.

Figure 2 shows the projected annual mean NO₂ concentrations around the city. Our site, indicated by the red circle, is outside any of the high concentrated areas.



Figure 2 – Projected annual mean NO₂ concentrations in City Centre AQMA

CONSTRUCTION DUST ASSESSMENT METHODOLOGY

Following the IQAM 2014 guidance we would assess the potential construction activities into the following categories: Demolition, Earthworks, Construction and Trackout.

This assessment has been carried out due to a *'human receptor' being within 350m of the boundary of the site or within 50m of the route used by construction vehicles.*

Potential Dust Emission Levels

We have assessed the earthworks as:

Demolition

There is no demolition as there are no buildings on the site therefore we have discounted this category.

Earthworks

Small - Total site area 2,500sqm, soil type a mixture of clay, silt and sand. <5 heavy earth moving vehicles active at any one time, formation of bunds <4m in height, total material removed <10,000 tonnes, earthworks during wetter months.

Construction

Medium – Total building volume 25,000 – 100,000m³, potentially dusty construction material (e.g. concrete), piling, on site concrete batching.

Trackout

Small – <10 HDV (>3.5t) trips in any one day, moderately dusty surface material (e.g. high clay content), unpaved road length 50-100m

The dust emitting activities for this development can be controlled effectively by appropriate measures outlined in the Construction Phase Mitigation Measures (P8) which will form the basis of the developments dust management plan. By implementing this plan throughout the construction we believe that there will be minimal residual impact as a result of this development.

The proposed development is not situated in an area of poor air quality and we believe that through the implementation of the proposed travel plan (previously submitted to LCC) there will be no significant impact from the development once completed and in use.

We therefore believe that the proposed development complies with all relevant national and local planning policies and there are no air quality constraints.



7

CONSTRUCTION PHASE MITIGATION MEASURES

Following the IQAM 2014 guidance we would state that the developers of the site would:

- Display the name and contact details of anyone accountable for air quality and dust issues on the site boundaries.
- Display the head or regional office contact information.
- Develop and implement a dust management programme in conjunction with the Local Authority.
- Record all dust and air quality complaints, identify causes, take appropriate measures to reduce emissions in a timely manner and record all measures taken.
- Make the complaints log available to LCC at all times.
- Record any exceptional incidents that cause dust and/or air emissions, either on or off site or the actions taken to resolve the situation in the log book.
- Undertake daily on site and off site inspections to monitor dust and record daily results.
- Carry out regular checks for compliance with the dust management plan.
- Plan the site layout so that any machinery causing dust are located away from neighbouring properties.
- Erect solid hoardings around the entirety of the site.
- Avoid site runoff of water or mud.
- Cover or fence stockpiles to prevent wind disturbances.
- Ensure all earthworks and construction vehicles switch off engines when stationary.
- Avoid the use of diesel or petrol powered generators wherever practical.
- Use suitable dust suppression techniques such as water sprays when cutting, grinding or sawing materials.
- Ensure adequate water supply on site.
- Use enclosed chutes and covered skips.
- Avoid bonfires or burning of waste on site.
- Implement a wheel washing facility for vehicles leaving the site boundaries.

