

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

Site:	Anglia Square including land and buildings to the north and west
Appeal by:	Weston Homes PLC
PINS reference:	APP/G2625/V/19/3225505
LPA reference:	18/00330/F

**Norwich Cycling Campaign**

**Proof of Evidence**

**Air Quality**

**PoE-CYC/101**

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A set of Appendices is provided in document PoE-CYC/102 which provides the full documents (or sections thereof) for many of the documents referenced within this document.

Documents are also provided in the Core Document set and noted as such in the footnotes.

## 1 INTRODUCTION

- 1 Climate Emergency Planning and Policy (CEPP) have been commissioned by the Norwich Cycling Campaign to provide an independent assessment of air quality in relation to planning for the proposed development by Weston Homes Plc (“the Developer”) at Anglia Square in Norwich (Application no 18/00330/F). The relevant Norwich City Council (“the council”, and “NCC”) application is 18/00330/F.
- 2 Dr Andrew Boswell is an independent consultant at CEPP, specialising in the interface of science, numerical footprinting, the planning system, policy and law. He has a doctorate in molecular biophysics (Oxford, 1981). He worked in IT and computer science in industry (1984-1994) and academia (University of East Anglia, 1995-2006). He was elected to serve as a councillor on Norwich City Council for 4 years until 2016 and on Norfolk County Council for 12 years until 2017. During this time, he took an active role in local plan making, public inquiries on infrastructure, legal compliance on air quality, carbon emissions and affordable housing.

## 2 SUMMARY

- 3 Recent UK court cases<sup>1</sup> have repeatedly made it clear that legal “compliance” to EU and UK Air Quality law and regulation *means “within the shortest possible time” after 2010*. Breaches after 2010 are illegal, and there remains no doubt that the judicial and case law position is that authorities must demonstrate that all possible actions are being made in the shortest possible time to eliminate breaches, including decisions within the planning system.
- 4 Recent case law with the Gladman’s case in Kent<sup>2</sup> makes it clear that developments within the planning system must act in line with EU and UK Air Quality laws. Consenting development which does not reduce air pollutants to legal compliance “within the shortest possible time” will be found unlawful in the courts.
- 5 Chapter 15 of the revised NPPF (“Conserving and enhancing the natural Environment”) requires that planning decisions should:
  - ensure new developments account for the likely effects of pollution on health (NPPF 180), and
  - sustain compliance with and contribute towards EU limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas (NPPF 181).
- 6 DM11 of the council development management policies also requires development to account for the local air quality action plan.

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<sup>1</sup> The three ClientEarth cases against the UK Government: ClientEarth1, 2015, UK Supreme Court; ClientEarth2, 2016, UK High Court; ClientEarth3, 2018, UK High Court. **The judgements are provided in the Appendices. [Core Documents]**

<sup>2</sup> The Gladman Pond Farm, Kent case. Planning appeal decision 9<sup>th</sup> January 2017; UK High Court, Nov 2017; and UK Appeal Court, Sept 2019. **The planning decision letter and subsequent judgements are provided in the Appendices. [Core Documents]**

- 7 On the developer's modelling, the Anglia Square development will:
- **Increase NO<sub>2</sub> levels at eight out of nine receptors modelled by the developer.** This is for 2028, 18 years after the UK should have met its legal requirements.
  - **Maintain a very high, and illegal, level of NO<sub>2</sub> on Magdalen Street:** the developer's diffusion tube monitoring in 2017 already shows this area to be illegal, and at a level not previously acknowledged by the council.
  - **Other locations where existing breaches of law and regulation continue to 2028 and beyond,** in the modelling, are Edward Street, New Botolph Street, Pitt Street and St Crispin's roundabout.
  - **PM<sub>10</sub> particulate levels, for 2028 a) increase with the development and b) exceed the current WHO guidelines at all nine receptors modelled.** DEFRA recognise that there is no safe level of PMs (both PM<sub>2.5</sub> and PM<sub>10</sub>), and their association with serious health issues becomes more evidenced each week.
- 8 The Developer's Air Quality Assessment (AQA) demonstrates that the development manifestly increases NO<sub>2</sub> and PM<sub>10</sub>, both **dangerous-to-public-health** air pollutants in the Anglia Square area, exposing the public to an increasing public health risk.
- Firstly, this contravenes the clear legal and regulatory requirements in the UK to reduce air pollutants to legal compliance "*within the shortest possible time*" that also applies to planning decisions by recent case law. This clear legal requirement is premised on the public health risk – as Lord Carnwath said in the 2015 Supreme court case, the state has an essential obligation "*to act urgently under article 23(1), in order to remedy a real and continuing danger to public health as soon as possible.*"
  - Secondly, consent of the application exposes the council's inability to take responsibility for, and play its part in delivering on, these public health obligations. For the planning system, these are explicitly expressed in NPPF 180, and are clear from recent case law.
- 9 Recent case law would strongly suggest that if the planning consent is upheld in this appeal, then the decision would be subsequently found unlawful by the courts.

## 2.1 Scope

- 10 Norwich Cycling Campaign have commissioned Professor Stephen Peckham and Dr Ashley Mills of the Centre for Health Services Studies (CHSS), University of Kent, to provide an independent assessment of air quality. The CHSS proof will focus on public health, air quality modelling flaws, and mitigation strategy concerns. This submission focuses on air quality law, regulation and the planning system, and where the development is illegal and contravenes limits, and the illegality of any planning consent to the development. The evidence in this submission and in the CHSS submission of evidence is complementary.

### 3 AIR QUALITY LAW AND REGULATION, AND THE PLANNING SYSTEM, IN THE UK

11 Air Quality in the UK is regulated by two main regimes. These operate largely in different ‘silos’ creating a complex legal and regulatory environment. For development planning decisions, planning guidance and local development management policies include air quality advice and may also refer to the laws and regulations. This section provides a summary of the background and interactions between these different systems.

#### 3.1 *The UK air quality management regime for local authorities*

12 Local authorities are required under part IV of the Environment Act 1995 to assess their compliance to the national Air Quality objectives by engaging in Local Air Quality Management (LAQM). The LAQM regime operates for local authorities to improve their air quality and achieve compliance to the EU Air Quality Directive’s levels, with annual reporting to DEFRA. The key reference LAQM Technical Guidance (TG16)<sup>3</sup> where section 1.0.1 says:

*“... LAQM is the statutory process by which local authorities monitor, assess and take action to improve local air quality. Where a local authority identifies areas of non-compliance with the air quality objectives set out in Table 1.1, and there is relevant public exposure, there remains a statutory need to declare the geographic extent of non-compliance as an Air Quality Management Area (AQMA) and to draw up an action plan detailing remedial measures to address the problem. ...”*

Table 1.1 of the LAQM Technical Guidance (TG16), referenced above, is given in the Appendices.

13 **Norwich has recorded illegal levels of air pollution from its own monitoring as far as records go back.** As bullet 510 of the committee report states, engaging in the LAQM has required the council to declare an Air Quality Management Area (AQMA) for NO<sub>2</sub> in 2012, and the proposed development site lies within it.

14 The LAQM regime operates separately from the issue of legal compliance of the **national** air quality plan (AQP) to the EU Directive. Further, where national AQP compliance uses technical computer models of NO<sub>2</sub> levels on roads, the LAQM uses local monitoring carried out by consultants for local authorities.

#### 3.2 *The national and European legislative framework*

15 At the time of writing the UK is subject to the EU Air Quality Directive, Directive 2008/50/EC. The Directive was brought into UK Statute by means of four sets of Regulations, one for each of the home nations. The English standards are The Air Quality Standards Regulations 2010<sup>4</sup> (the “English regulations”).

16 Whilst the situation on Brexit is very uncertain, the European Union Withdrawal Act section 2 is intended to transfer EU Regulations to the UK Statute on Brexit happening. In any case the corresponding English standards for Air Quality exist already on UK

<sup>3</sup> LAQM, TG16, February 2018 revision – selected pages are provided in the Appendices. [Core Document]

<sup>4</sup> <http://www.legislation.gov.uk/ukksi/2010/1001/contents/made>

Statute, and are the same as the European ones, and will persist beyond any UK departure from the EU.

