

# Save West of Ifield Response to Horsham District Local Plan 2023-2040

## Regulation 19

### Strategic Policy HA2 – Air Pollution<sup>1</sup>

#### 1 Introduction

- 1.1 This report focuses on issues related to air pollution that will result from the implementation of Strategic Policy HA2. As HA2 is on the boundary of Crawley Borough we have drawn on the evidence base of the Crawley Local Plan. Of particular importance are CBC's annual Air Quality Status Reports, as they provide information about the monitoring of pollutants at a large number of sites across the town, including two close to HA2.
- 1.2 The Horsham Plan 2023-2040 'parked' the original aspiration, proposed by Homes England, of the 3,000 house development (HA2) being the first phase of a much larger development of 10,000 houses. This is no guarantee that the idea will not emerge in the next plan period. There is already a 'search corridor' for a link road from the A264 at Faygate to Manor Royal. This road will then complete the circle of roads major roads around Crawley, with all the attendant traffic pollution. Therefore, while concentrating on the 3,000 development, reference is also made to the 10,000.

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<sup>1</sup> The author of the report is Jenny Frost. She has a background in physics and education. She is grateful to Paul Taylor-Burr for his assistance in the collection of information.

## 2 Executive summary

- 2.1 Following the UK's departure from the EU and the end of the transition period, those air quality laws relating to NO<sub>x</sub>, PM and Ozone for the protection of human health originating from EU legislation are retained in domestic legislation in accordance with the EU (Withdrawal) Act 2018 (as amended) and subsequent regulations.
- 2.2 The plan when adopted must conform to this legislation. If the evidence in preparing this plan indicates that the plan will not meet the legislation it could be subject to Judicial Review.
- 2.3 The *cumulative* effects of potential development in the area, including the expansion of activities at Gatwick, and the presence of an AQMA in Crawley, need to be addressed to ensure that air quality is not compromised.

## 3 Background

- 3.1 Air is taken for granted as it is invisible, but its invisibility hides components deleterious to health and its changing composition. There is a natural cycle whereby its constituents are replenished (for instance the absorption of carbon dioxide and the release of oxygen through photosynthesis in plants) which can be disturbed by human activity.

### Constituents of the air

- 3.2 A simple approximation of the proportion of constituents of air is: 78% nitrogen; 21% oxygen; with carbon dioxide and rare gases making up the last 1%. The proportion of its constituent gases have been subject to change with increased industrialisation (from 280 ppm CO<sub>2</sub> pre-industrialisation to 412 ppm in 2019 – and related reduction in the proportion of O<sub>2</sub>). Of all the gases, the one contributing most to climate change is carbon dioxide. The need for 'carbon capture' is now well documented internationally.

### Air Pollutants

- 3.3 Defra lists the following air pollutants for which there are limits that should not be exceeded:

particle matter; nitrogen dioxide, Ozone, sulphur dioxide; polycyclic aromatic hydrocarbons (PAHs); Benzene; 1,3-butadiene, carbon monoxide and lead.

However, it identifies Particle Matter and Nitrogen Dioxide as the two components most deleterious to health. Local authorities are required to submit an Annual Air Quality Status Report (ARS) based on the monitoring of NO<sub>2</sub> and Particulate Matter.

### **Particulate matter (PM)**

- 3.4 Research on air pollution divides particles into three categories PM<sub>10</sub>; PM<sub>2.5</sub> and PM<sub>0.1</sub><sup>2</sup>. PM<sub>10</sub> are those particles that are less than 10 micrometres (10<sup>-6</sup>m), PM<sub>2.5</sub> less than 2.5x10<sup>-6</sup> m and PM<sub>0.1</sub> less than 0.1x10<sup>-6</sup>m. Sources of these are:

PM<sub>10</sub> – construction dust and road dust.

PM<sub>2.5</sub> - vehicle emissions; wildfires; power plant emissions including from waste incinerators.

PM<sub>0.1</sub> – also referred to as Ultra Fine Particles or UFP - same sources as PM<sub>2.5</sub>, and particularly from aircraft fuel.

There are ambient air quality standards for PM<sub>10</sub> and PM<sub>2.5</sub> but not yet for PM<sub>0.1</sub>.

