



**CPRE Kent 4
Air Quality**

Appeal by Gladman

PINS Reference: APP/V2255/W/15/3067553, 3067567 & 3148140

Swale Borough Council reference: 15/500671/OUT & 15/510595/OUT

Land Off London Road, Newington, Kent.

Proof of Evidence of Professor Stephen Peckham
Centre for Health Services Studies, University of Kent,
on behalf of the Kent branch of the Campaign to Protect Rural England

The Kent Branch of the Campaign to Protect Rural England exists to promote the beauty, tranquillity and diversity of rural England by encouraging the sustainable use of land and other natural resources in town and country.

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1. My name is Professor Stephen Peckham and I am Professor of Health Policy and Director of the University of Kent's Centre for Health Services Studies and Professor of Health Policy at the London School of Hygiene and Tropical Medicine. I have been working with local residents' groups and voluntary groups on air quality issues in Canterbury in respect of the developing Local Plan and in respect of proposed large scale developments.
2. The proposed development site is not identified as a site for housing development in the draft Local Plan which has identified a number of sites in the area including one in Newington itself. Thus, if allowed, the proposed housing will be additional to that proposed in the Local Plan. A core principle of the NPPF is that the planning system should contribute to preserving and enhancing the local environment and reducing pollution. It is for local planning authorities at the strategic level of developing local planning policies and when determining individual planning applications to have regard to improving air quality and reducing exposure to air pollution. The proposed developments will considerably add to traffic movements in the immediate area in relation to travel to work, school access, leisure trips, shopping and, with respect to the revised proposal, use of the doctors' surgery and staff, trade and visitor journeys associated with the extra care facility.
3. Apart from economic consequences of severe traffic congestion and its ill-effects on the quality of life for commuters and other road users, poor air quality and its effects on public health of local residents in the AQMAs is a serious problem that appears simply not to have been addressed. The evidence on the health impacts associated with exposure to NO₂ concentrations has developed considerably recently. The impact of reports from the Committee on the Medical Effects of Air Pollutants are evidenced by recent DEFRA Reports^{1, 2}. It is beyond dispute that poor air quality is a major influence on public health. In addition the adverse health effects of particulate matter (PM) are also widely accepted.
4. The Ambient Air Quality Directive 2008 was transposed in UK law by the Air Quality Standards Regulations 2010. Responsibility for meeting EU air quality limit values lies with central government, hence DEFRA coordinating air quality plans and assessments throughout the UK. In order for these objectives to be met and regulations implemented, the planning system, through local planning authorities, must play its part. The South East (zone 0031) area action plan arising from the DEFRA 2015 *Air Quality Plan* states that air quality should comply with national air quality standards by 2020. The Council has a legal obligation to meet EU directives on levels of air pollution.
5. Environmental Protection UK and the Institute of Air Quality Management have produced

¹ Valuing Impacts on air quality: Updates in valuing changes in emissions of Oxides of Nitrogen and concentrations of Nitrogen Dioxide (DEFRA September 2015)
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/460401/air-quality-econanalysis-nitrogen-interim-guidance.pdf

² Improving Air Quality in the UK - Tackling Nitrogen Dioxide in our towns and cities (DEFRA December 2015)
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/492901/eq-plan-2015-technical-report.pdf

Guidance "*Planning for Air Quality*" which is aimed at the spatial planning system³. It is for local planning authorities at the strategic level of developing local planning policies and when determining individual planning applications to have regard to improving air quality and reducing exposure to air pollution.

6. Compliance with and contribution towards EU limit values or national objectives for air quality is a significant material planning consideration and the adverse impacts on public health must be central to the determination of any housing application with regard to its effects on the existing AQMA. But that has not happened. In *Improving Air Quality in the UK*⁴ DEFRA states that:

The National Planning Policy Framework is clear 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 air pollution. New development should be appropriate for its location, taking proper account of the effects of pollution on people's health (Para 232).

