

Town and Country Planning Act 1990 - Section 77
Town and Country Planning (Inquiries Procedure)(England)Rules 2000

AIR QUALITY STATEMENT OF COMMON GROUND

Site:	Anglia Square including land and buildings to the north and west
Applicant:	Weston Homes PLC and Columbia Threadneedle Investments
Local Planning Authority:	Norwich City Council
Rule 6 Parties	Norwich Cycling Campaign
PINS reference:	APP/G2625/V/19/3225505
LPA reference:	18/00330/F

Introduction

1. This Air Quality Statement of Common Ground is made in relation to the Inquiry called by the Secretary of State in relation to planning application 18/00330/F. The inquiry relates to an application for planning permission for the redevelopment of the buildings and open land known as Anglia Square, (the Site).
2. The Statement of Common Ground has been produced by the Council. The draft has been distributed to the Applicant and Norwich Cycling Campaign with the intention of seeking to agree information and as many issues as possible prior to the consideration of the Inquiry.

Please enter – Agreed/not agreed, adding short explanation where necessary

	Suggested Common Ground	The Council	The Applicant	NCYC
1	Under the Environment Act 1995 the annual mean objective level for NO ₂ is 40 µg/m ³ . The source for this information is core document CD 15.8.	Agreed	Agreed	Agreed. As laid out in CYC3/1 (bullet 17), the annual DEFRA regulatory limits for NO ₂ , PM10, and PM2.5 in the UK are 40 µg/m ³ , 40 µg/m ³ , and 25 µg/m ³ respectively. The source for this information is core document CD 15.8. Local authorities are required under part IV of the Environment Act 1995 to assess their compliance to the national AQS objectives by engaging in Local Air Quality Management (LAQM).
2	Norwich City Council has defined an Air Quality Management Area (AQMA) for NO ₂ where there are known to be breaches of the annual mean objective	Agreed	Agreed	Agreed
3	Norwich City Council has an Air Quality Action Plan 2015 which includes measures which are expected to reduce levels of NO ₂ within the AQMA.	Agreed	Agreed	DISAGREE. We are not confident that the NCC Air Quality Action Plan 2015 is robust.
4	Under the Environment Act 1995 the 1-hour mean objective level for NO ₂ is 200 µg/m ³ not to be exceeded more than 18 times a year. The source for the regulatory limits is core document CD 15.8	Agreed	Agreed	As in 1 above. Agreed, and the source for the regulatory limits is core document CD 15.8. However, this objective is impossible to measure without very expensive equipment. Note at 6 below that the proxy figure for this objective of 60µg/m ³ is not always reliable.
5	The purpose of Defra Local Air Quality Management Technical Guidance TG16	Agreed	Agreed	DISAGREE

	(LAQM TG 16)(CD 11.37) is to support local authorities in carrying out their duties under the Environment Act 1995			<p>We would agree that the stated intention of LAQM TG16 is to support local authorities. However, in making planning decisions, we strongly emphasise that in practice LAQM TG16 allows for unsound data to receive a stamp of approval despite flaws that allow for the amplification of uncertainty. Following the guidance alone is therefore an unsound basis for decision making: scientific scrutiny and a precautionary approach to the interpretation of data must also be applied.</p> <p>A 2019 paper in the journal <i>Environmental Science and Policy</i> by our expert witnesses Prof Peckham and Dr Ashley Mills (provided as CD 15.32) identifies and describes three specific methodological failures in the LAQM TG16 which are relevant to the Anglia Square case. The uncertainties introduced by these issues have not been treated properly in AQA V2 and AQA V3.</p>
6	With reference to LAQM TG 16 paragraph 7.91 states “previous research carried out on behalf of Defra identifies exceedance of the NO2 1 hour mean is unlikely to occur where the annual mean is below 60µg/m3”.	Agreed	Agreed	<p>DISAGREE</p> <p>The statement is an example of where further scientific scrutiny may be required: it is unreliable and uncertain because the 60µg/m3 figure, based on annual measurements, is a proxy for understanding reality that is occurring much faster (ie at an hourly resolution). Its reliability is disputed – see CYC3/4, bullet 33, and core document CD15.31. The research that led to this proxy is from 2003 and would benefit from review and updating with more representative road traffic situations.</p>