- 3.5 There are ways of filtering out particles PM<sub>10</sub> and PM<sub>2.5</sub>, and these are built into some industrial enterprises. However, PM<sub>0.1</sub> is extremely difficult to filter out mechanically. PM from road use (tyres and brakes) have no mechanical means of being removed, whatever the size.

### **Nitrogen Dioxide**

- 3.6 Nitrogen Dioxide comes from combustion of fossil fuels (coal, oil and gas) especially from cars and from waste management. In addition, there are natural sources: volcanoes; oceans; biological decay; and lightning strikes. Human activity adds 24 million tons of nitrogen oxides to the atmosphere annually. It also contributes to the production of other air pollutants, including ozone (O<sub>3</sub>), nitric acid (HNO<sub>3</sub>) and nitrates (NO<sub>3</sub><sup>-</sup>).

### **Standards**

- 3.7 Limits set for safe levels of nitrogen dioxide are:

- annual average of 40 µg/m<sup>3</sup>
- 200 µg/m<sup>3</sup> in any one hour

Limits set for safe levels of PM<sub>2.5</sub> and PM<sub>10</sub> are:

- annual average 20mg/m<sup>3</sup>
- mean of 50 mg/m<sup>3</sup> in any 24-hour period,

Exceedance of these limits determines designation of an area as an AQMA.

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<sup>2</sup> <https://www.gov.uk/government/statistics/air-quality-statistics/concentrations-of-particulate-matter-pm10-and-pm25>

### **Health hazards from all pollutants**

- 3.8 'Air pollution is a major public health risk ranking alongside cancer, heart disease and obesity'<sup>3</sup>. Air pollution in general is known to contribute to increases in incidents of cancer, heart disease and respiratory infections. It is particularly dangerous for people who suffer from asthma.
- 3.9 Nitrogen dioxide dissolves in water to form nitric acid which is corrosive to the surface of the airways and the lungs, hence reducing the ability of the respiratory system to cope with infections. Ozone which is associated with nitrogen dioxide also causes damage to skin cells in respiratory tracts and cause breathing problems.
- 3.10 Emerging research indicates that PM<sub>0.1</sub> can penetrate the body further, getting into the bloodstream and can more easily coat the whole surface of the lungs. With the lining of the lungs coated the gaseous exchange by which the body takes in oxygen is much reduced. Even PM<sub>2.5</sub> can enter the bloodstream and be transported to other parts of the body including to the brain.
- 3.11 Those most susceptible to pollution related diseases are young children, the elderly and those with pre-existing lung problems. Much of the air pollution is transport related (TRAP). Young children are more susceptible to TRAP just because they are closer to the ground where the emissions are at their densest. Long exposure can lead to complications in pregnancy and low birth weights.

### **Monitoring of air pollutants**

- 3.12 The government provides data on air pollution measurements from across the country, with an analysis of the data and overall trends in annual, monthly and daily exposure to NO<sub>2</sub>; PM<sub>10</sub>; PM<sub>2.5</sub>; ozone (O<sub>3</sub>) and Sulphur Dioxide (SO<sub>2</sub>). The picture is one of overall downward trends, but it has to be remembered that some of the reduction is attributed to reduction in the use of coal fired energy production, both in UK and in Europe.
- 3.13 Horsham's and Crawley's ASRs are publicly available on their respective websites. However, Horsham's monitoring sites are mainly clustered in Storrington, Cowfold and Horsham Town, with none near HA2 site. Given that HA2 is to be placed on Crawley's borders, we have used Crawley's air pollution report<sup>4</sup> to understand the situation at present.
- 3.14 Crawley has 111 non-automatic NO<sub>2</sub> monitoring sites across the town, some measuring kerbside pollution and some background pollution. There are three automatic NO<sub>2</sub> monitoring sites associated with Gatwick airport. One (CA2) on the

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<sup>3</sup> <https://www.gov.uk/government/publications/air-quality-explaining-air-pollution/air-quality-explaining-air-pollution-at-a-glance>