- 17 In the second ClientEarth judgement (ClientEarth2), paragraphs 6 to 15, Mr Justice Garnham gives a good overview of the “legislative scheme”<sup>5</sup> of the EU Directive. It is recommended that this section of the judgement is read for further details: it is reproduced in the Appendices. We summarise some key points relevant to the development below.
- 18 Article 13 of the Directive provides limit values and alert thresholds for common pollutants to protect human health: NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> are the ones relevant to the application, and its planning and health impacts. The legislated limit values used in the UK are reproduced below, summarised from the full DEFRA objective limits<sup>6</sup> which are given in the Appendices.

	Objective	Measured as
Nitrogen Dioxide (NO <sub>2</sub> )	40 µg/m <sup>3</sup>	Annual mean
	200 µg/m <sup>3</sup>	Hourly mean, not to be exceeded more than 18 times a year
PM <sub>10</sub>	40 µg/m <sup>3</sup>	Annual mean (except Scotland where it is 18 µg/m <sup>3</sup> )
	50 µg/m <sup>3</sup>	24 hourly mean, not to be exceeded more than 35 times a year
PM <sub>2.5</sub>	25 µg/m <sup>3</sup>	Annual mean (except Scotland where it is 10 µg/m <sup>3</sup> )
	15%	Annual mean, urban background reduction target 2010-2020

**Table 1: UK Air Quality objectives for NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> (DEFRA)**

The Developer’s Air Quality Assessment (AQA)<sup>7</sup> includes some of this data at Table 1. It omits the PM<sub>2.5</sub> information, and the AQA does not address PM<sub>2.5</sub> pollution from the development, although these particles present the greatest health risks.

- 19 Referring to the national air quality plan (AQP), Article 23 of the Directive provides that:

“In the event of exceedances of those values for which the *attainment deadlines* have already expired the air quality plan shall set out appropriate measures, *so that the exceedance period can be kept as short as possible.*”

(emphasis added)

- 20 The above limits became UK law in 2010 with the enactment of the English Regulations; so the attainment deadline is 2010.
- 21 Regulation 26 of the English Regulations requires the Secretary of State, when the levels of NO<sub>2</sub> (amongst other pollutants) exceeds any limit value, to draw up and implement an air quality plan (AQP) to achieve that limit value. Regulation 26 also specifies that the

<sup>5</sup> In the second ClientEarth judgement (ClientEarth2), paragraphs 6 to 15, Mr Justice Garnham gives a good overview of the “legislative scheme” – see <https://www.judiciary.gov.uk/wp-content/uploads/2016/11/clientearth-v-ssenviron-food-rural-affairs-judgment-021116.pdf>. **The judgement is provided in the Appendices. [Core Document]**

<sup>6</sup> ‘National air quality objectives and European Directive limit and target values for the protection of human health’. Department for Environment Food & Rural Affairs [Online]. Available at [https://uk-air.defra.gov.uk/assets/documents/Air\\_Quality\\_Objectives\\_Update.pdf](https://uk-air.defra.gov.uk/assets/documents/Air_Quality_Objectives_Update.pdf). **This document is reproduced in the Appendices. [Core Document]**

<sup>7</sup> ‘Air Quality Assessment for the proposed re-Development at Anglia Square, Norwich Report to Weston Homes Plc Version 2 – Addressing NCC Comments’, Aether Ltd, Aug. 2018. **[Core Document]**

AQP must “include measures intended to ensure compliance with any relevant limit value *within the shortest possible time*....”.

### 3.3 *The three ClientEarth cases – enforcing UK compliance with the EU Air Quality Directive*

22 The UK Government has been dragged through the High Court and Supreme Court in three separate cases. The fundamental reason in each case has been that the Government has not produced an AQP that ensured compliance *within the shortest possible time*, and in the court’s view has not been dealing with the air pollution public health crisis urgently enough. The judgements are given in the Appendices, a short-potted history is:

- The first UK 2011 AQP was quashed in the Supreme Court in 2015 with a mandatory order to prepare a new plan (ClientEarth1<sup>8</sup>). **In the Supreme Court judgement, Lord Carnwath, at bullet 27, made it entirely clear that under the EU Directive, the UK state has an essential obligation, and that it related to a serious public health danger:**

“.. to act urgently under article 23(1), in order to remedy a real and continuing danger to public health as soon as possible.”

- A second AQP was published on 17<sup>th</sup> December 2015, and Mr Justice Garnham’s judgement from the High Court in the ClientEarth2<sup>9</sup> case on 2<sup>nd</sup> November 2016 found it remained unlawful and directed DEFRA to produce another new plan. **Central to the judgement was “compliance *within the shortest possible time*” for NO<sub>2</sub> levels.** A third AQP (“AQP 2017”) was produced by the Government in 2017.
- On February 11<sup>th</sup> 2018, Mr Justice Garnham’s judgement from the High Court in the ClientEarth3<sup>10</sup> case made a mandatory order requiring the urgent production of a Supplement to the 2017 Plan, **again central to the judgement was “compliance *within the shortest possible time*” for NO<sub>2</sub> levels.**

23 The Government has had two Air Quality Plans quashed, and their third AQP heavily amended: in every case, due to not taking necessary action for “compliance *within the shortest possible time*”. In summary, the UK courts have shown determination to enforce compliance with the NO<sub>2</sub> levels in the Directive within the shortest possible time and on the grounds of the serious public health risk associated with any unnecessary delay. This may be expected to ripple-down to all levels of governance, judicial and quasi-judicial systems related to air quality.

### 3.4 *The UK Planning system in context of national and European legislative framework*

24 In just such a ripple-down, in September 2019, the Court of Appeal upheld a planning permission refusal on air quality grounds for 330 homes in Kent: **the first time a**

<sup>8</sup> <https://www.supremecourt.uk/cases/docs/uksc-2012-0179-judgment.pdf> The judgement is provided in the Appendices. [Core Document]

<sup>9</sup> <https://www.judiciary.gov.uk/wp-content/uploads/2017/05/clientearth-v-secretary-of-state-for-the-environment-food-and-rural-affairs-20170427.pdf> The judgement is provided in the Appendices. [Core Document]

<sup>10</sup> <https://www.judiciary.gov.uk/wp-content/uploads/2018/02/clientearth-no3-final-judgmentdocx.pdf> The judgement is provided in the Appendices. [Core Document]

**planning appeal has been refused due to concerns over air pollution and public health.**

- 25 This case involved a Gladman Developments Ltd proposal in 2014 for up to 330 homes and 60 sheltered accommodation units in Kent, close to local AQMAs. The proposals were refused in 2015 by Swale borough council on the grounds that the development could impact air quality. The proposals were refused by a planning inspector, and again by a High Court judge in 2017 with Gladman taking the decision to the Court of Appeal, where the decisions of the inspector and the High Court were upheld on air quality grounds. The appeal decision letter<sup>11</sup>, and the High Court<sup>12</sup> and Appeal Court<sup>13</sup> judgements are reproduced in the Appendices.
- 26 The Inspector’s decision letter (DL) of January 2017 refers to the 2015 ClientEarth2 judgement at paragraph DL 92:

*“Added emphasis to the urgency of meeting the limit values for air pollutants was given by the decision of the High Court in November 2015 quashing the Government’s 2015 Air Quality Plan. The court found that the plan should have sought to achieve compliance by the earliest possible date rather than selecting 2020 as its target date. It also found that the Government had adopted too optimistic a model for future vehicle emissions.”*

(emphasis added)

- 27 And, at paragraph DL 106 said:

*“even after taking into account the proposed mitigation measures, **the appeal proposals are likely to have an adverse effect on air quality particularly in the Newington and Rainham AQMAs.** I reach this conclusion for the reasons set out above, notwithstanding that the Council raise no objection to the proposals on air quality grounds. Both proposals would thereby conflict with the guidance in NPPF paragraphs 120 and 124”.*