				<p>Further, the modelling in AQA V2 and V3 start with verification against data sets derived from diffusion tubes. Diffusion tubes are inherently inaccurate, and methods to correct for this can introduce further errors (Peckham and Mills, 2019, CD 15.32). Therefore, any identification of exceedance or compliance to the 1-hour NO2 objective has high levels of uncertainty with AQA V2 and V3.</p>
7	<p>LAQM TG 16 Box 1.1 provides guidance to local authorities on where the air quality objectives should apply.</p>	Agreed	Agreed	<p>Agreed.</p> <p>However, there is an issue that Box 1.1 provides 8-hour and 12-hour objectives, but there are no corresponding objective levels for NO2. So it is not clear where gardens lie in the guidance: in fact, this is recognised by footnote 10 to the Box which says “Such locations should represent parts of the garden where relevant public exposure to pollutants is likely, for example where there is seating or play areas. It is unlikely that relevant public exposure to pollutants would occur at the extremities of the garden boundary, or in front gardens, although local judgement should always be applied.” (Our emphasis).</p> <p>In our view, the situation for the Dalymond Court garden nearest to Edward Street is unclear. If this resident were to be in their garden for several hours, they would clearly have greater than 1-hour exposure. Therefore, the 1-hour objective does not apply, and for NO2 the annual objective then applies – as it does on the street façade of Dalymond Court.</p>

8	With reference to LAQM TG 16 Box 1.1 the annual mean NO2 objective should apply to all 'locations where members of the public might be regularly exposed. Building facades of residential properties, schools, hospitals, care homes etc.'	Agreed	Agreed	Agree, with caveat from 7 above, that gardens of Dalymond Court should be included here.
9	With reference to LAQM TG 16 Box 1.1 the annual mean NO2 objective does not apply at: building facades of offices and other places of work where members of the public do not have regular access; hotels; gardens of residential properties; kerbside sites (as opposed to locations at the building façade) or any other locations where public exposure is expected to be short term.	Agreed	Agreed	DISAGREE. Footnote 10 as described in 7 above says local judgement must be applied for gardens.
10	With reference to LAQM TG 16 Box 1.1 the 1-hour mean NO2 objective applies: to all locations where the annual mean applies; kerbside sites (for example, pavements of busy shopping Streets), those parts of car parks and bus stations and railway stations etc, which are not fully enclosed and any other locations where members of the public might reasonably expect to spend one hour or longer.	Agreed	Agreed	Agree, with caveat from 7 above for the gardens of Dalymond Court.
11	The legal annual and hourly mean NO2 objectives are applicable at the defined relevant receptor locations.	Agreed	Agreed	DISAGREE. The validity of the statement is predicated on

	<p>Relevant Receptor is defined as; A location representative of human (or ecological) exposure to a pollutant, over a time period relevant to the objective that is being assessed against, where the Air Quality Strategy objectives are considered to apply. LAQM TG(16) pg 7-138.</p>			<p>having a representative set of relevant receptors.</p> <p>We have serious concerns about the set of relevant receptors provided by the Council and Applicant. We do not accept that they provide the representative coverage, both in their locations and the number of sites, to provide a trustworthy model of air quality. For example, just 1 receptor is used in each of Edward Street (A) and Magdalen Street (B). We dispute that a single receptor can be representative of a whole façade of these large buildings.</p> <p>Further, we do not accept the AQA V2 and V3 modelling that predicts their values is correct.</p> <p>Until a model is produced which is both more accurate (less optimistic) and has clear bounds of certainty/uncertainty, identifying the exceedance or compliance with any objective is not possible.</p>
12	<p>In analysing the impact of the proposed development, the predicted NO2 levels will be regarded having reference to both V2 and V3 of the AQAs.</p>	Agreed	Agreed	<p>DISAGREE</p> <p>AQA V2 requires further development, for example extending its range of diffusion tubes for verification, and extending the model receptors to add greater representation.</p> <p>AQA V3 introduced less reliability and optimism that accumulates through the modelling. Both are subject to the methodological failures identified in CD 15.32.</p> <p>Until a model is produced which is both more</p>