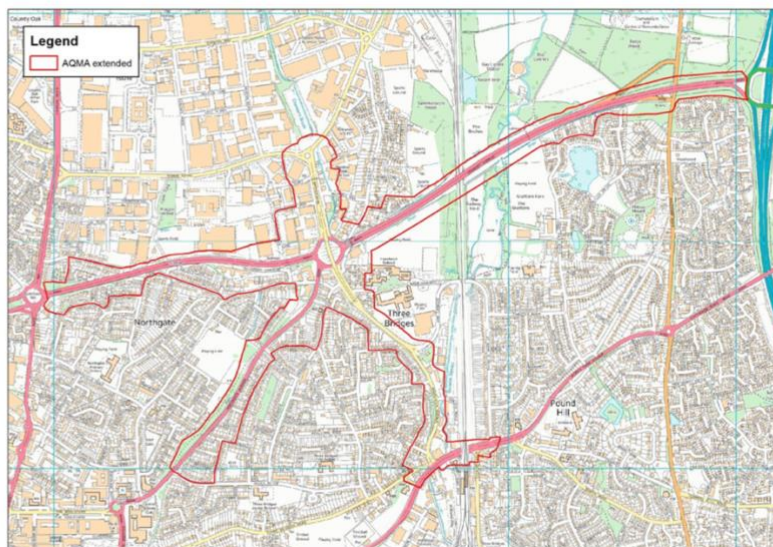
<sup>4</sup> Crawley Borough Council 2023 *Air Quality Annual Status Report (ASR)* September 2022  
In fulfilment of Part IV of the Environment Act 1995 Local Air Quality Management  
<https://crawley.gov.uk/sites/default/files/2023-08/Annual%20Air%20Quality%20Report%202023%20v1.pdf>

eastern side of Gatwick airport, is operated by Crawley, another on the south terminal (LGW3) is operated by London Gatwick and the third, to the southwest of the airport, (RG3) by Reigate and Banstead Borough Council (RBBC). CA2 and LGW3 also monitor PM2.5 and PM10.

- 3.15 In addition, people living in areas near Gatwick Airport, (Ifield, Langley Green, Forge Wood, Horley) are well aware that, depending on wind direction, they can smell and even taste aviation fuel. They are their own monitoring devices! But this is not picked up by NO<sub>2</sub> and particle monitors.
- 3.16 Crawley has one Air Quality Management Area (AQMA) along Crawley Avenue and the Hazelwick roundabout, which in 2021, was extended to the area round Three Bridges station and is now referred to as the Crawley AQMA. (see screenshot below from the Crawley 2023 ASR).
- 3.17 The 2023 CBC ASR contains data from 2022 monitoring with graphs comparing data over a five year period. These enable overall trends plus significant variations from the trend due to exceptional circumstances such as COVID lockdown in 2020 and early 2021.

#### Appendix D: Map(s) of Monitoring Locations and AQMAs

Figure D.1 – Map of Crawley AQMA Boundary



#### **Role of vegetation in reducing air pollution**

- 3.18 Vegetation plays an important role in reducing both gaseous and particulate matter as well as climate change:

*Plants are involved in the uptake transfer and assimilation (or in some cases the decomposition) of many gaseous or particulate pollutants. Therefore trees and vegetations can play an important role in influencing urban air quality,*

*and in mediating some of the negative effects of pollutants. Vegetation also removes from the atmosphere carbon dioxide (CO<sub>2</sub>) – the main greenhouse gas associated with climate change<sup>5</sup>.*

This is also acknowledged in Crawley Borough Council's Topic Paper 6 Climate Change July 2023<sup>6</sup>.

*Air quality is in some ways distinct from climate change, to the extent that not all air pollutants are counted as greenhouse gases. Notwithstanding this, these issues are closely linked, both in the role which some pollutants play in contributing to the greenhouse effect, and in the effects of climate change in terms of poorer outdoor and indoor air quality....*

- 3.19 However, the Forestry Research and CBC document make clear that not all vegetation is suitable, and the Horsham Plan points out that deposition of NO<sub>2</sub> can damage ancient woodland (HDC 2023, 6.16). There is specific legislation on the level of NO<sub>2</sub> near sensitive habitats<sup>7</sup>.

#### **Mortality attributable to long-term exposure**

- 3.20 The ASR also provides a figure for the percentage of deaths that can be attributable to exposure to air pollutants. Crawley's figures are similar to places like Brighton and Worthing marginally below the national average and below London.

