

**MINUTES OF THE SCRUTINY TASK & FINISH GROUP:  
LONDON LUTON AIRPORT AIR QUALITY IMPACT**

**WEDNESDAY 12<sup>TH</sup> SEPTEMBER 2019 AT 6.00 PM**

**PRESENT: COUNCILLORS; KEENS (CHAIR), FRANKS, MOLES, TAYLOR, AND WYNN**

**SUPPORT OFFICERS / ADVISORS:**

- Eunice Lewis – Democracy and Scrutiny Officer
- Andrew Loosley – Technical Officer - Environmental Protection / Air Quality
- Lisa Hudson - Public Health Development Officer
- Antony Aldridge - Strategic Development Manager LLAL

**ACTION**

<b>09.</b>	<b>APOLOGY FOR ABSENCE (REF: 1)</b>	
	<b>Resolved:</b> An apology for absence from the meeting was received on behalf of Councillor Waheed.	
<b>10.</b>	<b>MINUTES FROM 15<sup>TH</sup> AUGUST (REF: 2)</b>	
	<b>Resolved:</b> That the minutes of the meeting held on 15 <sup>th</sup> August 2019 be agreed, taken as read and as a correct record and the Chair be authorised to sign them.	
<b>11.</b>	<b>PROGRESS OF THE CHILL STUDY – (REF: 7)</b>	
	Gurch Randhawa PhD FFPH DL Professor of Diversity in Public Health & Director, Institute for Health Research University of Bedfordshire delivered a Power Point presentation regarding progress of the CHILL (Children's Health in London and Luton) study. He explained that CHILL was funded by the National Institute of Health Research (NIHR) programme and it had brought together a collaboration of experts from five globally leading research centres, including Asthma UK Centre for Applied Research, MRC and Asthma UK Centre in Allergic Mechanisms of Asthma, University of Bedfordshire and the University of Southern California, etc. He said that the study had been commissioned to take place in the next 4 years period and during this time, it would help to determine whether proposed interventions to reduce air pollution would help to improve the growth of children's lungs. He said that over 84 primary schools were involved in the study to reach out to over 9,000 children at the conclusion of the study.	

Professor Randhawa advised that primary school children in Luton were also taking part in this study with the hope that one of the outcomes would be to improve their health. He added that Luton schools were deliberately spread across the patch to cover the main roads along Luton and Dunstable.

. He stated that they wanted to ensure that the CHILL study was child centred and therefore the first task was to ensure that the process was child friendly. A short video clips was played that children had been evidently been encouraged to take part in the process in term of their understanding and thoughts of clean air quality. The children in the video clips explained the impact of climate change and what they would like the outcome of the study to be. The children explained their wish to make the air cleaner and the involvement of children in years 2, 3, and 4.

### **Low Emission Zones**

There had been quite a number of debate about the effectiveness of low emission zones. He said that there was no evidence so far that low emission zones were effective. He further explained that the CHILL study would hopefully produce some comparative data and evidence on whether the low emission zones were effective or not.

In terms of the work that would take place in the next 4 years he explained what work had already taken place in year 1 which included health assessment which had been completed. The Health checks would include weight check, height measurement of lungs whether they were working as they should. He said that throughout the 4 years period, children lungs check would be repeated every year to find out how their lungs had been impacted by climate change or bad air quality and how functional their lungs were. He further explained some of the work that would be undertaken in the next 4 years period.

Professor Randhawa stated that the intention was to show the video to primary school children at their assemblies in order to encourage parents and their children to get involved and this had been proved successful in terms of progress so far.

A member asked what point pollutants became active and whether it was when they were low or high. Professor Randhawa explained that year one of the study had been completed in terms of data collection and there had been a very positive response from the school children.

In terms of comparison between Luton and London, Luton was compared to London Hillingdon and Luton's pollutants levels were similar to London Hillingdon and it would interesting to see what the outcome of this study would be at its conclusion. He stated that the least polluted place was South Kensington and Marylebone Road was much worse in terms of air pollution. A member asked whether North Kensington was in the low emission zone to which the Professor responded that this was the case as that particular area was a low congestion area.

Professor Randhawa explained some of the benefits of the CHILL study which he said was to involve young children and to get the schools thinking about public health air pollutions. The benefits of the involvement for the school meant that the children involved would get a free lungs health check in the next four years.