				accurate (less optimistic) and has clear bounds of certainty/uncertainty analysing the air quality impact of the proposed development is not possible.
13	On the basis of 12) exceedance of an annual mean NO ₂ concentration of 40µg/m ³ for the scenario 'with development but no policy applied' is predicted to occur at ground floor receptor locations A, B,G and H in table 5 in AQA v3 and ground floor receptor locations A, B, E, F, G and H in table 4 in AQA v2	Agreed	Agreed	<p>DISAGREE</p> <p>a) on basis of 12 above, the models are untrustworthy, particularly AQA V3 which has optimism that accumulates through the modelling.</p> <p>b) we note the data given is incomplete. AQA V3 also gives DT9 (13 St Augustines Street) and DT11 (St Augustines Street) as exceeding an annual mean NO₂ concentration of 40µg/m³ for the scenario 'with development but no policy applied'.</p> <p>As noted at 14 below, DT9 and DT11 are locations subject to the annual mean objective.</p> <p>For clarity, the receptor locations A-I are given in Figure 4 of AQA V2, and locations of DT6, DT9 and DT11 are given in Figure 5 of AQA V3.</p>
14	On the basis of 11) the annual mean NO ₂ Objective applies at the façade of Dalymond Court (on Edward Street), 8-22 Edwards Street, Block B (ground floor) and 13 & 52 St Augustines Street.	Agreed	Agreed	<p>Agreed, with the caveat that these may be only a sub-set, with other locations as yet not identified. The garden of Dalymond Court should also be included.</p>
15	On the basis of 12) exceedance of a 1-hour mean NO ₂ concentration of	Agreed	Agreed	DISAGREE

	60µg/m ³ for the scenario 'with development but no policy applied' is predicted to occur at receptor locations B, G and H (very nearly) in V2 and A (very nearly) in V3 – locations shown on Plan 1.			<p>a) on basis of 12 above, the models are untrustworthy, particularly AQA V3 which has optimism that accumulates through the modelling.</p> <p>Note, Plan 1 corresponds to Figure 4 in AQA V2.</p>
16	On the basis of 11) the 1-hour mean NO ₂ Objective only applies at residential gardens of Dalymond Court on basis of levels indicated in Table 5 in AQA V3 & in Table 4 in AQA V2.	Agreed - and at the bus stop on Magdalen Street	Agreed	<p>DISAGREE</p> <p>a) on basis of 12 above, the models are untrustworthy, particularly AQA V3 which has optimism that accumulates through the modelling</p> <p>b) on the basis of 7 above, the annual mean NO₂ objective applies at the garden of Dalymond Court</p> <p>c) on the basis of 10 above, the 1-hour mean NO₂ objective applies to all locations where the annual mean applies (ie as specified in 14 above).</p> <p>d) on the basis of 11 above, we do not accept that the receptors modelled are representative, and therefore do not provide a trustworthy model of air quality. A more comprehensive and representative receptor set might reveal more 1-hour mean breaches.</p> <p>e) there is no receptor for the residential gardens at Dalymond Court (see 17 below).</p>
17	With reference to Table 1:2019 Annual mean NO ₂ data (uncorrected) the 2019 mean for Edward St is 26.6 µg/m ³ . At	Agreed	Agreed. Although the locations are not exactly the	<p>DISAGREE – this is not a valid comparison</p> <p>DT1 is not an equivalent site to receptor A in</p>