*In Crawley, the latest (2021) estimated fraction of mortality attributable to long-term exposure to particulate pollution was 5.4% ... Crawley's level (5.4) places it in a similar position to other urban centres in the region such as Reigate (5.6), Brighton (5.3) and Worthing (5.3), but below the higher mortality values attributable to PM in major cities such as London (7.2%) and the national average of 5.5%.*

*The mortality indicator for particulate pollution in Crawley has improved from the previous year (6.2%). This improvement was reflected across the region in Sussex and the Southeast and is likely to be due to natural year to year variation as well as increased regulatory measures and technology to control particulate pollution nationally and regionally.*

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<sup>5</sup> <https://www.forestresearch.gov.uk/tools-and-resources/fthr/urban-regeneration-and-greenspace-partnership/greenspace-in-practice/benefits-of-greenspace/improving-air-quality/#:~:text=Plants%20are%20involved%20in%20the,the%20negative%20effects%20of%20pollutants.>  
Accessed 30 January 2024

<sup>6</sup> <https://crawley.gov.uk/sites/default/files/2023-08/Topic%20Paper%206%20Climate%20change.pdf>

<sup>7</sup> Chartered Institute of Ecology and Environmental Management Advisory Note: Ecological Assessment of Air Quality Impacts  
<https://cieem.net/wp-content/uploads/2020/12/Air-Quality-advice-note.pdf>

## 4 Policies related to Air Pollution

### National Planning Policy Framework (2023)

4.1 On pollution, the NPPF 185 states:

*“Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development.”*

4.2 NPPF 186 requires compliance with relevant limit values for air pollutants, and also states that opportunities to improve air quality or mitigate impacts should be identified.

*“Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking account of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites or local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications...”*

4.3 Para 186 also draws attention to the need to take into account *cumulative* impacts from individual sites, which is why it is so important to draw on the Crawley reports of pollution and to recognise that HA2 is close to Gatwick Airport.

### Relevant Case Law

4.4 The Court of Appeal confirmed a High Court ruling that a 330-home scheme, submitted by land promoter Gladman for countryside in Kent, was rightly refused at appeal in light of the UK's failure to meet the requirements of EU air quality standard. An inspector was found in the high court case Gladman Developments Limited v SoS and Swale BC 6/11/2017 to have made no error in interpreting the impact of vehicle emissions on existing residents in dismissing two housing appeals. Mr Justice Supperstone held that the inspector had properly applied and understood ClientEarth v SoS for the Environment, Food and Rural Affairs 2016, which required the government to restrict air pollutants to within set levels. The Court of Appeal Gladman Developments Limited v SoS and Swale BC 12/9/2019 said it was no part of the inspector's duty to resolve the "tension" between the government's established default in meeting EU air quality standards and the means by which - and when - those targets would be achieved. It was, the judge said, "obvious" that "proposed development such as this, judged likely to worsen air quality in a material way because the proposed mitigation had not been shown to be effective, was inevitably inconsistent with the air quality action plans".

## Horsham District Plan Regulation 19 Policies

4.5 Strategic Policy 11 Environmental Protection echoes the NPPF policies.

*“Development proposals must ensure that they...*

*Minimise air pollution and greenhouse gas emissions in order to protect human health and the natural environment.*

*Contribute to the implementation of local Air Quality Action Plans and do not conflict with their objectives.”*

4.6 HDC (para 6.13) has also made the decision to declare the whole of the district an ‘Emission Reduction Area’ because the ‘main source of air pollution is from the vehicle emissions’ and because of “the potential for traffic increases arising from new development...”.

4.7 Strategic Policy 12 lists the guidance that proposals will be required to follow related to air pollution both during construction and afterwards. This includes: the Air Quality and Emission Guidance for Sussex (2021); Air Quality Action Plans; impact on habitats and biodiversity. It requires proposals also “to mitigate the impact on the amenities of users of the site” and ensure “that the cumulative impact of all relevant permitted and allocated developments, including associated traffic impacts, is properly assessed”. p 59.

