aug25feedbackISH

Laurence Moss – UR 2206568 – ISH 25th Aug 21 – Air Quality

Notes after Hearing 25th August

effects of air pollution – in context of long – 15 yr – construction project

dementia – AirQualityNews 8/8/21 reports research showing reduction of dementia, with reduction of PM2.5 over 10 years – up to 26% reduction in women. French survey – reduction dementia by 15%-17% for every microgram of 2.5. NB – **reduce** pollution from PM2.5 and you **reduce** dementia.
So, EDF are going to **increase** the levels over a period of 15years, and so we can expect an increase in Dementia/Alzheimers from that period.

turn off vehicles – 'Engines off campaign' – fresh calls for fleet operators and businesses to lower pollution by preventing unnecessary idling. CEO of British Safety Council recognised the links between pollution and illness and called for concrete action to reduce pollution – engine idling is part of that pollution. I call for 'engine off' policy for SZC project.

childhood obesity – researchers at Barcelona Institute for Global Health found link between pollution, traffic and noise with childhood obesity. - disrupting molecular mechanisms, sleep deprivation

pm2.5 higher risk of ICU / Covid 19 – long term exposure to air pollution significantly associated with ventilation and longer stays and worse outcomes, for those with Covid – E.U. Society of Clinical Microbiology and Infectious disease.

- **My Conclusion –** increasing the PM2.5 pollution is likely to increase levels of Dementia, Childhood Obesity and longer stays in ICU [and worse outcomes].

Environment bill

- **AQS**trategy review every 5 years – 3 in lifetime of this project
- targets for PM2.5 (oct22) amount of ambient pm2.5, and another in 15 yrs – 2 in lifetime of this project
- local authority to have more power to monitor and reduce public exposure to excessive levels of pollution.
- 'Air quality partners' (EDF?) to share responsibility for dealing with pollution.

Government reviewing acceptable levels – in context of W.H.O lower levels, and implications for coroners report about Adoo-Kissi-Debrah's death.
Chartered Inst Environmental Health – criticised government seeking to reduce levels rather than set targets.

- **My conclusion –** The Environment Bill is likely to result in more awareness, and more monitoring, especially by Local authorities, but not set any useful threshold values for action.

AQEG / Defra – impacts of Net Zero pathways on future air quality in UK - 2020
Influence of international bodies concerned with air pollution – UNECE convention of long range transport of air pollution.
1.3 conclusions -

- ‘Air pollution has immediate adverse health effects on communities where it is experienced {*That will be East Suffolk*} and care is needed to ensure that…. Air quality impacts are considered and minimised’
- clean transport options – recognising problems of miles driven, exhaust pollution, brake and tyre fragments.

2. air quality impacts during transition to net zero
    - construction projects [like] nuclear power may have modest effects in terms of national emissions but be significant … in some localities. The effects may be transitory but are ‘real and substantial’. ‘additional control measures for large infrastructure projects would be beneficial’

from responses to SZ Questions in ISH session -
I have never claimed that PM2.5 pose a *current* problem in East Suffolk , apart from occasional ‘highs’, but I suggest that they **may** become a problem if SZC goes ahead with the traffic flow predicted. We need to be monitoring air for the first signs of a problem.

Monitoring
That is why we need to monitor the air quality. I have been recording baseline values to show what the air quality is like now, around various parts of East Suffolk where people live and work.
It is in SZC and ESC’s interest to be able to establish what baseline values are now [should they ever be blamed for excesses in the future]. It is surely ‘head in the sand’ to claim ‘we don’t measure them (2.5s) because they are insignificant’. How do they know that?

I regret that they tried to rubbish my Air Quality monitor as ‘unreliable’. I do not put my faith in absolute values that it measures, but attempt to study whether these values are going up or down over time, and where the values are highest. I have a lab report/assessment which compares it with Laboratory standards, which suggests it is “highly correlated with reference devices” and within 85-88.5% of those standards.
The Guardian 21/8/21 – reports the government is going to spend £25m on 300,000 CO2 monitors for schools, because of the association of poor ventilation of classrooms and the spread of Covid. Remember that the [aforementioned] EU study found the link between Covid and air pollution – **each 1mgm/m3** increase in long term exposure to PM2.5 is associated with 3x more likely to being ventilated and 2x the likelihood of a stay in ICU. But the figure of 1mg/m3 is an **insignificant amount,** in the opinion of ESC ‘experts’ [Broomfield and Lowe] who consider it too insignificant to measure. Outside of Yoxford school I measured a value of 3.6mg/m3, so an increase of just 1mg/m3 could make a considerable difference, but it’s likely to be much more.