	Receptor location A0, the baseline year NO2 levels input to the model for AQA V2 (50.4 µg/m ³) & AQA V3 (56.7 µg/m ³) on Edward St are in excess of actual levels measured in 2019.		same (they are estimated to be approx. 60m apart), there is no reason for there to be such a big discrepancy between the monitored concentrations, resulting in the conclusion that the 2017 data is unreliable	Edward Street as they are a considerable distance apart. This illustrates our point at 11 above. Further DT1 is currently in a non-street canyon location which will be converted to a street canyon by the development. The 2019 data mentioned is unratified.
18	With reference to Table 1:2019 Annual mean NO2 data (uncorrected) the 2019 mean for Magdalen St is 39 µg/m ³ (DT2). At receptor location B0, the baseline NO2 levels input to the model in AQA V2 (62.8 µg/m ³) & AQA V3 (54.2 µg/m ³) on Magdalen St are in excess of actual levels measured in 2019.	Agreed	Agreed. Although the locations are not exactly the same, there is no reason for there to be such a big discrepancy between the monitored concentrations, resulting in the conclusion that the 2017 data is unreliable	DISAGREE – this is not a valid comparison DT2 is not an equivalent site to receptor B in Magdalen Street because: <ul style="list-style-type: none"> - B is in a street canyon whereas DT2 is in an open space, and - they are a considerable distance apart. The 2019 data mentioned is unratified.
19	The national bias correction factor is calculated using the applicable spreadsheet on the Defra website https://laqm.defra.gov.uk/bias-adjustment-factors/national-bias.html This database is updated 3 times a year as council datasets are submitted.	Agreed	Agreed	DISAGREE Norwich City Council have referred to this site as the source of their national bias factor for 2019 (2018 data). However, they refer to multiple different versions of the spreadsheet below (the 03/19 and the 09/19 versions) which differ in the

				<p>input data provided by contributing local authorities and therefore outputs.</p> <p>The 03/19 data is the set used in the NCC 2019 ASR.</p>
20	<p>At the time of submission of the 2019 ASR (CD10.4) to Defra, the national bias correction factor for 2018 data (Gradko 50% TEA in acetone) was 0.92, based on 8 studies (03/19 database).</p>	Agreed	Agreed	<p>DISAGREE</p> <p>The data corresponding to Norwich diffusion tubes (Gradko 50% TEA in acetone) in the 03/19 spreadsheet (“at time of submission”) has an unusually large bias spread of 106% - reflecting a range of -22.6% to 83.3%.</p> <p>In their peer reviewed paper CD15.32, Prof Peckham and Dr Ashley Mills, examined the 2017 data (09/18 spreadsheet) <u>for all laboratory/tube combinations</u> reporting to DEFRA. The worst bias spread in 2018 was Staffordshire Scientific Services, “20% TEA in water” at 77.1% spread. The laboratory and method used by NCC - Gradko “50% TEA in acetone” - had 59.8% spread for 2017.</p> <p>Generally, the huge variability for some laboratory/method combinations highlights great potential for inaccuracy. In particular, the large bias spread for the laboratory/method used by Norwich in 2018 of 106% - worse than any laboratory/method in 2017 and nearly twice the Norwich laboratory/method spread for 2017, strongly indicates that this nationally derived bias factor is extremely untrustworthy.</p>

				We will provide an evidence note that explains this in more depth for the hearing.
21	The national bias correction factor for 2018 data (Gradko 50% TEA in acetone) is 0.89 based on 18 studies (09/19 database).	Agreed	Agreed	DISAGREE The data corresponding to Norwich diffusion tubes (Gradko 50% TEA in acetone) in the 09/19 spreadsheet has an unusually large bias spread of 106% - reflecting a range of -22.6% to 83.3%. This is the largest variability for any laboratory/method for both 2017 and 2018, and indicates poor source data.
22	For Norwich City Council 2018 diffusion tube data, the difference between the local and national bias correction factors is 0.03 when using the 09/19 database for calculation of the national bias correction factor.	Agreed	Agreed	DISAGREE The DEFRA ratified data was based on the 03/19 spreadsheet, but Norwich City Council are quoting the 9/19 spreadsheet here. Both spreadsheets are unreliable for the "Gradko 50% TEA in acetone" tubes in 2019 (2018 data): as in 20 and 21 above, neither the 03/19 or 9/19 spreadsheet data, and resulting national bias factors, are trustworthy as they both exhibit a very large bias spread. Further analysis will be provided in an evidence note for the hearing that will show the Council's statement 22 to be unreliable and meaningless.
23	At 52 St Augustines Street the application of the national (instead of the local) bias correction factor (derived	Agreed	Agreed	DISAGREE As above, neither the national bias factors derived