In relation to the school testing days, he stated that the children see this as an opportunity to ask a number of questions about climate change and to widen their understanding about air pollution. It had also given the kids a new ambition to strive to become scientist. So it had become an incentive for local children. The study gives those involved the opportunity to have their cognitive development monitored, saliva test and not just the height and weight and each data would take about 30 minutes to input into the system. A lot of work was already taking place.

Professor Randhawa commented that he would be happy to return every year to inform the committee of yearly progress of the study. The DSO advised that this could form part of the recommendation from the task and finish group.

Members of the committee asked the following to which the Professor gave responses as follows:

In response to a question whether there was evidence to demonstrate that the low emission zones were effective, it was stated that this type of work had not been commissioned to take place. Unfortunately there were a lot of government policies which were not joined up. Professor Randhawa said that this study had only happened because the Mayor of London got involved and pushed for this to take place.

Members suggested that that the progress of the CHILL studies be reported to the Council's Scrutiny Children Services Review Group annually. The DSO advised that this could form part of the recommendations from this review.

The Chair of the task and finish group stated that it was essential not to deviate from the scope of the review by asking questions more relevant to Luton and to the areas surrounding the airport as this was within the remits of the review. A member stated that children were a transient and that their progress could only be monitored if they were to remain in the same vicinity. He said it was good to note that children were now considering a career in sciences as a result of this study. He asked if there was a chance that this study would benefit their parents. In response members were informed that the process would continue to encourage participation from parents in order to have a robust outcome of the study. He explained that there were other consideration in the process such as "walk to school week" which would be introduced in some schools as part of the CHILL initiatives and those children already involved had shown interest in terms of their involvement and participation.

In terms of their lungs capacity in the next 2 years, Professor Randhawa explained that there were so many variables but the report would tell in the end. In terms of taking into account other factors Professor Randhawa said that there were lots of variables especially in terms of demographics. In relation with comparative data, this study had already been scaled down but a lot of data about children's

	<p>extra curriculum activities were being collected with a little incentive of a £5.00 voucher from Sainsbury as a recognition of their participation. However, current clean air comparative data were not available. He further explained that Luton had an interesting data and a lot of achievements to be proud of although it does not always claim the credit for its achievements, such as the DART and the Airport Link Road projects, etc.</p> <p>A member raised the issue of cyclist who were usually stuff behind traffic and motor fumes and the damage being done to their health and in response, members were informed that cycling breathes in less pollution so this was not as bad as it looks. There were also cycle routes that were off the motor way without the exposure to fumes.</p> <p>Some of the primary schools in Luton which were part of the study were in the flight path such as Wigmore Primary School. Professor Randhawa stated that the Airport in themselves were not pollutants but the traffic around it was the real issue of pollution. There was recognition that Luton was doing well in terms of its recent activities to tackle air pollution. The Professor stated that Luton was doing well especially with regards to the recent activities of air pollution. It was noted that evidence showed that air pollution was worse and at a high level in London despite the low emission zones.</p> <p>In relation to Puttridge Bury area, some members expressed concern that some of airplanes during landing would fly extremely low. Members enquired whether this situation was likely to increase the rate of air pollution and requested for more evidence and information in this area.</p> <p><b>Resolved:</b> (i) That the PowerPoint presentation (Ref: 7) regarding the progress of the CHILL study be noted; and that the committee's thanks to Professor Gurch Randhawa, from Institute for Health Research University of Bedfordshire be recorded.</p> <p>(ii) That Professor Gurch Randhawa be requested to submit an annual progress update of the CHILL study to the Council's Scrutiny Children Services Review Group until the completion of the study in 4 years' time.</p> <p>(iii) That Officers be requested to submit to a future meeting of the TFG evidence and information relating to "landing and fly path" and whether this was likely to cause increased rate of pollution.</p>	
12.	<b>COMPARATIVE DATA AND TRENDS ON THE LONG TERM IMPACT OF POLLUTANTS – (REF: 8)</b>	
	<p>The Public Health Development Officer delivered a PowerPoint presentation (Ref: 8), regarding comparative data and trends on the long term impact of pollutants. She stated at the last meeting the committee requested for data of the health outcomes across the town by ward. The Officer explained that data was not available by wards but she had managed to find some data broken down by GP recorded data. She added that this was the data it was possible to identify in the time but more thorough work could be done if given the time.</p>	