Response by SZC AQ1.2 for deadline 2 – “in the absence of comprehensive background concentrations of PM2.5”, they take the values for PM10’s as surrogates. So how do they know the concentrations of PM2.5’s unless they monitor them? They would rather try to conflate them with PM10’s which can be mitigated.
ESC follows on to state ...”dispersion of modelling of construction dust and particulates is subject to high levels of uncertainty”. Regardless of the fact that the particulates that I am concerned about is not about construction dust, but transport associated, why is the modelling uncertain? Because you don’t monitor them.

Following – AQ1.3 – Do you agree with the findings of the ES that the only potential source of significant air pollution would arise from construction dust?
SZC answers with what they have assessed, and that does not include transport related PM pollution.

ESC follows – “This is not agreed”. They agree that significant sources of pollution will occur..”but it has not been demonstrated that construction dust is the only significant source”. “the proposed mitigation is appropriate but may not be sufficient to achieve negligible impact”. So if it may not be negligible, why is it not monitored by ESC, and then later claim in the ISH 25th August that is is “insignificant”?
Later – p82 - ESC answering AQ1.22 – claims that SZC’s assessments of “existing air pollutant concentrations .. are low enough that impacts from additional traffic will not be significant across the majority of the ESC area”. I do not claim that there is a current problem of air pollution but identify the likelihood of it. The experts of SZC and ESC appear to be able to predict future ‘insignificant’ pollution on the basis of their assessments. The claim that it “ not be significant across the majority of the ESC area” – opens up the possibility that it will be significant in the minority of the ESC area, but they are not willing to measure it because on 25th August they claimed it was all insignificant, and won’t measure it.

I find that the opinions of SZC and ESC are contradictory, are not based on sound monitoring [or offers of future monitoring], and are self serving since they both want to hide the results of possible PM2.5 air pollution from the public – as they would have to do something about it then.

my focus on PM particulates – nature of 2.5’s and 10’s – not dust!
The use of the word **– dust** – conjures up concept of small fragments of rocks/sand, which can be mitigated by standard industrial techniques – spraying and washing down.
PM10’s can be mostly mitigated in this way,
PM2.5 invisible fragments of many nasty chemicals – harmful to life/health, small enough to penetrate brains via lungs – **cannot** be mitigated.
It is in EDF’s [and ESC’s] interest to get you to think that by mitigating the bigger particles, you will reduce the quantity of PM2.5, and to get you to think that the problem is associated with construction dust, rather than its road and combustion origins. ESC knows that they have a local authority duty to monitor air pollution, especially with the Environment Bill approaching. There’s not a lot of things they can do about reducing PM2.5s [apart from reducing traffic flow], so that’s why they try to deny there is a problem – if they don’t measure it, no one will know about it!

issue of trust
There have been figures of pollution data discussed, of baseline data, and a lot of use of words like ‘predicted, anticipated, not-significant’. We are expected to believe the ‘experts’ who fail or refuse to measure pollution values, but rely on their ‘predictions’ and opinions of ‘insignificance’. These are issues of insufficient and unrepresentative monitoring, of data which needs to be based on measurement, and the results made transparent in public.

issues of health –
PM2.5s have associations with all significant health conditions, and there are no safe thresholds for levels of PM2.5s. When industry says “it will have no significant effect” – if you or your loved ones are part the 1% increase in Alzheimers, or Coronary disease, Covid or COPD – it will have a significant effect on their health and life expectancy.
Both Covid virus and Pm2.5 can penetrate masks. “it’s possible that long term exposure *[eg 15 years]* to air pollution impairs the immune system making us susceptible to viruses” …… and “fine particles of air pollution act as a carrier for the virus. [EU Society of clinical microbiology]

ESC – july 21,p74/5 Ch16,HW1.0– comments on there being a focus on workers health and not the community’s health / existing residents. “**Community safety concerns of the project and their impact on health and well being of existing residents are not considered**” Rep1-045 for detail..