	from database 09/19) would result in an elevation of 1.5µg/m ³ in the NO ₂ annual mean.			from the 03/19 or 9/19 spreadsheet data are trustworthy. The statement is unreliable and meaningless as 22 above
24	LAQM TG16 Box 7.11 provides advice to Local Authorities on when to apply the local vs national bias adjustment factor.	Agreed	Agreed	DISAGREE We agree Box 7.11 provides advice. However, it has not been applied consistently by Norwich City Council (NCC). The CEPP rebuttal for Norwich Cycling Campaign (CYC1/4, bullet 25) gives a history of how NCC has applied this advice. In every year except 2019 (2018 data), NCC have chosen a national bias factor over a local factor. The 2019 selection goes against NCC's own reasons for rejecting a local bias factor in previous years – that the co-location study is at a “canyon-like” street. This is the first bullet point reason given in Box 7.11 under “ Cases where the combined [national] bias adjustment factor may be more representative ”. So NCC have not followed the LAQM TG.
25	The WHO recommended guideline for annual mean PM _{2.5} is 10µg/m ³ and 20µg/m ³ annual mean for PM ₁₀ .	Agreed	Agreed	COMMENT: Yes, but there are sustained calls for these guidelines to be reviewed by Public Health and Medical experts, as we substantiate in our evidence. The WHO have said there is no safe level of PM _{2.5} for many years. WHO are also reviewing their guidelines (see CYC1/1, bullet 55 and CYC1/2, Appendix 11).
26	The government has stated in the October 2019 Environment Bill that in 2022 it will review the target date for	Agreed	Agreed	DISAGREE: The statement is contradictory. It gives a specific target, and then says it is subject to change.

	implementation of the annual mean PM2.5 target level of 10µg/m3. The date and target level is subject to change.			<p>This is only a draft Bill, and any target has to be subject to a Statutory Instrument by 31/10/22.</p> <p>The Draft Bill document does not state that the UK target will align with either current or future WHO guidance, merely that a target will be legislated where it is currently not.</p> <p>The date and target may be changed by Parliament both via the Bill and the SI.</p>
27	In the UK (except Scotland) the EU objective level for annual mean PM2.5 is 25µg/m3, but for UK urban areas the objective is a 15% reduction in concentrations at urban background between the period 2010 & 2020.	Agreed	Agreed	<p>Agree</p> <p>a) However, the government plan a legal limit for PM2.5 from 2022 – see 26 above.</p> <p>b) this urban background objective finishes this year and has not been updated for beyond 2020, so is not greatly relevant.</p>
28	Within the NCC boundary, there are 2 continuous monitoring stations at Castle Meadow (kerbside) and Lakenfields (urban background) both monitoring PM10 & PM2.5	Agreed	Agreed	Agreed
29	Over the last 5 years (2012-2018), the level of kerbside PM2.5 annual mean varies between 9 & 15µg/m3 whilst the level of urban background varied between 10 & 12µg/m3. In 2018 both urban background and kerbside PM2.5 annual mean levels measured 10 µg/m3 which meet the WHO guideline	Agreed	Agreed	<p>DISAGREE that these figures are the most meaningful, as they do not report trends.</p> <p>The text is inconsistent stating 5 years but gives a 7-year span (2012-2018). We think 2014-2018 is intended as this is the span used for PM2.5 data in the 2019 ASR.</p>