She explained that whilst it was acknowledged that air pollution was a known major risk factor for health outcomes it is not the only risk factor held accountable for the data presented

With so much data to potentially share with members, the Officer explained how she used one a study to identify the premise for health indicators to share with the group. In terms of the Premises for health indicators she advised:

- An NHS site shared a study which took place in 2015 and in a bid to try to assess the link between pollution and air traffic and health outcomes. The study revealed that living near the airport may be bad for health, the officer reiterated this is only one study and that no inference could be taken, a literature review would be required if inferences were to be deduced.
- The study did however give guidance of what data to include in this presentation. The study concluded that there was increase in asthma and chronic obstructive pulmonary disease (COPD) by 17% and heart problems increased by 9%.
- The findings were in line with other evidence it also finding that changes in pollution levels had a negative impact on whole populations but greater effects in the young, sick and elderly and that increased

Members asked if it was possible to have comparative data which would be able to identify the different sources of the type of air that we breathe in Luton. At the last meeting more geographical data was reported to the committee but what members actually would like to see the sources of the pollutants. The Officer showed Members a slide from the Public Health England Evidence Review of Outdoor Air Quality which identified the sources of air pollution of health concern. The Officer reminded Members that air pollution could be linked and attributed to a lot of variables and impacts throughout the life course. Members were informed that a Public Health England document reviewed evidence available and gave information and identified interventions which could be taken to prevent, mitigate or avoid air pollution impacts. A member stated that a number of occasions, they had been informed that the traffic going to and fro was the biggest problem by comparative data, therefore another option would be to look at other sources of air pollution.

The Air Quality technical officer stated that there was a study looking at where pollutions come from, but could or maybe able to look at this in view of national pollution, however, in terms of this review, the focus should be on the areas to be covered by the scope, local figures. Also, Gatwick and Heathrow could not be considered as comparative to Luton. The Public Health Officer stated that Sheffield had done their own in depth studies highlighting what percentage of air pollution was from what sources. *The Public Health Officer has made the [Sheffield Clean Air Strategy](#) with this detailed information available to members.*

The Public Health Officer further explained that there were different sources of pollution but did not know what the Luton figure was, but nationally it was recognised that air pollution most harmful to health came mostly from traffic. Some of the ways in which air pollution could be managed were discussed in the Public Health England Evidence Review and also in the last meeting with such initiatives to reduce congestion and traffic across the town such as Park and Ride, traffic management, affordable and reliable green public transport, and accessible and attractive cycling and walking routes and clever green infrastructure designed to keep pollution away from where people live, work and travel.

The Public Health Officer presented the percentage of mortality attributable to PM2.5 in Luton compared with Luton's statistical neighbours and data from those areas with air ports. The Officer highlighted that this was modelled data. The percentage of mortality attributed to air pollution, for Luton was 6.2%, compared with England 5.1% and Thurrock who has 18 AQMA areas was 6.1%. It was pointed out that Luton had three air quality management areas in Luton.

Responding to a question, the Public Health Air Quality Technical Officer stated that Thurrock had its own issues and was known as an HGV's Hub for people travelling to London, swapping dirty vehicles to cleaner vehicles to take into London to avoid expensive congestion charges.

In terms of Asthma the Public Health Officer provided recorded patients with asthma per GP surgery. She highlighted that a key factor in accuracy of data was asthma patients being identified and included on the register. She explained that Asthma is a common, long term disease that requires ongoing management if someone has sensitive airways. She explained triggers, include stress, exercise, cold, and breathing in substances such as smoke, pollution and pollen.

A member mentioned that Luton had always had a very high prevalence of asthma. In relation to asthma split by GP surgery a member identified that patients were scattered across large areas so may not be a good indication of air pollution in areas. The Officer explained that there is no ward data available in the data she had time to search. She added that asthma incidence was higher in children than adults and 36% higher in deprived communities than in the least deprived – higher levels of damp housing and fungal spores, pollution and second-hand smoke could be contributing factors. She explained that Luton had been flagged as red with a high asthma hospital admission rate meaning it was significantly worse than the national average. She showed this information comparing with Luton's statistically closest neighbours and those in areas where the larger airports existed and asthma hospital admissions. The Officer said she was not able to deduce meaningful data from charts, but it suggested there was likely more going on than air pollution for this stats to be so high in Luton.

