

## BHORA AGM 30 June 2015 Air Quality

### Speaking Notes pre Open Discussion

#### **Intro Blather**

Air (the only?) Public Good:-

- Young / old; rich/ poor; black / white; able / disabled; believer/ atheist; criminal / saint.

Breathing - non-discretionary

Draft NLWP due to go to LBE Cabinet next month (July 2015). & Boroughs of North London

2.15. Air quality within North London is uniformly poor as a result of high levels of nitrogen dioxide and dust (NO<sub>2</sub> and PM<sub>10</sub> respectively) that are mainly, but not exclusively, due to road traffic. As a result, all of the councils have declared Air Quality Management Areas (AQMA) covering the entire Borough in each case.

LBE Mini Holland Bid Document

The whole borough is also an Air Quality Management Zone and motorised traffic is a major factor in those parts of the borough with poor air quality.

Enfield also has some of the worst air pollution hotspots, with 10 of London's 187 Air Quality Focus Areas

Evening Standard 4 June 2015

"More than 1300 Londoners have already died prematurely due to toxic air this year...The shocking death toll includes more than 50 estimated fatalities in Enfield.."

We clearly have dirty air that is killing us (all)

## Where to Apportion Blame?

The French and other Europeans  
Sahara sand  
Big ships  
Power Stations (biggest cause of Sulphur Dioxides)  
Heating boilers  
Incinerators

Mostly blame traffic

Circa 2m cars when GA Musey was a boy, now > 30m. All have exhaust pipes, eroding tyres and brake pads

Back in time, diesels were small minority of cars  
Climate Change drove a CO<sub>2</sub> focus  
So HMG encouraged diesel.  
New car sales are now mostly diesel.  
Less CO<sub>2</sub> but much more particulates and more NO<sub>x</sub>'s  
Diesels many times worse for killer poisons than petrol  
HMG and industry knew this

11m UK diesel cars

1/3 of the car UK fleet

Diesel seen as dirty in USA, only 0.6% of cars run on it

95% of the NO<sub>2</sub>

91% of the particulates

Blame?

Consider in times of extreme air poison the call:

Asthma suffers, the old, the ill, joggers and more to stay indoors, slow down, take care et al.  
Never does UK hear - don't drive today.

Effect not cause is typically addressed.

Both main parties have long neglected this public health scandal.

London is the worst European capital for NOX

Official reaction? Try to water down the EU proposals. Both parties

## Clean Diesels?

Euro 6 standard (see eg local press letters promoting this as the solution)

Compulsory for new cars from September 2015

New cars, no more than 0.08g NOx per Km / 0.128g per mile

Tests were developed in Geneva by a car industry dominated group

In real world use conforming cars found to be up to 12 times the limit

Certification tested in lab conditions with eg no seats in car, radiator taped up, all gaps tapes over, engine running hot etc etc.

Discredited before it starts - HMG agree

Motor Industry want new standard to be three times looser than Euro 6.

No date for implementation

Pre Google / Apple 9 out of 10 Big Co's were Oils / Motors

Huge influencing power

(London: 22 000 black cabs; 8 500 diesel buses; 80 000 mini cabs

UK: 4m vans; 600 000 trucks; 88 000 buses)

## What Sort of Toxins?

Particulates (“soot”). Numbers relate to size

PM<sub>10</sub>

PM<sub>2.5</sub>

- (NB NOT incorporated into LAQM regulation so no Local Authority statutory obligation to review and assess AQ against them)

PM<sub>0.1</sub>

NO<sub>x</sub>

Ozone O<sub>3</sub>

Volatile leftovers from unburnt fuel

RAC, “the health hazards of small diesel particles are terrifying”

“Air pollution is one of exposure categories causing all the top 4 male death categories and 4 of the top 5 female death categories in London.”

Clean Air in London

## **What Impact?**

2010 Commons Environmental Committee noted that air pollution costs the NHS more than obesity

Particulates (PM<sub>2.5</sub> only)

29 000 premature UK deaths pa (Over 100 000 in America)

Circa 15 times the number from RTA's

4200 in London

5000 forecast in 2020

Average loss of life is 11 ½ years

About 8% of all deaths

Say 1 in 12

Go to a supermarket where 8% of shoppers will die because of the food they sell – acceptable?

All 50 of Britain's worst blackspots for dirty air are in London

2010 National Audit Office report – London had the worst PM<sub>2.5</sub> pollution in Europe

## **And worse to come**

NO<sub>x</sub>

Death numbers expected to be equivalent to those from PM<sub>2.5</sub>

A report is due from the Committee on the Medical effects of Air Pollutants

Chair said, addition of NOX impact will increase mortality rates from AP from 5-9% across the UK to 10-18%.

Already 2<sup>nd</sup> biggest public health issue after smoking. More than obesity, alcohol, RTA's

Could be the biggest

## Any More Impacts?

“Research is where we were with smoking 30 years ago”, ie this is only just starting but the experts already see an awful road ahead. Enough reason to tackle it aggressively.