4.8 The Air Quality Emissions Guide for Sussex (2021) states:

*“A basic design is expected to deliver: 1. No additional exposure to increased air pollution for existing or future occupants...”* and it also repeats national policy that both “an air quality assessment and an emissions mitigation assessment” are required

4.9 This requirement of the developer is expressed in Policy HA2 in HA2.5:

*“An Air Quality Impact Assessment and comprehensive Air Quality Strategy is submitted to and agreed by the Council to demonstrate that any impacts on the Hazelwick Air Quality Management Area and any impacts elsewhere, have been assessed and mitigated”.*

What is evident is that the onus for checking on the Air Quality Impacts lies with developers; it is further down the line in time from the plan itself.



## 5 Evidence Base

### Results from monitoring air quality in Crawley

- 5.1 Crawley's ASR shows that while the levels of NO<sub>2</sub> in the AQMA are just below the 40mg/m<sup>3</sup> safe limit, they are close to it, so the designation of AQMA is being retained.
- 5.2 Over the last five years there has been a steady decline in air pollution in the town as a whole (average NO<sub>2</sub> levels in 2018 were 19 µg/m<sup>3</sup> and in 2022 were 14 µg/m<sup>3</sup>. LAQM 2023 fig A3, p.44). CBC put this down to improvements in car design, reduction in the use of diesel cars, and societal changes such as working from home and using active travel. The effects of lockdown are evident in the dip in air pollution measurement during that period, particularly the dip in NO<sub>2</sub> readings at Gatwick.
- 5.3 The use of cars is however increasing and may offset improvements being made by the council through other measures. In their conclusion CBC writes:

*There were no exceedances of the annual mean air quality objective for nitrogen dioxide in 2022 and NO<sub>2</sub> concentrations remained below pre-COVID levels for a further year. However, there are indications that traffic levels are gradually rising, and this was reflected in small increases in measured NO<sub>2</sub> in 2021 and 2022 at sites within the AQMA and around Gatwick. The effect was not seen so clearly at other roadside and background sites across the monitoring network, where NO<sub>2</sub> levels appeared more stable, and it remains unclear at this time where pollutant levels will settle post-COVID. Given that the primary local source of pollution in Crawley is from vehicle emissions, we need to more fully understand the future trend in post-COVID vehicle movements and subsequent traffic related pollutant levels in order to effectively target air quality improvement measures. LAQM Report 2023 iv.*

- 5.4 The report identifies two factors that could make the situation less favourable. One is the increasing developmental pressures in the area. The other is the Development Consent Order (DCO) application from London Gatwick, which, if it were permitted, would result in increased aircraft movement, increased passenger movement to and from the airport, and increased numbers of freight lorries. These will have a significant effect on both the NO<sub>2</sub> and particle pollution levels.

- 5.5 The two monitors nearest to HA2 site, CR107 on the Ruser Road and CR 67 in Langley Green, are both Urban Background monitors – they are not Roadside Monitors and are placed about 10 metres from the road. They are both giving annual measurements of about 12/13 for NO<sub>2</sub>.
- 5.6 Annual averages inevitably mask peaks and troughs on different days depending on weather and time of day. Here is a screen shot for Crawley for one day in January, sent to me by someone who has to monitor air pollution because of an underlying health conditions.



### Evaluations from HDC’s sustainability report

- 5.7 HDC’s sustainability report conducted by an outside consultant, has one Sustainability assessment objective (SA objective 14) which relates to air pollution (“To limit the air pollution in the District and ensure lasting improvements in air quality”). The associated questions used for the appraisal are shown in the extract from Table 3.2 SA Framework (LUC, July 2021, Sustainability of the Horsham District Plan Local Plan Regulation 19, p 24)<sup>8</sup>

SA Objective	Appraisal questions: Does the Local Plan option/policy...		Relevant SEA topics
SA14: to limit air pollution in the District and ensure lasting improvements in air quality	SA4.1 Does the plan avoid, minimise and mitigate the effects of poor air quality? SA14.2 Does the Plan promote more sustainable transport and reduce the need to travel? SA14.3 Does the plan minimise measures which will help to reduce congestions? SA 14.4 Does the Plan minimise increases in traffic in Air Quality Management Areas? SA14.5 Does the plan facilitate the take up of low/zero emission vehicles?		Air and Human Health

<sup>8</sup> [https://www.horsham.gov.uk/\\_data/assets/pdf\\_file/0003/104592/Final-SA-Report-for-Horsham-District-Local-Plan-Reg-19-Reduced-size.pdf](https://www.horsham.gov.uk/_data/assets/pdf_file/0003/104592/Final-SA-Report-for-Horsham-District-Local-Plan-Reg-19-Reduced-size.pdf)

5.8 The appraisal document uses the coding on the right. In applying the SA14 questions to the Wol site, the appraisal comes up with +/-/? against a dark blue background. It is hard to ascertain what this means. Presumably they are saying that it might be slightly positive, but they are not sure.