The Public Health Officer showed data in respect of Chronic Obstructive Pulmonary disease (COPD) again making the same caveats that it was recorded GP data and that ward data was not available. She explained that COPD usually develops because of long-term damage to lung from breathing in harmful substances, usually cigarette smoke as well as smoke from other sources and air pollution. Explaining that jobs were people were exposed to dust, fumes and

chemicals could also contribute. She explained that someone over thirty five or who had never smoked were more likely to develop Chronic obstructive pulmonary disease (COPD).

A member mentioned that smoking and vaping electronic cigarettes was also a concern. The Public Health Officer explained that vaping could not be compared in the same magnitudes of harms to health as smoking. She advised that if members wanted more information about the evidence of vaping she would be more than happy to submit a report and/or answer any questions they may have on vaping. She was informed that the Council's Scrutiny Health and Social Care Review Group would be the right committee to receive this information.

Following questions comments and statements by members, officers gave response:

- The Air Quality Technical Officer explained that Luton had not exceeded the air quality objective level and this being the case, where Luton's air pollution level was not above the maximum of 40, then Luton would not be classed as being at risk. The Public Health Officer reminded members that in terms of PM2.5 there was no safe threshold for health and that NO2 health harms were known at the current safe limits and below.
- Availability of data was a huge challenge in relation to the requirement of this review. Sheffield was mentioned where a specific study was commissioned to identify where air pollution in the city came from but it was explained this was likely expensive. Public Health Officer said that more data could be obtained but members will need to be clear about what information they want to see and allocate sufficient time for this to be realised.

The Public Health Officer explained that from the public health point of view, public health would like to see initiatives that reduce traffic and congestion in the town with greater consideration to cycling and walking, green public transport and green infrastructure that is known to support physical health and wellbeing and can in some instances if used wisely act as a barrier from air pollution. Members expressed concern that getting park and ride to function in Luton was a challenge.

Members asked that this comparative data be used at future meetings of the committee.

The Public Health Officer stated that members of the committee should consider what data if any, they may wish to see in future, recognising that sufficient time would be required to realise such data.

**Resolved:** (i) That the PowerPoint (Ref: 8) regarding comparative data and trends in terms of health outcomes be noted: and that the committee's thanks to the Public Health Officer be recorded.

	(ii) That comparative data (evidence) and the sources of air pollution be submitted to future meeting of the committee on the proviso that this information was available.	
13.	<b>OVERVIEW OF THE 2019 AIR QUALITY ANNUAL STATUS REPORT (REF: 9)</b>	
	<p>The Technical Officer (Environmental Protection and Air Quality), presented the PowerPoint presentation (Ref: 9) giving an overview of the 2019 Air Quality Annual Status Report.</p> <p>He advised members that despite little change being observed in particulate matter levels, 2018 had seen an improvement in NO<sub>2</sub> levels at Council monitoring sites compared to the previous year. Reviewing each site where the annual mean NO<sub>2</sub> concentration exceeded 40µg/m<sup>3</sup>, the officer explained that only one of these (LN67 – Castle Street) represented a substantive exceedance of the relevant air quality objective.</p> <p>Commenting on the poor air quality in the vicinity of the Castle Street / Windsor Street / Hibbert Street crossroads, a member stated that Castle Street was busy most of the time and suggested that a pedestrian system be set up.</p> <p>Looking in detail at the airport operator's diffusion tube monitoring results for 2018, the officer explained that although 6 sites had recorded annual mean NO<sub>2</sub> concentrations in excess of the 40µg/m<sup>3</sup> objective level, none of them would be considered exceedances under the terms of the Local Air Quality Management (LAQM) regime due to the absence of a relevant receptor at these locations.</p> <p>A member raised concerns that 5 of the 6 sites at which elevated levels of NO<sub>2</sub> were measured were in close proximity to a number of commercial premises. Responding to this observation, the officer explained that the relevant Defra guidance document (TG16) states that the Air Quality Objectives:</p> <p><i>“Should general not apply at building facades of offices or other places of work where members of the public do not have regular access?”</i></p> <p>Following some discussion on the potential exposure of airport passengers to elevated levels of NO<sub>2</sub> whilst passing through the drop-off zone, the officer explained that (due to the relatively short amount of time passengers spend in this area) the 1-hour mean air quality objective would apply, not the annual mean objective level. The officer noted that currently the 1-hour mean air quality objective does not appear to have been exceeded at any of the airport's monitoring sites (i.e. none of them have annual mean NO<sub>2</sub> concentrations in excess of 60µg/m<sup>3</sup>, which is necessary for the 1-hour objective to be breached).</p> <p>Following the display of a map showing the location of a number of new air quality monitoring sites established by LLAL over the last year, members requested a list of these new locations.</p> <p>Presenting a range of charts showing annual trends in air quality measurements for PM10, PM2.5 and NO<sub>2</sub>, the officer highlighted that none of the</p>	