(emphasis added)

- And, at paragraph DL 128:

*“Against all these social benefits, however, must be set the strong likelihood that, notwithstanding the proposed mitigation measures, **the appeal proposals would contribute to at least ‘moderate adverse’ impacts on air quality in both the Newington and Rainham AQMAs.** Thus they would be likely to have a significant adverse effect on human health. These effects of the proposals would conflict with the guidance in NPPF paragraph 124”.*

(emphasis added)

- 28 Note, Inspector Roger Clews relates ‘moderate adverse’ impacts on air quality to a likelihood to have a significant adverse effect on human health. This is important later

<sup>11</sup> <https://cprekent.org.uk/wp-content/uploads/2017/01/3067553-and-3148140-appeal-decisions.pdf> . The decision letter is provided in the Appendices. [Core Document]

<sup>12</sup> [https://cornerstonebarristers.com/cmsAdmin/uploads/judgment\\_.pdf](https://cornerstonebarristers.com/cmsAdmin/uploads/judgment_.pdf) . The judgement is provided in the Appendices. [Core Document]

<sup>13</sup> <https://cprekent.org.uk/wp-content/uploads/2019/09/Pond-Farm-Court-of-Appeal.pdf> . The judgement is provided in the Appendices. [Core Document]



when we look at the impacts of the Anglia Square scheme by the same assessment schema.

Note, the policies in paragraphs 120 and 124 of the former NPPF are replicated with minor changes in paragraphs 180 and 181 of the revised NPPF. So, for 120 and 124 above, read NPPF 180 and NPPF 181.

- 29 The subsequent High Court judgment (HCJ) by Mr Justice Supperstone also predicated itself significantly upon the ClientEarth2 judgement. The specific points below relate to the relevance of the EU Air Quality Directive, the ClientEarth cases, and the interpretation of local planning decisions within an AQMA. The issues highlighted below give a clear, and helpful, steer on the latest case law which applies to the Inspector considering air quality in the Anglia Square appeal too.

- (A) On whether the planning system can presume that local air quality will improve because the Government is required to comply with the law (ie the EU Directive). At HCJ29 and 30, relating to HCJ Ground 1(a) (our emphasis):

*‘29. However, as Mr Richard Moules, for the Secretary of State, and Mr Ashley Bowes, for CPRE, submit, **the Inspector was not required to assume that local air quality would improve by any particular amount within any particular timeframe.***

*30. In the recent decision in R (Shirley) v Secretary of State for Communities and Local Government [2017] EWHC 2306 (Admin) Dove J said at para. 63:*

*“... the question of air quality and exceedance of any limit values or thresholds is clearly and obviously a material consideration in the decision as to whether or not to grant planning permission. It is also material to the determination of whether mitigation measures are required and the [a]ffect of any mitigation measures that are proposed.”*

*As Mr Moules observes, **there is no suggestion in Shirley that the duty to produce and implement an air quality plan means local planning authorities should presume that the UK will become compliant with the Directive in the near future.***

...

*31.*

*In those circumstances I agree with Mr Moules that the Inspector could not reach any view as to whether the measures in the new National Air Quality Plan would be likely to be effective in securing compliance by any particular date.’*

(emphasis added)

- (B) On whether the planning system presumes that other schemes of regulatory control are legally effective. This again refers to the EU Directive but specifically in the context of interpreting former NPPF 122. Note, the policies in paragraph 122 of the former NPPF are replicated with minor changes in paragraph 181 of the revised NPPF, so for 122 below, read NPPF 181. At HCJ39, relating to HCJ Ground 1(b) (our emphasis):

*“I reject this submission. Paragraph 122 is clear. I agree with Mr Moules that the principle referred to in paragraph 122 concerns situations where a polluting*

*process is subject to regulatory control under another regulatory scheme in addition to the planning system. It is directed at a situation where there is a parallel system of control, such as HM’s Inspectorate of Pollution in Gateshead MBC, or the licensing or permitting regime for nuclear power stations in R (An Taisce) v Secretary of State for Energy and Climate Change [2013] EWHC 4161 (Admin). The point being that the planning system should not duplicate those other regulatory controls, but should instead generally assume that they will operate effectively. **The Directive is not a parallel consenting regime to which paragraph 122 is directed. There is no separate licensing or permitting decision that will address the specific air quality impacts of the Claimant’s proposed development.***

(emphasis added)

- (C) On whether the Inspector should have explained inconsistencies between any proposed mitigation measures and the local air quality action plan. At HCJ67, relating to HCJ Ground 2 (our emphasis), Supperstone J holds that it is sufficient for the Inspector to find that the development would be likely to have an adverse effect on air quality.

***“The Inspector found that the proposed development would be likely to have an adverse effect on air quality, particularly in the AQOMAs. That being so, I agree with Mr Moules that it is obvious why the Inspector concluded that the proposed development was inconsistent with the local air quality action plans that sought to ensure development did not harm air quality. The decision letter read as a whole makes it clear to the parties (Bloor Homes East Midlands Ltd v Secretary of State for Communities and Local Government [2014] EWHC 754 (Admin) at paragraph 19, per Lindblom J (as he then was)) that the inspector followed national policy, found there to be a breach of the air quality action plans, and accordingly concluded [at] that both proposals would conflict with the guidance in NPPF paragraph 124.”***

(emphasis added)

For 124 above, read NPPF 181.

### 3.5 The planning policy framework

- 30 Chapter 15 of the NPPF on “Conserving and enhancing the natural environment” contains these three sections that are particularly relevant:

“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 ...***”

NPPF 180 emphasis added

“Planning policies and decisions should sustain and contribute towards ***compliance with relevant limit values or national objectives for pollutants***, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. ... Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan.”

NPPF 181 emphasis added

31 Note from (B) above, in the case of Air Quality, there is no other regulatory scheme that can substitute or add to a planning decision meeting NPPF 181. The planning decision itself must solely address the specific air quality impacts of a proposed development.

### 3.6 *Norwich City Council Development management policies*

32 The relevant Norwich City Council Development management policy is DM11. As noted at bullet 510 of the committee report:

*“DM11 requires development which is likely to have an impact on air quality to take particular account of the air quality action plan for that area.”*

33 DM 11.16 states:

*“11.16 Any consideration of the quality of air and potential impacts arising from development is capable of being a material planning consideration. In considering proposals the council must take appropriate account of the risks from pollution, and how these can be managed or reduced. Planning and pollution controls are separate but complementary. The planning system plays an important role in determining the location of development which may either give rise to, or be exposed to potential risks from, pollution. **Development which may give rise to airborne emissions of harmful substances will be required to assess their possible direct and indirect impacts on health, the natural environment and general amenity.** Appropriate mitigation measures should be identified. Particular consideration should be given to pollution issues for development proposals in and around Air Quality Management Areas (AQMAs).”*

(emphasis added)

34 DM 11.20 states:

*“11.20 It is important that new development which may give rise to a potential adverse impact on either air or water quality is responsibly managed to reduce and mitigate that risk. Since the impacts of environmental pollution are addressed mainly through other legislation and pollution control permitting regimes, the planning decision-making process informed by this plan must focus on the suitability and the impact of the development or use itself (NPPF, paragraph 122) and not seek to revisit issues already satisfactorily dealt with through other pollution control mechanisms.”*

(emphasis added)

NPPF 183 replaces former NPPF paragraph 122. Since the Gladman appeal court judgement, it is important to note, as is explained above, that DM11.20 and NPPF 183 may not be interpreted as meaning the planning system can either:

- presume that that local air quality will improve because the Government is required to comply with the law, or
- presume that other schemes of regulatory control are legally effective.