Figure 2.2 Key to symbols and colour coding used in the SA of the Horsham Local Plan Review

++	Significant positive effect likely
++/-	Mixed significant positive and minor negative effects likely
+	Minor positive effect likely
+/- or +/-	Mixed minor or significant effects likely
-	Minor negative effect likely
-/+	Mixed significant negative and minor positive effects likely
-	Significant negative effect likely
0	Negligible effect likely
?	Likely effect uncertain

5.9 The assumptions underlying this choice are: a) that people are likely to find employment in Crawley and so will not have to travel so far by car or can go by bike or on foot; b) that there is likely to be public transport available.(para 7.259 and para 7.260). These assumptions are challenged in the transport study from SWol. However, the SA does acknowledge that the choice of HA2 might exacerbate the conditions of the Crawley AQMA near the Hazelwick roundabout. (para 7.260).

5.10 The impact of the 10,000 house development on SA 14 is not covered in the Sustainability Report. It would, of course, make matters worse especially with the addition of more cars, a link road and the expansion at Gatwick should that go ahead.

5.11 The sustainability appraisal attaches weight to the benefit of the location of SA101 to Crawley’s services and facilities and policy HA2 considers that the citing of a secondary school will meet existing education needs in Crawley. This strongly indicates that the development is interdependent with the existing urban area of Crawley. There is no evidence to justify a conclusion that those travelling between the two areas would not do so by car and no highways improvements are proposed outside of the allocation. For these reasons it would not be unreasonable to conclude that the allocation would result in a significant effect on levels of air pollution.

## HE EIA Scoping Opinion Report 2023

5.12 HE states that during construction:

*“The Proposed Development has the potential to affect air quality through emissions to air and dust during construction from earthworks and transport related effects. Receptors located along Charlwood Road, Ifield Avenue and Rusper Road may be affected by changes in traffic.”*

And that during operation (i.e. once completed):

*“Operational effects would consider quantitatively the shift in vehicle emissions as a result of the new occupants and visitors. Ecological sites with*

*national designations (specifically meaning SSSIs and European designated ecology sites) are sensitive to nitrogen deposition.”*

- 5.13 They have identified Glovers Wood, House Copse and Buchan Hill as sites which contain ancient woodland and have SSSI or similar status and hence are areas that must keep NO<sub>2</sub> levels below the level specified for ancient woodlands. However, there is no mention of considering the ancient woodland at the southern end of the Local Green Space.
- 5.14 The EIA report concedes that there will be increased pollution as a result of increased traffic flow in local roads and that the effects will be modelled for these roads. It also concedes that dwellings within the overall area (although outside the red line on their maps) will have worse air quality. These comprise the buildings by Ifield Court Farm, Pound Cottages, Pound Cottage and The Druids.
- 5.15 There is also the belief that only developmental traffic will go in and out of the site. If, as promised, there are facilities that other people might use then the traffic will be more than that from the houses.
- 5.16 There are two arms to the mitigation strategies: one is the uptake of low emission vehicles, the other is the reduction of vehicle movements. The former relies not only on the supply of electric charging points, but ‘contributions to refuelling infrastructure’ (presumably financial) and ‘financial support to include low emission public transport options’. The latter relies on:

*Provision of a detailed travel plan (with provision to measure its implementation and effect) which sets out measures to encourage sustainable means of transport (public, cycling and walking) via subsidised or free-ticketing, improved links to bus stops, improved infrastructure and layouts to improve accessibility and safety.*

*Improvements to public transport, cycling and walking infrastructure.*

*Support for and promotion of car clubs 6.6.2*

It is not specified where the financial support will come from nor who will support the car clubs.