The PHE – AQ1.42 p93/4 – are asked to respond to – “Human Health particulate matter – para 12.6.11 of APP-212 suggests there could be a risk to human health if long term dust generating activities increase...Do you consider the mitigation identified would be sufficient to avoid adverse effects to human health? “
The Public Health England response at deadline 2 - “ ...pollutants, particularly particulate matter are non-threshold – ie a population is likely to be subject to potential harm at any level…” which remind us that pollutants like PM2.5’s have no safe threshold, and they need monitoring. To avoid monitoring or claim that we don’t do it is immoral and irresponsible.

SZC is a long term project which will increase traffic flows and consequently increase PM2.5 levels. A child born at the start of the SZ project will leave school at the end of the project and will have breathed in this pollution for 15 years. Any litigation for serious medical conditions during this period, and likely to use these arguments in their legal action for compensation.

I repeat - I find that the opinions of SZC and ESC are contradictory, are not based on sound monitoring [or offers of future monitoring], and are self serving since they both want to hide the results of possible PM2.5 air pollution from the public – as they would have to do something about it then.

Please note that residents of Leiston / Saxmundham have two choices of Hospital / Clinic available. Either John Paget near Lowestoft, or Ipswich – both are 20 to 25 miles in either (opposite) direction. Apart from the inconvenience of being ill, there is the added inconvenience of the diagnosis and treatment being a long way away! This is why we are so concerned about the health implications of the pollutants.

Comparisons with Hinkley locality (Pollution)
https://www.sedgemoor.gov.uk/article/1014/Air-Quality-in-Sedgemoor shows how the responsible Local Authority – Sedgemoor – decides to analyse particulates. The latest report relates to 2020.

- *The PM10 Daily/24hr mean, for which the WHO say there should be **no** times there is exceedance of the 50ug/m3 level, and each of the x4 PM monitors shows several times of exceedances (whereas for the UK/EU it would be x35 times)*

Particulate Monitor Number of times 24-hour mean was exceeded (January – December 2019)

PM1 Bristol Road 15

PM2 West Bow House (where West St joins Broadway) 5

PM3 Taunton Road 3

PM4 Quantock Road 16

AND on PM2.5 annual mean, the WHO level is 10ug/m3, and all x4 PM monitors show levels over that (even though levels are under UK/EU required levels)

3.2.3 Particulate Matter (PM2.5) Table A.6 in Appendix A presents the ratified and adjusted monitored PM2.5 annual mean concentrations for the past 5 years. In general the PM2.5 levels were consistently lower than those of PM10. The UK Air Quality Objectives and Pollutants – LAQM, table 1.1 for PM2.5 imposes an obligation in England to work towards reducing emissions/concentrations of fine particulate matter (PM2.5). Sedgemoor will continue to monitor for PM2.5 and PM10 and collate the data to find any trends, hot-spots or areas of concern.

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Why cannot ESC and SZC produce date reports like this?

Guardian Newspaper report – 14/Aug 2019 - *https://www.theguardian.com/uk-news/2019/aug/14/hinkley-point-c-london-traffic-bridgwater-somerset*

Air and noise pollution, traffic chaos and rising rents are blighting the Somerset town that has found itself the gateway for the marathon construction of the new Hinkley Point C (HPC) nuclear power station, locals say.

Limits for air pollution have been exceeded on main roads in Bridgwater on multiple occasions this year, while Highways England data shows truck numbers have increased by more than 20% since building work started in 2016.

On some roads, two heavy goods vehicles pass through every minute. Not all are delivering to Hinkley but, with no bypass built for the nuclear site, locals say it has made the town unnavigable at times.

Buses transporting 4,000 construction workers to the site add to the traffic – and the influx of workers is pushing up rents. Rat runs are in gridlock and a town that is home to just under 40,000 people is experiencing London-level traffic on some roads.

Friends of the Earth, which looked at the air quality data for 2018 and 2019 provided by the local Sedgemoor district council, said it was concerned about the high incidences of particle matter on some roads.

Data shows that particle matter measuring 10 micrometers (PM10) has exceeded safe limits on Quantock Road 16 times already this year, while on nearby Bristol Road those limits were exceeded 15 times.

This is what we are worried about!