In other words, the air quality assessment itself provided to the planning system must be interpreted solely on its own data. In the words of Supperstone J at (B) above *“There is no separate licensing or permitting decision that will address the specific air quality impacts of the Claimant’s proposed development.”* Arguments that the data may be pessimistic, or “worst case” etc, due to other legal and regulatory requirements, or other factors, hypothetically offsetting the Air Quality impacts of a development, are not lawful.

### 3.7 *Norwich City Council Local Air Quality Plan (2015)*

35 In 2015, Norwich City Council and Norfolk County Council published an Air Quality action plan (AQAP) under the Environment Act 1995 Part IV. A key aim was to *“improve health, safety and the environment”*, and the plan says *“air quality is a material planning consideration for all developments inside AQMA which could have impact on NO<sub>2</sub>”*. On commitment, it says *“Norwich City Council and Norfolk County Council are committed to improving air quality in the AQMA to bring it in line with the National Air Quality Standard for nitrogen dioxide.”*

### 3.8 *Public Health Outcomes Framework and PM<sub>2.5</sub> emissions*

36 On 27<sup>th</sup> November 2019, the council released a draft of its 2019 LAQM ASR<sup>14</sup> report.

37 Section 2.2 address comments from DEFRA’s appraisal of the previous year’s ASR and recommends that the council *“could make reference to the Public Health Outcomes Framework and their relevant local indicator for PM<sub>2.5</sub> in this section of the report.”*

38 This is addressed in Section 2.3 of the 2019 ASR which describes the council’s approach to reducing PM<sub>2.5</sub> emissions and/or concentrations. The 5<sup>th</sup> bullet point in the section says:

*“The minimisation of airbourne particulates will continue to be an important factor in all planning application considerations. Developers are encouraged to be part of the Considerate Contractors Scheme and have a fully adhered to onsite Environmental Policy.”*

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<sup>14</sup> 27th November 2019, Norwich City Council, Draft 2019 LAQM ASR, ASR\_Template\_England\_2019\_Draft.pdf [Core Document]

#### 4 NO<sub>2</sub> MEASUREMENTS AND MODELLING IN DEVELOPER'S AIR QUALITY ASSESSMENT

39 Aether Ltd was commissioned by Weston Homes Plc to produce an air quality assessment (AQA)<sup>15</sup> for the proposed Development at Anglia Square, Norwich. We are working here with the August 2018 version 2. We understand a further version will be submitted by the Developer on 3<sup>rd</sup> December 2019, after the deadline for this Proof of Evidence.

The AQA has two sets of data for NO<sub>2</sub>:

- NO<sub>2</sub> levels **measured** by diffusion tube in 2017 at location points (“*sites*”) named A – H
- NO<sub>2</sub> levels **modelled** for location points (“*receptors*”) for base year 2016, and 2028 without and with the development, named A – I
- there is a third A – J series which refers to the *buildings* in the development.

Whilst some sites and receptors overlap, the naming schemes are not the same, and are potentially confusing. So, for example, site A is NOT the same as receptor A. A map is provided below which shows all the data in one place.

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<sup>15</sup> ‘Air Quality Assessment for the proposed re-Development at Anglia Square, Norwich Report to Weston Homes Plc Version 2 – Addressing NCC Comments’, Aether Ltd, Aug. 2018. [Core Document]

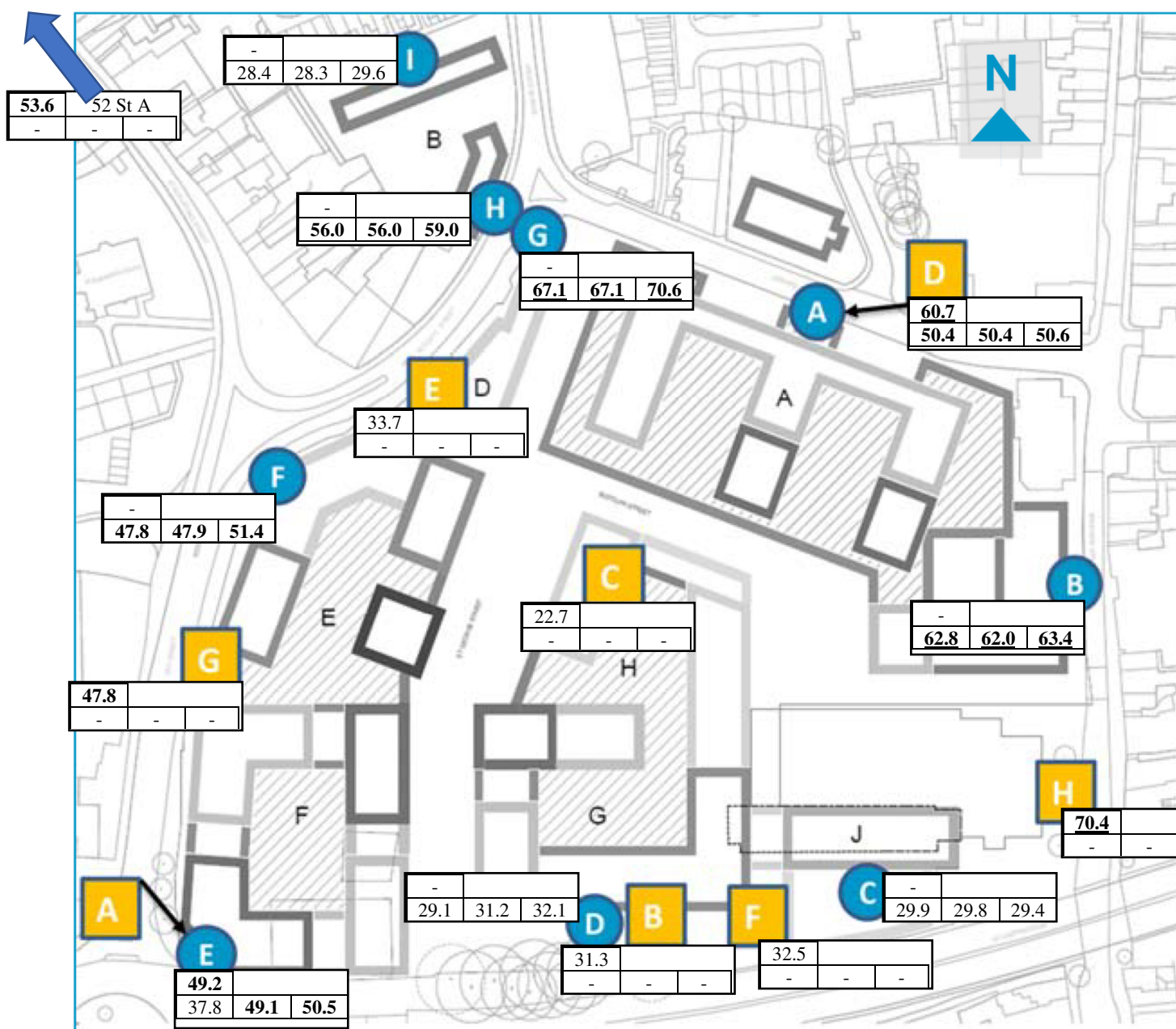
4.1 Map superimposing measured and modelled NO<sub>2</sub> levels

Key to map:	NO <sub>2</sub> Annual mean (Diffusion Tube)			<i>Measured</i>
	Annual mean (2017)	Annual mean (2028) Without development	Annual mean (2028) With development	

**Bold** values breach the EU Air Quality Directive and the annual mean NO<sub>2</sub> limit under the LAQM. **Bold underlined>** values breach the EU Air Quality Directive hourly mean NO<sub>2</sub> limit under the LAQM. Only modelled values at ground level are shown.

The 2017 City Council monitoring level for 52 St Augustine's Street (just off the NW corner of map) has been indicated too.