7. Paragraph 124 of the NPPF states:

*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.*

8. The main source of air pollution in the AQMAs is from traffic emissions from the major roads. The proposed development site lies adjacent to an AQMA in Newington covering the A2 with two further AQMAs located to the east and west on the A2 in Sittingbourne and Rainham. The primary source of pollution is from traffic although background particulate matter (PM_{2.5}, PM₁₀, Ozone etc) also are important – especially PM_{2.5}. No assessment of PM_{2.5-10} is undertaken at roadside sites in this area but recent World Health Organisation (WHO) data⁵ revealed that in the South East both Eastbourne and Southend-on-Sea had PM levels above that recommended by WHO, and this would also be true for this stretch of the A2 in Newington.
9. The developers have argued that the proposed developments will not have any significant impact on air quality and have not undertaken an air quality assessment. However, responsibility lies with the local planning authority to ensure that additional impacts on air quality from this site are considered alongside other local developments in terms of fulfilling NPPF policy “...**taking into account the presence of Air Quality Management Areas and the cumulative impacts on air quality from individual sites in local areas.**”

³ <http://www.iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf> (submitted for inclusion in Core Documents Library)

⁴ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/486636/air-quality-plan-2015-overview-document.pdf

⁵ World Health Organisation Outdoor Air Pollution database, May 2016
http://www.who.int/phe/health_topics/outdoorair/databases/cities/en/

10. Based on TRICS calculations the proposal for 300 houses would generate 2100 vehicle movements per day. DETR traffic data shows a slight sustained growth in traffic numbers on the A2 in Newington and an additional 2100 car journeys involving the A2 at this point represents a significant increase even if only half the journeys are through Newington rather than heading west. However, given the rural nature of Newington and that most people travel outside of the area for work, education, shopping and to visit leisure and recreational facilities it is likely that TRIC data underestimates the total number of vehicle movements. The revised proposal for 126 houses, a doctors' surgery and 60 place extra care facility would produce 882 vehicle movements from the dwellings and the surgery and extra care facility would result in vehicle movements equivalent to between 80-120 houses. Again a significant increase on current vehicle movements and will involve additional larger HGVs delivering to the extra care facility. If the surgery draws on a population outside of Newington vehicle movements may be greater still.
11. In both cases the cumulative effect of these vehicle movements and others from proposed development in the same area will substantially increase traffic levels of the A2 through the AQMA. The level of traffic turning onto and off the A2 will also have an impact on traffic flow leading to further congestion – especially where the road narrows within the village requiring larger vehicles having to wait for oncoming traffic before passing through the village.
12. NO₂ levels in Newington are measured by one automatic roadside station and nine diffusion tubes. Full data for all diffusion tubes is not available for 2015 but unadjusted levels ranged between 37µ/mg and 60µ/mg and for those receptors where data is available to calculate annual means (SW19, SW35, SW36, SW37, SW42, SW45 and SW66) ratified levels ranged between 30 and 46 with three receptors showing levels at 40µ/mg or above. The other receptors recorded levels of just under 30µ/mg or more. NO₂ data from the Swale Newington 3 automatic roadside monitoring station recorded a mean of 30µ/mg in 2015. While there were no hourly breaches of the upper limit (180µ/mg per hour exceeded 18 times per annum) but on a number of occasions during the year levels reached 150µ/mg+. NO_x and NO₂ are also significantly harmful to people's health. While UK maximum levels of NO₂ are 40µ/mg the world Health organisation recommends maximum levels of 20µ/mg and a recent report by the Royal College of Physicians⁶ identifies adverse health consequences for children above 10µ/mg. The AQMA in Newington is along a stretch of the A2 where buildings are close to the road edge creating a canyon effect which prevents emissions from dispersing and therefore exacerbates poor air quality.
13. The proposed Local Plan has allocated a site in Newington for the development of 115 houses and there are other sites that would have traffic implications for the A2 in Newington and affect the AQMA. The proposed Local Plan already identifies that in respect of the proposed development of 115 houses:

⁶ RCP and RCPH 2016: Every breath we take; the lifelong impact of air pollution
<https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution> (summary document submitted for inclusion in the Core Documents Library)

Newington experiences pressures on the local road network outside the usual peak hours. As a result, a transport assessment will need to consider the need for, and funding of, off-site infrastructure improvements. This shall include the junction with the High Street, the A2/Church Lane junction and the Key Street roundabout (A2/A249). In the case of improvements in the centre of the village, the potential here will be limited due to the impact on listed buildings. The Transport Assessment should also inform impacts upon air quality, ensuring the development does not compromise the centre of Newington which is an Air Quality Management Area. Innovative mitigation measures may be required to address any impacts. (Paragraph 6.5.140)

14. Any increases in traffic movements will undoubtedly increase pollution levels through increased traffic numbers and increased congestion. Any interruption of traffic (stop/go and severe slowing of traffic speed (to between 10 and 15km/hour) substantially increases the level of emissions from motor vehicles. A reduction from an average speed of 50km/hour to 10k/hour doubles CO₂ emissions from petrol and diesel cars (Based on Euro 4 data) and NO_x by at least 50%.
15. It is inconceivable that improvements in emission control in vehicles would enable such a substantial reduction in NO₂ levels or indeed other emitted pollutants (CO₂, PM_{2.5-10}, SO₂) given that traffic levels are predicted to rise. The recent analysis by the UK Parliament's Environmental Audit Committee (2014) suggested that compliant Euro 6 diesel cars may in fact produce levels of NO₂ around seven times higher than the regulated limit in the real world. Thus modelling using non-real world pollutant levels will be substantially underestimating actual NO₂ levels. It is not clear how the effects of increased pollution levels are to be mitigated. Proposals for mitigation have been calculated as a financial contribution in line with DEFRA's national guidelines but there is no indication how such financial mitigation is to be used to reduce pollution levels. Any increase in traffic levels will result in increasing pollution levels and continued breaches of national air quality limits and increasing pollution levels and failure to meet the planned reductions by 2020 required by the South East (zone 0031) area action plan. Given the clear adverse impact on air quality it is unacceptable that there is no clear mitigation plan. The only possible way to ensure that future pollution levels in the AQMA are within statutory limits would be to reduce, not increase traffic. Thus any vehicle movements from the site would have to not be through the existing AQMA or impact on adjacent AQMAs in Teynham and Sittingbourne.
16. In 2013 Swale Borough Council undertook a Quantitative Appraisal of Newington AQAP Measures which provided "*... quantitative estimates of the impacts on local NO₂ concentrations likely to result from the implementation of the measures proposed in the Newington AQAP. The assessment focuses on impacts in the AQMA to predict whether compliance with NO₂ objectives is likely to be achieved if the measures are implemented*" (Section 1.2). The report concluded that to comply with NO₂ objectives would require reductions in HGV and vehicle traffic along with moving the pedestrian crossing. Clearly any increase in traffic would therefore exacerbate the problems of air quality in the AQMA and result in not meeting NO₂ objectives.

17. The effects of air pollution on human health cannot be ignored and all efforts should be made to improve, not add to, the ambient air quality in Newington, and in the local and adjacent AQMAs on the A2 in particular. To rely on mitigation measures dealt with by conditions in individual planning applications completely fails to address the cumulative impacts of allocating these large sites within the draft Local Plan on the Newington AQMA.
18. Compliance with and contribution towards EU limit values or national objectives for air quality is a significant material planning consideration and the adverse impacts on public health must be central to the determination of any development application with regard to its effects on the existing AQMAs. This proposed development will contribute to the continuing breaches of limit values of the Air Quality Directive 2008/50/EC. This is a significant constraint on further development, and must be fully addressed by the applicants.