Public Health England – 5.3% of all deaths in over 25’s are linked to air pollution; 8.3% in inner London

Early days in research, but beyond deaths from PM<sub>2.5</sub> and equivalent numbers expected from NO<sub>x</sub>:-

Shortens life expectancy

Reduces lung function

Worsens symptoms of asthma

5.4m UK people diagnosed with asthma

Fifth of those being children

Worsens symptoms of chronic obstructive pulmonary disease (COPD)

Worsens symptoms of heart disease

Causes stunted lung development in children

Stays with them the rest of their lives

Sharply raises the risk of deadly strokes

BMJ – “particulate matter and gaseous pollutants both showed a strong temporal reaction with mortality from stroke and hospital admission for stroke”

Blood supply to the heart went down raising the risk of heart attack

Blood vessels stopped responding with levels of “clot busting factor” going down {tissue plasminogen activator (tPA)}

Increases risk of clots, especially in older people

Believe is poor air quality is associated with:

Dementia in middle age

“Findings suggest air pollution is insidious effects on structural brain ageing, even in dementia and stroke free individuals”

Low birth weight

Premature birth

Reduced lung function

Increased risk of infections

Diabetes

Deficits in Neurodevelopment

Deficits in Cognitive function

Autism

Schizophrenia

Children growing up near busy roads have greater memory and cognitive problems  
Babies gestated in areas with high air pollution are born with smaller heads  
Circumference directly related to pollution levels

“which in turn suggests a reduction in brain volume”

Jonathan Grigg, Professor of paediatric medicine, Queen Mary University  
of London

Increasingly being linked to cancer

WHO has officially classified diesel fumes as a cause of cancer

High concentrations of NO<sub>x</sub> are strongly associated with respiratory infections – anyone?

Alteration in emotional response

Being linked in utero to eg bad health, poor school results, lower earnings.

Equality of opportunity needs to consider pre natal health impacts from air pollution

### Internationally

lives of northern Chinese are 5.5 years shorter on average due to air pollution

Chicago Uni research

Air pollution in rich countries + India + China is costing \$3.5 trillion pa in premature deaths and ill health

OECD

Chinese report indicate costs were more than 10% of GDP

London has worse NO<sub>x</sub>

not as bad with particulates

### **Safe Limits?**

EU Limit and UK Supreme Court

HMG needs plans by end of year to tackle NO<sub>2</sub> which is in breach of EU limits at numerous London locations

UK has breached EU limits for NO<sub>2</sub> since 2005  
Currently viable plan to achieve compliance until 2030  
20 years after original deadline

Breath air that does not meet EU limits never mind more stringent health-based WHO air quality guidelines

EU limit for PM<sub>2.5</sub> is 25 micrograms per metre<sup>3</sup>

Oxford Streets annual mean is 135

An average, which includes relatively quiet night times

1568 times the hourly limit of 200 was exceeded

Limit for NO<sub>2</sub> is 40 micrograms metre<sup>3</sup>

London average at monitoring stations typically 55-60

Roughly a 1% reduction in lung function for every 5 micrograms long term exposure to NO<sub>2</sub>

75% of main roads in London are expected to still breach NO<sub>x</sub> limits in 2020

On WHO standards 96% of British urban dwellers are exposed to dangerous levels of particulates

Environmental Audit Committee Nov 14, "Meeting EU standards should be the minimum requirement. Regardless of EU rulings it is unacceptable that UK citizens could have their health seriously impacted over decades before the public health problem is brought under control."

WHO classified outdoor air pollution as carcinogenic to humans in Oct 2013, just as it did with cigarette smoking in Feb 1985.



## What to Do?

Prof Kelly quote -you are now a "carrier"

Less Carbon Based Transport

Active Travel

Walk

Cycle

Support Mini Holland / Cycle Enfield's ambitions

Reduce traffic then ensure what remains is cleaner

Not diesel cars

Switch off when waiting

Electric Cars?

Whole of life study showed one powered via coal fired power stations would cause three times as many deaths as a petrol car

Reduce diesel vehicles faster

New Euro Standard

MoT test

Legalise against "fixing" of filters and AdBlue

Press / support Ultra Low Emission Zones for Boroughs

Be aware

Alert when air is bad

Last year only 20 of the 935 London schools / nurseries within 150m of a busy road were aware of a text warning service

Successes elsewhere

Berlin - exclude the most polluting vehicles. NOX down 20%, particulates by 50%

Paris - diesel free by 2020

France - E10 000 to swap diesel for electric

Helsinki- trebled cycle use since 2000

Lyon - trebled bike lanes in 12 years

Glasgow - "pollution squads" planned (?operating?) to stop and test cars at random

£60 fine

Fine for parking with an idling engine

Other air quality aspects

Bonfires

Oil based paints

CHP

Edmonton Incinerator

Richard Branson – “close some of London’s busiest streets to cars altogether”. “Time for bold decisions and a Second World War mentality to clean up the capitals polluted air”. “Diesel cars and coal burning should be banned to make an immediate difference to Londoners’ health.”

Zac Goldsmith – “calls for all new minicabs and delivery vans to be electric powered.

Increase public awareness – so behaviour changes

Could LBE seek to become an Exemplar Air Quality Borough?

2014 in its third report, the recommendations in the previous two having been ignored said, amongst much more, – the Environmental Audit Committee called for a ban on new schools, hospitals and care homes next to air pollution hot spots

Also demanded hundreds of schools be fitted with air filtration systems

NO SUCH THING AS PASSIVE BREATHING.

Oxford Street, breached its legal air pollution limit for the whole of 2015 just four days into January.

See:

Air Quality in Enfield A Guide for Public Health Professional

London Borough of Enfield Air Quality Action Plan

House of Commons Environmental Audit Committee Action on Air Quality 2014

Clean Air in London

European Environment Agency, eg Air Pollution Fact Sheet 2014

[www.London.air.org.uk](http://www.London.air.org.uk)

[www.airtext.info/](http://www.airtext.info/)

[www.walkit.com](http://www.walkit.com)

<http://uk-air.defra.gov.uk/>

<https://twitter.com/DefraUKAir>