6 Council monitoring locations within 1km of the airport boundary has ever exceeded either of the air quality objectives for NO2.

In response to a slide overlaying the annual mean NO2 measurements made along the Eaton Green Road with corresponding traffic flow data, members asked for additional clarification to be supplied on exactly what the traffic data represents.

Presenting charts showing the annual mean NO2 levels recorded at airport diffusion tube sites since 2007, the officer noted that the data held by LBC (presented) differs slightly from that published in the Airport's Annual Monitoring Report. Having looked into the cause of the apparent discrepancy, the officer commented that it appeared to be caused by the use of different bias correction factors. The officer explained that the bias correction factors are obtained from a Defra spreadsheet that is periodically refined, consequently the exact value used to bias correct diffusion tube data will vary slightly depending on when the data was processed. To account for this variation the officer stated that he had reprocessed the airport data using the correction factors stated in version 06/19 of the Defra spreadsheet and would circulate it to members to confirm that any changes would be minor and not change the overall picture presented by the figures.

The officer concluded his presentation with a number of slides regarding the contribution of surface access to airport emissions and the generic apportionment of on-airport emissions to different sources based on data from Gatwick and Heathrow.

A member commented that persuading people not to drive was a big fantasy as car park at Airports was a means of generating substantial income for the Airports. It was stated that the DART project may alleviate some of the problems and from public health point of view, it would chose bus transport overs cars.

### **Surface Access**

This was not as simple as it appear to be. Members would like to see a report on surface access and the UK Aviation and AQ and sustainable aviation.

### **Aircraft Engine Efficiency /Emission Data**

In relation to aircraft engine efficiency, members attention was further drawn to the following quote: "The International Civil Aviation Organisation (ICAO) provides information about emissions from specific engine models, within a reference landing and take-off cycle (LTO cycle), which are necessary to compare different engine technologies for certification. However, these emissions figures do not reflect day-to-day conditions".

A member asked the level of aircraft efficiency and how much of this was the responsibility of the international civil aviation. Members requested that officers should submit a report on the emissions produced by the Luton Airport.

Members further requested that a list of the location of all diffusion tubes be circulated via the Democratic Services Officer.

	<p><b>Resolved:</b> (i) That the PowerPoint presentation (Ref: 9) be noted and that the committee's thanks to the Technical Officer (Environmental Protection and Air Quality) be recorded.</p> <p>(ii) That the actions requested by members be noted and reported to a future meeting of the task and finish group as listed below:</p> <ul style="list-style-type: none"> <li>• Aircraft Engine Performance/Efficiency (Airport Related Emissions Luton Airport)</li> <li>• Surface Access – The UK Aviation and AQ sustainable aviation</li> <li>• A list of the locations of diffusion tubes – Anthony Aldridge</li> </ul>	
<b>14</b>	<b>FUTURE WORK PROGRAMME</b>	
	<p><b>Resolved:</b> That the following items be considered for submission to the next meeting of the review group on 16<sup>th</sup> October 2019 in consultation with the Chair.</p> <ul style="list-style-type: none"> <li>• Relevant data on aviation related emissions contained in the Air Quality Pollutant Inventory for England;</li> <li>• LTN diffusion tube data reprocessed with the bias correction factors specified in the version 06/19 of the Defra spreadsheet; and</li> <li>• Provide additional information/clarification on the traffic flow data available for Eaton Green Road.</li> <li>• Airport Related Emissions – source appointments information relevant to the expansion of the Airport.</li> </ul>	
	(NOTE: The meeting ended at 20.45)	