	recommendations. (2019 ASR CD 10.4).			<p>Figure 5 of CYC1/1 shows that the trend of kerbside PM2.5 levels measured at Castle Meadow CM1 is that they are increasing over the 9 years period (2010 – 2018 NCC data). The trend of urban background levels as measured by Lakenfields CM2 is downward over the same period.</p> <p>The upward trend for kerbside PM2.5 in the City against the downward trend for background level indicates a problem in the City centre that is not properly recognised by the Council. The upward kerbside trendline passed the (inadequate) WHO standard of 10µg/m3 in 2012.</p>
30	In the 2019 ASR (CD10.4) Fig A.4 shows source apportionment for PM2.5 in Norwich (based on analysis carried out in 2015). It found the main contribution of PM2.5 is derived primarily from residual+salt and to a lesser extent secondary particulates	Agreed	Agreed	<p>COMMENT: It is well established that the road traffic proportion to total PM2.5 levels is small; for example, the DEFRA AQEG report in 2012 found “traffic local sources (primary exhaust emissions and brake and tyre wear) to be 7% nationally (see CD 15.131, Table 6.1).</p> <p>The 2019 AQEG report on PM2.5 emissions from tyre and brake wear, and road abrasion (CD 15.132) reported that 60% and 73% (by mass), respectively, of primary PM_{2.5} and PM₁₀ emissions from road transport, are from these non-exhaust sources. This report also reported that these fractions will become more dominant in the future. Electric vehicle braking produces more particulates due to EVs being heavier vehicles due to heavy batteries.</p>
31	In Norwich over the last 5 years (2012-	Agreed	Agreed	DISAGREE that this statement is meaningful in

	2018), there has been no breach of the UK (except Scotland) air quality objective level for either PM10 or PM2.5, 40µg/m3 and 25µg/m3 respectively.			<p>the current public health crisis.</p> <p>We provide evidence from medical experts that neither the DEFRA objective levels for PMs, nor the WHO guideline levels, are adequate. There is a very significant medical lobby for the legal levels for particulates to be both below DEFRA and the WHO levels.</p> <p>Kerbside measurements in Norwich have been breaching WHO guidelines for both PM2.5 and PM10, for the years 2010-2018, and the trend of both pollutants is upwards (CYC1/1, Figure 5 and Figure 6).</p>
32	For the “With development, No Policy applied” scenario there is not predicted to be a breach of the PM10 objective level of 40µg/m3.	Agreed	Agreed	<p>DISAGREE that this statement is meaningful in the current public health crisis, as per 31 above.</p> <p>CHSS in their rebuttal for CYC (CYC3/4, bullets 25-27) show how the PM2.5 fraction can be calculated from the PM10 fraction given, and that no receptor location shows a PM2.5 value below the WHO guideline value of 10µg/m3 when this calculation is performed on the applicant’s AQA V2 PM10 data (and AQA V3 PM10 data). This is despite the Council apparently believing that 10µg/m3 is likely to become the UK PM2.5 target level after October 2022, see 26 above.</p>
33	In the Institute of Air Quality Management January 2017 document - Land-Use Planning & Development Control: Planning for Air Quality para 8.3 it states “ The presence of an AQMA should not halt all development, but	Agreed	Agreed	<p>DISAGREE that this statement is relevant</p> <p>CYC have never said that development should be halted in an AQMA.</p> <p>As we said in our Opening Statement, there must</p>

	<p>where development is permitted, the planning system should ensure that any impacts are minimized as far as is practicable. Even where developments are proposed outside of AQMA's, and where pollutant concentrations are predicted to be below the objectives/limit values, it remains important that the proposed development incorporates good design principles and best practice measures, as outlined in Chapter 5, and that emissions are fully minimised".</p>			<p>be clear, trustworthy evidence that support the conclusion that legal levels of air quality will be delivered with a development in an AQMA. This is consistent with Lord Justice Lindblom's judgement in the appeal court on the Gladman case (para 41, page 66 of CYC1/3).</p> <p>Such "a clear conclusion" has not been demonstrated in this case from the evidence provided by the Council and the applicants.</p>
34	<p>Planning Condition 42 states 'Prior to the commencement of above ground level construction works within each phase a further Air Quality Assessment (AQA) shall be submitted to and approved in writing by the local planning authority. The AQA shall be informed by a further period of Nitrogen Dioxide monitoring (details of which shall be agreed in writing with the local planning authority) and include full details of air quality mitigation measures for commercial and residential development within that phase The approved mitigation measures shall be implemented in full prior to occupation and retained thereafter'.</p>	Agreed	Agreed	<p>DISAGREE that this relevant.</p> <p>The intended purpose of this planning condition is to assess mitigation measures within the development itself at the beginning of each phase.</p> <p>Our concerns are that the modelling, at the outset, is subject to methodological failures, and consequently there is no clear, trustworthy evidence that supports the conclusion that legal levels of air quality will be delivered with the Anglia Square development as a whole (within the Norwich AQMA). Retrospective measures added at the beginning of phases are not helpful, if overall the development is unable to deliver legal levels of air quality.</p>
35	<p>That it's scientifically credible to assume some improvement in air pollutant concentrations going forward and that in</p>	Agreed	Agreed	<p>DISAGREE</p> <p>The credible scientific approach is to build a</p>