Figure 1: Map with both measured and modelled NO<sub>2</sub> levels



## 4.2 What the Developer's NO<sub>2</sub> modelling shows

40 **The development increases NO<sub>2</sub> levels.** The map shows that ground-floor, street-level levels of modelled NO<sub>2</sub> are greater with the development than without it at each of the nine receptors A-I, except location C. This is entirely consistent with statements from both Norwich City Council (NCC) and the Developer's consultants Aether Ltd (AL):

(A) AL AQA, page 27 *"The results indicate that annual mean NO<sub>2</sub> concentrations would change by  $\leq 3.7 \mu\text{g}/\text{m}^3$  at all locations."*

(B) NCC Planning committee agenda<sup>16</sup>, bullet 518 *"The modelling predicts that in all locations (with the exception of location C) the development (2028) will lead to an increase in NO<sub>2</sub> concentrations – the level of increase varying between 0.2 – 3.6  $\mu\text{g}/\text{m}^3$ ."*

### 41 The development sustains breaches of the EU Air Quality Directive and LAQM

- **Six** receptors exceed the annual objective of 40  $\mu\text{g}/\text{m}^3$  with the development: A (50.6  $\mu\text{g}/\text{m}^3$ ), B (63.4  $\mu\text{g}/\text{m}^3$ ), E (50.5  $\mu\text{g}/\text{m}^3$ ), F (51.4  $\mu\text{g}/\text{m}^3$ ), G (70.6  $\mu\text{g}/\text{m}^3$ ) and H (59.0  $\mu\text{g}/\text{m}^3$ ). These are illegal levels of NO<sub>2</sub> under the EU Directive, 18 years after the UK should have achieved legality.
- **Two** receptors exceed the 1 hour mean objective of 60  $\mu\text{g}/\text{m}^3$  with the development: B (63.4  $\mu\text{g}/\text{m}^3$ ) and G (70.6  $\mu\text{g}/\text{m}^3$ ). These represent a higher level of public health risk from illegal NO<sub>2</sub> exposure remaining 18 years after legality should have been achieved.

42 The Developer's Air Quality Assessment uses the Environmental Protection UK's Air Quality Guidance Document (AQGD)<sup>17</sup> to assess impacts as "negligible", "slight", "moderate" and "substantial".

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<sup>16</sup> NCC Planning committee agenda, 6<sup>th</sup> December 2018 [Core Document]

<sup>17</sup> Nov 2017, <http://www.iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf> [Core Document]

- 43 In the table below, we summarise the above (from NCC Planning committee agenda Table 3) and AQGD significance of the development (from Table 6 in the developer's Air Quality assessment).

Receptor	Floor	Modelled data $\mu\text{g}/\text{m}^3$			2028 With Development			AQGD Significance
		Base Year 2107	2028 Without Dev	2028 With Dev	Increases	Annual mean Breach	Hourly mean breach	
A	0	<b>50.4</b>	<b>50.4</b>	<b>50.6</b>	✓	✓		Moderate
B	0	<b>62.8</b>	<b>62.0</b>	<b>63.4</b>	✓	✓	✓	Substantial
C	0	29.9	29.8	29.4				Negligible
D	0	29.1	31.2	32.1	✓			Slight
E	0	37.8	<b>49.1</b>	<b>50.5</b>	✓	✓		Substantial
F	0	<b>47.8</b>	<b>47.9</b>	<b>51.4</b>	✓	✓		Substantial
G	0	<b>67.1</b>	<b>67.1</b>	<b>70.6</b>	✓	✓	✓	Substantial
H	0	<b>56.0</b>	<b>56.0</b>	<b>59.0</b>	✓	✓		Substantial
I	0	28.4	28.3	29.6	✓			Negligible

**Table 2: Summary of NO<sub>2</sub> modelling for each receptor and its significance (Ground floor only)**

- 44 5 receptors register as “substantial” impact and one as moderate. Both “moderate adverse” and “substantial adverse” impacts are considered likely to have a significant effect on human health, according to the AQGD. Note, that Inspector Clews in the Gladman case related ‘moderate adverse’ impacts on air quality to a likelihood to have a significant adverse effect on human health.

#### 4.3 What the Developer's NO<sub>2</sub> diffusion tube (DT) monitoring shows

- 45 A very high level of existing NO<sub>2</sub> pollution is measured by the Developer at diffusion tube *site* H on Magdalen Street (70.4  $\mu\text{g}/\text{m}^3$ ). The existing high risk to public health in this location is sustained to after 2028, 18 years after the UK adopted the EU Directive, as modelled *receptor* B, close by on Magdalen Street, is modelled to still breach the hourly mean limit at 63.4  $\mu\text{g}/\text{m}^3$  in 2028.
- 46 Levels also breach the EU Directive at *sites* A (49.2  $\mu\text{g}/\text{m}^3$ ), D (60.7  $\mu\text{g}/\text{m}^3$ ), and G (47.8  $\mu\text{g}/\text{m}^3$ ).
- 47 The Pitt Street, Duke Street roundabout, location A, also measures an illegal existing level of NO<sub>2</sub> at 49.2  $\mu\text{g}/\text{m}^3$ . This is against a modelled figure for the base year of 37.8  $\mu\text{g}/\text{m}^3$  (model receptor E) suggesting that the modelling is significantly optimistic. The modelled figure for 2028 with the development is 50.5  $\mu\text{g}/\text{m}^3$ , and this could be higher if the model optimism is persistent.



#### 4.4 What Norwich's historic performance under LQMA and AQMA shows

- 48 The 2018 Air Quality Annual Status Report<sup>18</sup> from the Council to DEFRA presents data for 2017 under the LAQM. It is the most recent fully ratified data published by Norwich City Council. To see trends, we have made a comparison with previous years<sup>19</sup> in graphs below.
- 49 On November 27<sup>nd</sup> 2019 at the request of Norwich Cycling Campaign, Norwich City Council released the draft 2019 ASR report (on 2018 data). As noted by CHSS in their Proof of Evidence, **the council has chosen an unusually low bias factor for the 2018 NO<sub>2</sub> diffusion tube data.** The 2018 factor is also inconsistent with how bias factors have been selected in previous years, and therefore makes comparisons of the 2018 data with previous years untrustworthy. Therefore, we do not use the 2018 NO<sub>2</sub> diffusion tube data which still awaits ratification from DEFRA.
- 50 St Augustine's is a street close to the development, and as noted in bullet 512 of the committee report:

*“The northern boundary of the AQMA is defined by the inner ring road but extends out to include the St Augustine's area where the canyon effect of the buildings on the edge of the street and heavy traffic loading has resulted in exceedances of the annual mean air quality objective for NO<sub>2</sub> of 40 micro grammes/cubic metre of air (µg/m<sup>3</sup>).”*

All four sites in St Augustine's increased in 2017, as below. The bold red line for the monitor outside 52 St Augustine's is close to residential property and must be below 40 to meet the EU Directive<sup>20</sup>.

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<sup>18</sup> [https://www.norwich.gov.uk/download/downloads/id/4715/2018\\_air\\_quality\\_annual\\_status\\_report.pdf](https://www.norwich.gov.uk/download/downloads/id/4715/2018_air_quality_annual_status_report.pdf) [Core Document]

<sup>19</sup> The annual reports are archived here, and the analysis was carried out by extracting the relevant data from each year's report. [https://www.norwich.gov.uk/downloads/download/1917/air\\_quality\\_monitoring\\_reports\\_and\\_assessments](https://www.norwich.gov.uk/downloads/download/1917/air_quality_monitoring_reports_and_assessments) [Core Documents]

<sup>20</sup> This site has “annual mean relevant exposure” due to being close to residential properties.

