Dear Sirs,

I write on behalf of Kew Residents Association, an organisation representing residents living in Kew Ward, London Borough of Richmond –upon –Thames.

We object to further expansion of Heathrow Airport, whether it is the additional Northwest Runway Scheme (Heathrow NWR), or the Extended Northern Runway Scheme (Heathrow ENR), since both schemes will cause a significant and harmful increase in atmospheric nitrogen dioxide. We focus our objection on nitrogen dioxide for three reasons.

- High concentration of this air pollutant is a major threat to human respiratory health. It induces airway inflammation in healthy people and exacerbates symptoms in asthmatic patients. Rigorous quantification of mortality and morbidity due specifically to nitrogen dioxide is not available but is known for particulate pollution. The latter causes 29,000 premature deaths per year in the UK, of which about 4000 are in London [UK Government Committee on the Medical Effects of Air Pollution]. By analogy, it is reasonable to predict significant deaths and morbidity from increased atmospheric nitrogen dioxide pollution.

- We draw attention to the fact that the atmospheric nitrogen dioxide concentration adjacent to major roads in our area already exceeds UK and EU statutory limits. Further increases associated with inevitable increased road traffic associated with Heathrow expansion will exacerbate this and delay DEFRA's goals of reducing levels to acceptable limits.

- "The Airports Commission: Air Quality Assessment" is an extremely complex document covering many topics. Brevity precludes commenting on all of them. However we propose that atmospheric nitrogen dioxide concentrations are a key indicator of the deleterious effect of Heathrow expansion. The projected levels after expansion are, in themselves, sufficient reason to reject further expansion of Heathrow.

Projected Nitrogen Dioxide levels after Heathrow expansion

Heathrow NWR scheme. The Jacobs Report for the Airports Commission states:

"the incremental change (in NO_2) associated with the unmitigated Heathrow NWR Scheme would cause the retained Bath Road (A4) sector PCM road link to have a marginally higher concentration in 2030 (48.7 µg/m3) than the Maximum PCM Predicted Concentration in the Greater London Agglomeration (which is 48.6 µg/m3and occurs at Marylebone Road). The unmitigated Heathrow NWR Scheme would thus delay Defra in achieving compliance with the Limit Value."

The description of 48.7µg/m3 as being a marginally higher level than the maximum PCM predicted concentration in Greater London does not really make the point! What is important is that

48. 7µg/m3 is well in excess of the statutory EU and UK limit of 40 µg/m3, the level with which the UK must comply following the recent ruling of the Supreme Court. Nitrogen dioxide levels above 40 µg/m3 are considered to be harmful to health. Thus this scheme must not be allowed to go ahead, especially when a non-polluting alternative of building a second runway at Gatwick is available.

If some of the mitigation measures proposed were implemented, the Report acknowledges only that "*they might be sufficient to avoid delaying compliance"*. Use of the word "might" does not give confidence that they definitely would avoid delaying compliance, or causing health problems for the 121,377 people living in the Principal Study Area.

Heathrow ENR scheme The Jacobs Report for the Airports Commission states:

"the incremental change associated with the unmitigated Heathrow ENR Scheme would cause one of the Bath Road (A4) sector PCM road links to have a higher concentration in 2030 (55.8 µg/m3) than the Maximum PCM Predicted Concentration in the Greater London Agglomeration (which is 48.6 µg/m3). The unmitigated Heathrow ENR Scheme would thus delay Defra in achieving compliance with the Limit Value".

Again what is important is that 55.8µg/m3 is way, way, in excess of the statutory EU and UK limit of 40 µg/m3, the level with which the UK must comply.

The Report goes on to state that even If all of the proposed "*mitigation measures were incorporated, a reduction in NO2 concentrations at the Bath Road PCM receptor could be achieved, but may not be sufficient to avoid delaying compliance".* The ENR scheme would put the health of 100,389 people living in the Principal Study Area at risk. We conclude that any proposal to adopt this scheme should be dismissed.

Existing nitrogen dioxide levels in Kew Ward

The London Borough of Richmond upon Thames is designated an "Air Quality Management Area" because nitrogen dioxide levels in the Borough continue to exceed the statutory level. Most of the air pollution in the Borough comes from traffic (Richmond.gov.uk). Three major roads run through Kew Ward, the A316 on the southern boundary, which connects to the M3 motorway; the A205 (South Circular Road/ Mortlake Road); and the A307 (Kew Road). All these roads are very busy and the most recent available analysis shows that nitrogen dioxide levels exceed statutory levels at all sites tested, as shown in the table.

Kew Roads: Kerbside Nitrogen Dioxide concentrations (µg/m^3) by diffusion tube, 2010-2012

ROAD	Location on Road	2010	2011	2012	Mean
Mortlake Rd (A205)	Cemetery gates	59	41	48	49
Mortlake Rd (A205)	West Hall Rd	62	44	55	54
Mortlake Rd (A205)	Kent Rd	54	40	53	49
Lower Richmond Rd (A316)	Chalkers Corner	71	52	59	61
Kew Road (A307)	Walpole Ave	46	50	56	51

Source: From Table 10, Air Quality Progress Report for *The London Borough of Richmond upon Thames, 2014*

476000 flights per year currently use Heathrow Airport and this is predicted to rise to over 700,000 flights if a third runway is built**. It is inconceivable that this huge increase in flights will not result in a very large number of extra passenger road journeys to and from the airport.** The three main roads running through Kew carry much of the traffic from south London and beyond to the M4 and A4 and thence west, including passengers to Heathrow. It is inevitable therefore that with this enormous expansion of the airport, we will see more traffic to and from the airport travelling through Kew, adding to air pollution in an area which is already significantly in excess of UK and EU NO_2 limits. The sequel to increased levels of NO_2 is increased respiratory health problems for our residents, especially children. In December 2014 the Environmental Audit Committee of the House of Commons has warned that schools must not be built next to polluted roads stating that "*children growing up near busy roads with high NO2 and particle emissions have stunted and impaired lung* development". This situation, the Committee said is unacceptable and protecting children and vulnerable people in affected areas should be a priority for Government and Local Authorities. In Kew we have 3 primary schools adjacent to Mortlake Rd, one on Kew Rd, and three other schools within a 100 metres of our main roads. The aim must therefore be to radically reduce traffic and pollution on these roads and certainly not to do anything which would increase it, including expanding Heathrow. The same argument could of course be applied to many other areas of West London

In summary, a recommendation to approve either of the runway proposals for Heathrow would be an environmental disaster, increasing air pollution near the airport and further afield. In our view it would be criminal to support a recommendation to go ahead with the NWR or ENR schemes, knowing that they would not only delay achieving acceptable and legal levels of NO_2 but would actually increase the poisoning of our air and severe health problems for children and vulnerable adults.

A far less polluting, financially viable, alternative exists to solve the problems of London's requirement for a further airport runway – the expansion of Gatwick Airport. We ask the Commission to approve this option and not those at Heathrow.

Yours faithfully,

[redacted]

[redacted]