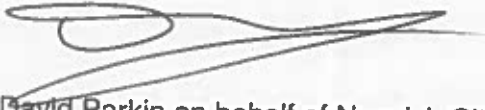
	2031 the actual concentrations are likely to fall between the 'no policy applied' and 'policy applied' scenarios.			<p>trustworthy model, and to properly assess uncertainty within it: this has not been done. And our evidence shows how AQA V2 is incomplete (requiring more diffusion tube work and a more representative spread of model receptors) whilst optimism accumulates through the modelling process in AQA V3. The “no policy applied” and “policy applied” scenarios in AQA V3 are applied to model data that its already to untrustworthy as we will show in our evidence-in-chief.</p> <p>We acknowledge that the appellant has now discarded the notion (in AQA V3) that a “policy applied” scenario can be applied 100%.</p>
36	That the CURED v3 road transport emissions model is a precautionary estimation of pollutant concentrations in future years	Agreed	Agreed	<p>DISAGREE</p> <p>CURED (Calculator Using Realistic Emissions for Diesels) V3A is a valuable tool for sensitivity testing in AQAs. It was developed after Air Quality Consultants analysed historical predictions and found that versions of the DEFRA Emissions Factor Toolkit EFT were overly optimistic. The developers Air Quality Consultants say themselves that “further work is required to reconcile predictions” made by CURED and other emission factors (CD 15.27, page 3) with recent on-the-ground measurements. In other words, with emission factor toolkits, the assessment of optimism, realism and pessimism is an on-going process.</p> <p>In January 2020, research was released (CD 15.133) by NGO Transport and Environment that</p>

				<p>dangerous particle pollution can surge to over 1,000 times its normal rate as diesel vehicles clean their diesel particle filters (DPFs). This applies even to the latest Euro 6d standard vehicles. Real-world effects such as this have yet to be included in either CURED V3A or EFT v9 (this particular example affects PM2.5 and PM10 outputs rather than NO2). Crucially, T&E say, “The findings disprove automotive industry claims that the newest Euro 6d-temp diesel models are clean, which should be acknowledged when designing clean air policies, and especially the future post-Euro 6 standard.”</p> <p>The application of the precautionary principle relates more to interpretation of scientific data and evidence, than to the data/evidence itself. (Optimism, realism and pessimism apply to data, as above). In the case of emission factor toolkits, they have been known to be optimistic against real-world testing and real-world road conditions for many years. After every correction, further problems are discovered – the issue with DPFs above is an example. The precautionary and scientific approach is not to rely on them as proven robust models, when they clearly are not, but as indicative models that need to be interpreted very carefully. (This appears to be the approach of CURED developers Air Quality Consultants).</p>
37	People’s exposure in the residential / retail / commercial units at the development site will be appropriately mitigated by the installation of	Agreed	Agreed	<p>DISAGREE</p> <p>This does not address the wider issue of achieving legal levels of pollution in the AQMA as</p>

	mechanical ventilation where required.			quickly as possible. This does not apply to existing residential properties at the site, and close by, such as 8-22 Edward Street, Dalymond Court, 13 and 52 St Augustines, Dalymond Court gardens, which are subject to the annual mean NO2 objective, as identified at 14 above.
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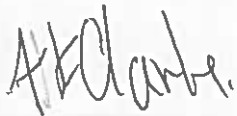
Each of us confirms that we have made clear which facts and matters referred to in this report are within our own knowledge and which are not. Those that are within our individual knowledge we confirm to be true. The opinions each of us has expressed represent our true and complete professional opinions on the matters to which they refer.



David Parkin on behalf of Norwich City Council



Peter Luder on behalf of Weston Homes
and the Application



Tony Clark on behalf of Norwich Cycling Campaign

Date of document – 10 February 2020