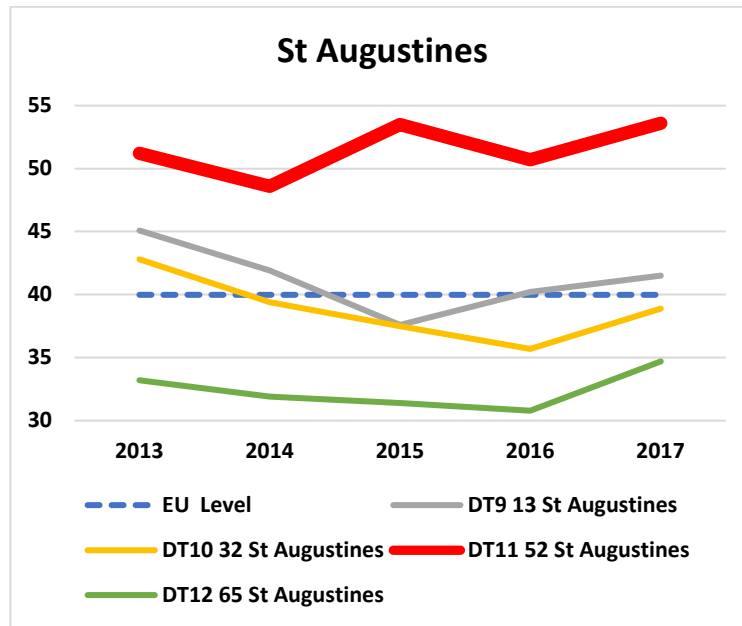


Figure 2: 2013-2017 historic data on NO2 levels in St Augustine’s Street

- 51 Table B.1 (Appendix B) of the Developer’s Air Quality report shows traffic (Annual Average Daily Traffic – AADT) increasing in St Augustine’s from 14,574 movement in 2016 to 15,165 in 2028 (without development) and 17,599 (with development), a 21% increase with the development. Given that this location is known to be illegal, it should have been modelled by the developers in their report.
- 52 Castle Meadow is an area that has had significant attention in the Council’s actions on air pollution as it is in a busy city centre area with many pedestrians and shoppers. Despite, this, and a downward trend since 2013, levels increased in 2017, and again in 2018.

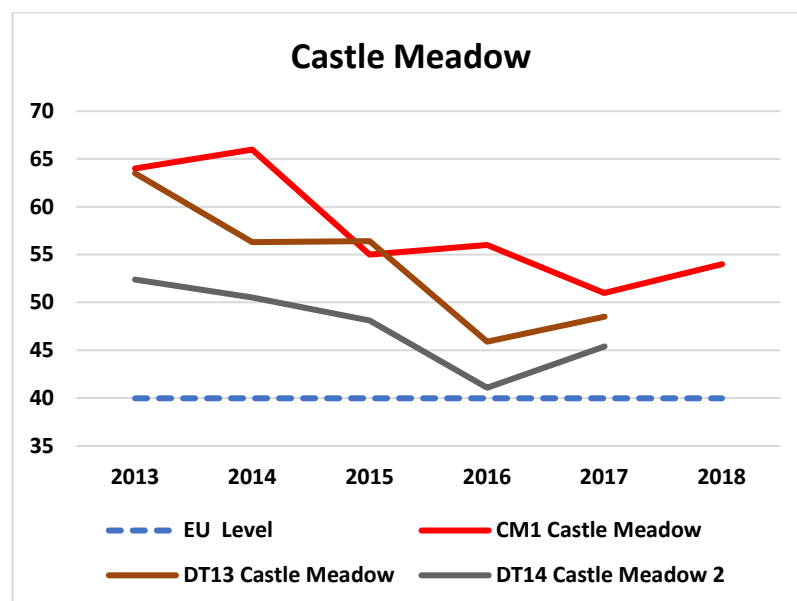


Figure 3: 2013-2018 historic data on NO2 levels in Castle Meadow

On the above graph, we show CM1, the automatic analyser for 2018, but not DT13 and DT14. These are diffusion tubes for which, as we (and CHSS) have noted above, there is an unusually low bias factor in the 2018 data.

Further the 2018 data for CM1 (Table A.4 in the draft 2019 ASR report) shows that it also breaches the 1-hour mean objective by exceeding the hourly level of over 200  $\mu\text{g}/\text{m}^3$ , 19 times in 2018. The EU Directive and LAQM objective is no more than 18 exceedances in 1 year. This is a more serious breach of the objective limits, and it had not been breached since 2014. **It's reappearance in 2018 indicates that NO<sub>2</sub> pollution is getting worse in central Norwich.**

53 Other sites showing increases include Zipfel House at the top of Magdalen Street and close to the development.

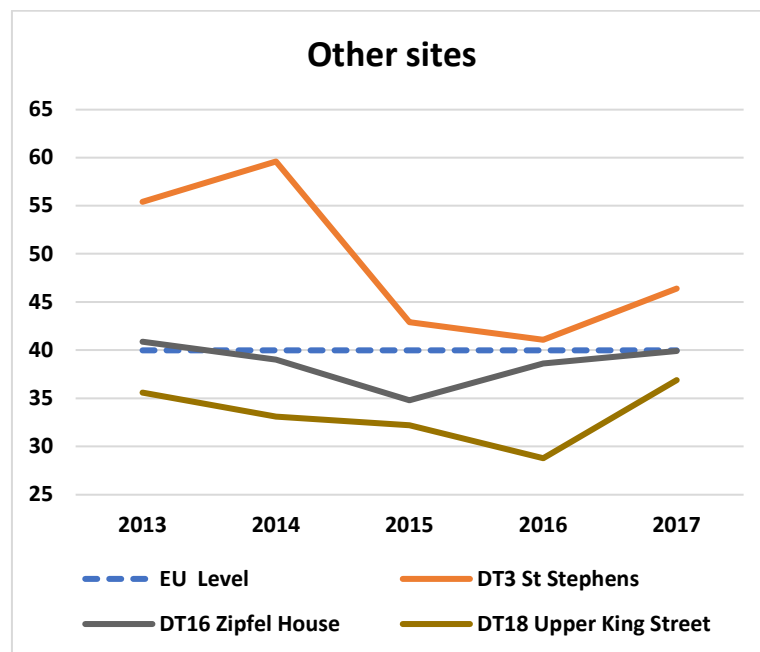


Figure 4: 2013-2017 historic data on NO2 levels at other sites

## 5 PARTICULATE MATTER (PMs) MEASUREMENTS AND MODELLING IN DEVELOPER'S AIR QUALITY ASSESSMENT

### 5.1 World Health Organisation (WHO) Guidelines

54 WHO periodically reviews the international literature on air pollution and has developed Global Air Quality Guidelines. The latest, being from 2006<sup>21</sup>, is now considered outdated as the evidence base, for adverse health effects related to short- and long-term exposure to these pollutants, has become much larger and broader<sup>22</sup>. These have influenced the levels in the EU Directive although they have not been adopted in it, the 2006 WHO recommendations being stricter, as shown below.

	2006 WHO Global Air Quality Guidelines	EU Directive Annual Mean Level	Scottish LAQM Objective
Nitrogen Dioxide (NO <sub>2</sub> )	40 µg/m <sup>3</sup>	40 µg/m <sup>3</sup>	40 µg/m <sup>3</sup>
Particulate Matter (PM <sub>10</sub> )	20 µg/m <sup>3</sup>	40 µg/m <sup>3</sup>	18 µg/m <sup>3</sup>
Particulate Matter (PM <sub>2.5</sub> )	10 µg/m <sup>3</sup>	25 µg/m <sup>3</sup>	10 µg/m <sup>3</sup>

55 The WHO have a project currently updating their guidelines<sup>23</sup>, and the 2017 Lancet Commission on Pollution and Health, as a seminal piece of global work, reported that the new Guidelines would be available from 2018<sup>24</sup>. Hot Press: A BMJ editorial on November 27<sup>th</sup> 2019 on PM2.5 health impacts entitled "*The harder we look, the more we find*" reviewed PM2.5 health risks, and made an urgent call for revised WHO guidelines to be published<sup>25</sup> (reproduced in Appendices). Whilst they have not been published yet, they may be expected soon. In the medium term, new WHO Guidance may be expected to influence new levels in national and European legislation.