## 6 Impact of Wol on Air pollution

- 6.1 We challenge the assumptions of the Sustainability assessment. Employment opportunities in Crawley are not as strong as is believed, so people may be travelling further to work. The traffic from the site will come out onto Ifield Avenue and add to the congestion that is seen there at rush hours. Slow moving or stationary traffic with idling engines increases pollution. The congestion on Ifield Avenue arises because of the number of cars using the roundabout between Ifield Avenue and the A23. As a result, this area could well help to extend the Crawley AQMA further west.
- 6.2 Currently Ifield Avenue is not an area being monitored for air quality. There are no indications that HE will be making their assessments from local readings as they are taking data from DEFRA in order to estimate the level of pollution.
- 6.3 The placing of such a development on an area which is a major health benefit to people in Crawley because of its rural setting is contrary to policy and contrary to the spirit of the duty to cooperate.
- 6.4 The fifteen-minute neighbourhood with its walking and cycling paths within it are highlighted in the 'masterplan'. However, once cyclists and pedestrians emerge onto Charlwood Road they face roads that are not safe for cycling. Despite Crawley's progress in developing a network of cycle paths for active travel, there is a long way to go before an adequate network can be established.
- 6.5 It is important to consider the traffic that will go to and from HA2 from existing residents in Crawley who wish to access the facilities there, particularly the secondary school. People coming across the town may well pass through the AQMA in the centre and make the situation worse. This increase in traffic movements will increase emissions and road dust, worsening the AQMA in Crawley.
- 6.6 The increased traffic from new residents in HA2 will enter the AQMA if travelling to Manor Royal, Gatwick, the M23 etc, increasing traffic related air pollution in Crawley.
- 6.7 The outcome of the application for a Development Consent Order (DCO) for Gatwick Airport Limited (GAL) to use the emergency runway as an additional runway is as yet unknown. Should Gatwick expand its operation, there will be increases in aircraft movement, passenger car travel, and freight lorries – all of which increases air pollution.
- 6.8 The gradual move to electric cars will, over time, reduce NO<sub>2</sub> emissions, but it will not remove the generation of particulate matter from brakes, tyre and road dust which are increased due to the weight of these vehicles.
- 6.9 HA2 will also reduce the level of natural vegetation with the destruction of hedgerows and trees. This will reduce the effect that these have on filtering out the particles in the air, sequestering carbon and absorbing some of the other pollutants.
- 6.10 The HE EIA outlines the assessment that will be done when it has a 'detailed travel plan'. A detailed travel plan has not as far as I know yet emerged. Elements are there,

such as reconfiguring the junction at Bonnetts Lane and potentially shutting off Rusper Road to through traffic, but these do not form a full-scale traffic plan. Deferring these issues risk making the plan unsound.

## **7 Conclusion**

- 7.1 While HDC has policies in place related to air quality which resonate with those of NPPF, they mostly put the onus on the developer at the time of application to show that the necessary standards will be met.
- 7.2 In this case the onus is falling on HE to supply that evidence through their travel plan. However, there is currently no conclusive travel plan on which to base a judgement of the increased traffic flows that will result from this development. All assessments of air pollution will be done – they have not been done.
- 7.3 The pollution associated with HA2 could significantly contribute to the nearby AQMA in Crawley, creating worse health conditions for those living nearby.
- 7.4 The development of HA2 removes a green field space which is relatively low in air pollution and which provides a healthier environment for those (mostly Crawley residents) who use it for recreational country walking.
- 7.5 It also removes a proportion of the trees and hedgerows which can play an important role in the capture of particulate matter from the air and sequestering carbon.
- 7.6 HDC has postponed the decision about the 10,000 house development. We note, however, that it has not been ruled out. They have not addressed the consequent air pollution that will arise from this and which will stretch over a large area close to areas of Outstanding Natural Beauty and SSSI.
- 7.7 The cumulative effect of pollution in the area should Gatwick be given permission to expand has not been addressed. It is cumulative effect that has the health impact.
- 7.8 For these reasons we do not believe that the air pollution associated with the site has been adequately addressed. There is not sufficient joint working on what is an important cross-boundary strategic matter so the plan is not effective. Furthermore the plan is not sound as it is not consistent with NPPF 185 and 186.

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(this is an useful guide on how to monitor pollution, the time needed for gaining reliable data and how to interpret the data).