56 Further, there is increasing pressure from health<sup>26</sup> and environmental<sup>27</sup> civil society groups for legal levels of particulate pollution to be reduced to World Health Organization limits by 2030. This would mean 10 µg/m<sup>3</sup> for PM<sub>2.5</sub> or less following a WHO review. Scotland already has more robust objectives of 10 µg/m<sup>3</sup> for PM<sub>2.5</sub> and 18 µg/m<sup>3</sup> for PM<sub>10</sub> under the LAQM guidance.

<sup>21</sup> 2006 WHO Air Quality Guidelines: [https://apps.who.int/iris/bitstream/handle/10665/69477/WHO\\_SDE\\_PHE\\_OEH\\_06.02\\_eng.pdf](https://apps.who.int/iris/bitstream/handle/10665/69477/WHO_SDE_PHE_OEH_06.02_eng.pdf) [Core Document]

<sup>22</sup> <http://www.euro.who.int/en/health-topics/environment-and-health/air-quality/activities/update-of-who-global-air-quality-guidelines> Reproduced in the Appendices.

<sup>23</sup> <http://www.euro.who.int/en/health-topics/environment-and-health/air-quality/activities/update-of-who-global-air-quality-guidelines> Reproduced in the Appendices.

<sup>24</sup> The Lancet Commission on pollution and health (2018), [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(17\)32345-0/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)32345-0/fulltext) [Core Document]

<sup>25</sup> "The health effects of fine particulate air pollution", Matthew Loxham et al, British Medical Journal (2019), <https://doi.org/10.1136/bmj.l6609> Reproduced in the Appendices. [Core Document]

<sup>26</sup> "Environment Bill must go further to protect against air pollution", British Heart Foundation, October 2019 <https://www.bhf.org.uk/what-we-do/news-from-the-bhf/news-archive/2019/october/environment-bill-must-go-further-to-protect-against-air-pollution> [Core Document]

<sup>27</sup> "Living near busy road stunts children's lung growth, study says", Guardian, November 2019, <https://www.theguardian.com/environment/2019/nov/25/living-near-busy-road-stunts-childrens-lung-growth-study-says> [Core Document]

57 The Centre for Health Services Studies, University of Kent has provided evidence to the Appeal on the severe medical impacts of PMs. Further, DEFRA acknowledge by that there is no safe level for PMs<sup>28</sup>: the relevant webpage is reproduced in the Appendices.

## 5.2 What the Developer’s PM<sub>10</sub> modelling shows

58 **The development sustains PM<sub>10</sub> levels above WHO levels at all receptors.** Table 4 of the Developer’s Air Quality report shows that every receptor modelled (A-I) has greater than 20 µg/m<sup>3</sup> PM<sub>10</sub> modelled with and without the development, at ground, first, second and third floors<sup>29</sup>.

59 **The development increases PM<sub>10</sub> levels at all receptors and all floor levels.** Table 4 shows all modelled values if PM<sub>10</sub> increase with the development. CEPP note that it is not clear why the Developer figures for the 2017 base year are in the range 0.53 – 2.47 µg/m<sup>3</sup> when the Developer AQA states the DEFRA estimated mapped background PM<sub>10</sub> concentration for 2017 around the development Site is 19.5 µg/m<sup>3</sup>.

Receptor	Floor	Modelled data µg/m <sup>3</sup>			2028 With Development	
		Base Year 2107	2028 Without Dev	2028 With Dev	Increases	WHO Breach
A	0	1.36	21.9	22.0	✓	✓
B	0	1.75	22.5	22.7	✓	✓
C	0	0.64	20.6	20.6		✓
D	0	0.66	21.1	21.2	✓	✓
E	0	1.18	24.1	24.4	✓	✓
F	0	2.13	23.3	24.0	✓	✓
G	0	2.47	23.9	24.7	✓	✓
H	0	1.85	22.8	23.4	✓	✓
I	0	0.53	20.4	20.6	✓	✓

**Table 3: Summary of PM<sub>10</sub> modelling for each receptor and its significance (Ground floor only)**

## 5.3 No Developer’s PM<sub>2.5</sub> modelling

60 The Developer does not provide any modelling or analysis on PM<sub>2.5</sub>. It should be noted that PM<sub>2.5</sub> is a fraction of PM<sub>10</sub>, and as both originate from the same processes (combustion, brake and tyre wear, wood burning) their concentrations will be related. DEFRA provide a conversion factor in their Air Quality Damage cost guidance which reflects this co-dependence<sup>30</sup>. Therefore, the increase in PM<sub>10</sub> in the development can be expected to have a corresponding increase in PM<sub>2.5</sub> levels.

## 5.4 Norwich City Council ignore PM<sub>10</sub> and PM<sub>2.5</sub> impacts associated with the development

61 Norwich City Council ignore PM<sub>10</sub> data in their committee report. Except for superficial references at bullets 516 and 518, they make no interrogation of the data, nor advise councillors that the PM<sub>10</sub> associated with the development poses considerable health risk

<sup>28</sup> <https://laqm.defra.gov.uk/public-health/pm25.html> Reproduced in the Appendices. [Core Document]

<sup>29</sup> Only receptors E, F and I fall minimally below 20.0 µg/m<sup>3</sup> PM<sub>10</sub> at fourth floor level

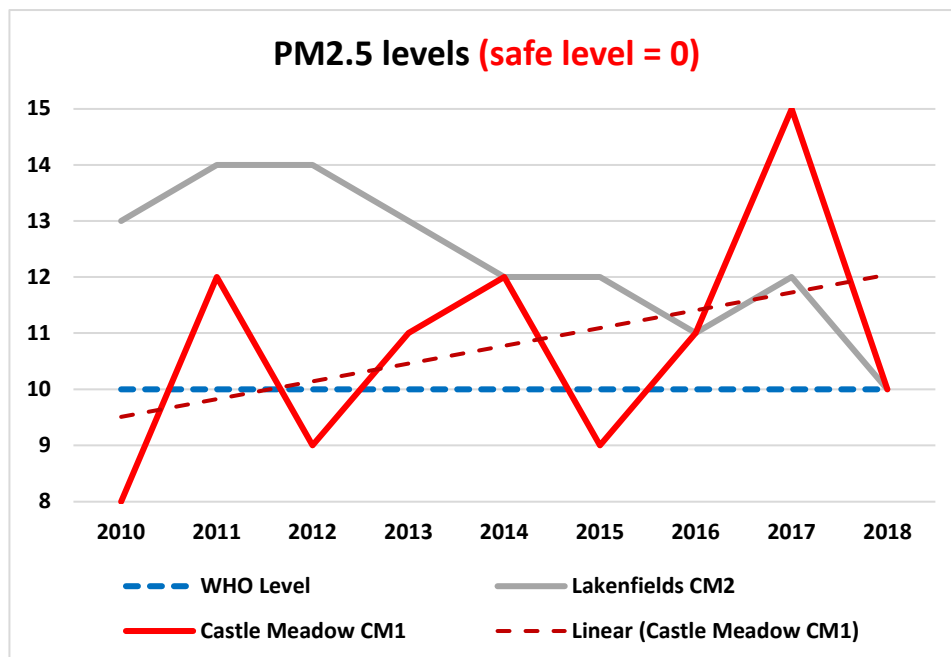
<sup>30</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/770576/air-quality-damage-cost-guidance.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/770576/air-quality-damage-cost-guidance.pdf) [Core Document]

and is above WHO guidelines. Further, the council reduced the Developer's AQA Table 4 which reported the modelling outputs for both NO<sub>2</sub> and PM<sub>10</sub> down to Table 3 in their committee report which only reported NO<sub>2</sub> so that the PM<sub>10</sub> data was invisible to planning councillors. The last bullet of 518 states implies that PM<sub>10</sub> may be ignored as there is no breach of the EU Directive predicted, and lack of PM<sub>2.5</sub> is not questioned. This ignores the public health risks at any level of PM as recognise by DEFRA and medical experts<sup>31</sup>.

**62 Ignoring the PM<sub>10</sub> data is a serious omission which results from the conflation by Norwich City Council of its regulatory obligations and its public health obligations, as covered in the evidence from the Centre for Health Services Studies, University of Kent.**

### 5.5 Norwich City Council monitoring of PM<sub>2.5</sub>

63 The 2018 Annual Monitoring report (for 2017 data) also showed an increase in PM<sub>2.5</sub> (particulate matter of 2.5 microns and smaller) levels at two Norwich monitoring locations. Levels in Norwich have been highlighted as exceeding World Health Organisation current recommended level of 10µg/m<sup>3</sup>. Note, there is no safe level of PM<sub>2.5</sub>. The Lakenfields CM2 data in this plot is used as an indicator of background PM<sub>2.5</sub> levels in Norwich whilst the Castle Meadow CM1 data is levels at the City Centre. Unratified data for 2018 has been added in. The linear trend of 2010-2018 values is shown.



**Figure 5: PM<sub>2.5</sub> levels in Norwich 2010-2018**

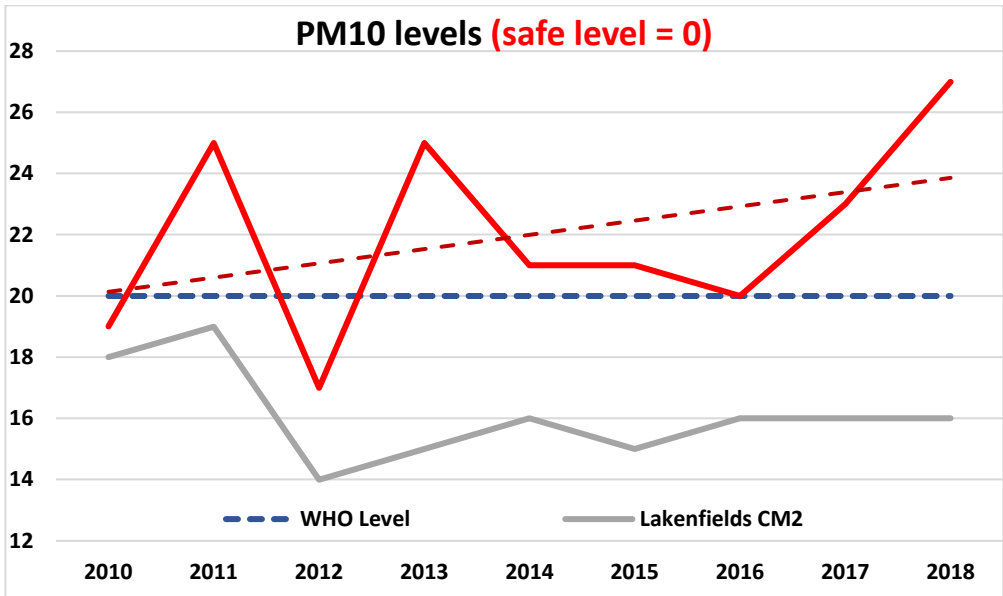
64 PM<sub>2.5</sub> emissions are a serious health problem in Norwich as evidenced by the 2015 Public Health England estimate of 62 annual excess adult deaths, and 720 life years lost, to PM<sub>2.5</sub> exposure in Norwich (see Centre for Health Services Studies evidence).

<sup>31</sup> "The health effects of fine particulate air pollution", Matthew Loxham et al, British Medical Journal (2019), <https://doi.org/10.1136/bmj.l6609>  
Reproduced in the Appendices. [Core Document]

In central Norwich, PM<sub>2.5</sub> emissions, as measured by the council, has rising trend-line since 2010 with a sharp increase in 2017. As the development is modelled by the Developer as increasing PM<sub>10</sub> and NO<sub>2</sub> levels, there will almost certainly be a corresponding increase in PM<sub>2.5</sub> too, and this needs to be investigated further.

**5.6 Norwich City Council monitoring of PM<sub>10</sub>**

65 The 2017 and 2018 data show a marked increase in PM<sub>10</sub> (particulate matter of 10 microns and smaller) levels in the City centre. Levels in Norwich have been highlighted as exceeding World Health Organisation current recommended level of 20µg/m<sup>3</sup>. Note, there is no safe level of PM<sub>10</sub>. The Lakenfields CM2 data in this plot is used as an indicator of background PM<sub>10</sub> levels in Norwich whilst the Castle Meadow CM1 data is levels at the City Centre. Unratified data for 2018 has been added in. The linear trend of 2010-2018 values is shown.



**Figure 6: PM<sub>10</sub> levels in Norwich 2010-2018**

66 Both PM<sub>2.5</sub> and PM<sub>10</sub> levels are above WHO standards in Norwich City Centre for most recent years, and the trend-line over the last decade is upwards. Both would also breach the LAQM regulations in Scotland.

67 At DEFRA’s recommendation in 2018, the Council is using the Public Health Outcomes Framework to address PMs, and in the draft 2019 LAQM Annual Monitoring report state that “the minimisation of airborne particulates (PMs) will continue to be an important factor in all planning application considerations”. To fulfil this, a development which increases PM levels, like Anglia Square is modelled to do, should not be consented.

## 5.7 *Statement from Public Health Officers from Norfolk County Council*

68 In May 2018, Public Health officers from Norfolk County Council raised concerns about the development, making the same points, with the planning officers, and stated:

*“We are concerned that modelling of both current use and post-development use of the site indicates a number of locations which would fail to meet existing, never mind reduce current levels of, air quality standards in terms of NO<sub>2</sub> and also fall above current recommended WHO measures for PM<sub>10</sub>. In some cases, the modelling suggests NO<sub>2</sub> levels may exceed hourly as well as annual mean figures. These hourly exceedances represent potential risks to people who may work or shop in the area as well as pedestrians, cyclists and drivers.”*

69 These concerns are the same as ours above.

## 6 FLAWS IN NORWICH CITY COUNCIL PLANNING REPORT

### 6.1 *Unlawful Bias to Optimism in Norwich City Council Planning Report*

70 The Norwich City Council planning report describes the Developer’s AQA report figures as representing “a worst-case scenario” at bullet 519. This implies to planning councillors that the situation will be better than the data presented before them. The council say this is due to:

- i. *“The ‘without development scenario’ does not include an allowance for the existing vacant buildings (multi-storey car park) and office space being brought back into use – this would result in a greater baseline traffic level”* [bullet 516]
- ii. *“..and also due to the approach of selecting air quality monitoring positions and receptor locations to identify potential ‘hotspots’”* [bullet 519]
- iii. *“The modelling makes no allowance for potential reduction is[in] emissions associated with future changes in car, HGV or buses engine technology or fuel type over that period”* [bullet 516]

71 Argument i is a relative argument based on the difference between comparing the ‘without development’ and ‘with development’ scenarios. The increase in pollutants with-development relative to without-development would be less because the factors quoted would increase pollutants in the without-development scenario. However, with-development pollution levels are unaltered by this. The EU Directive, and hence the planning system, is concerned with reducing absolute levels of air pollutants within the shortest possible time for the development. Consideration of the modelling of the ‘with development’ scenarios alone shows that the development sustains breaches of the EU Air Quality Directive and LAQM. Argument i is therefore specious.

72 The whole point of air quality appraisal is to identify hotspots of exposure as these constitute the greatest public health risk. NO<sub>2</sub> exposure is a point-source phenomenon, and NO<sub>2</sub> disperses quickly by distance from its source. Identification of hotspots is vital, and these are indicators of the real public health impact, not the worst-case impact.



Argument ii is, therefore, also specious as understanding the health impacts requires hotspot modelling.

73 Argument iii uses an optimism argument. It suggests that air quality will inevitably improve - “potential reduction in emissions” - due to technological and policy changes. However, the council, and the developer, do not provide any evidence for the certainty or reliability of such changes happening. In the Gladman case, both the High Court and Appeal Court made clear that planning decisions could not rely on such arguments. Such arguments of *optimism*, or *inevitability of air pollutants reducing*, were thrown out by Supperstone J in the Gladman case as discussed above. The courts made clear that the planning system cannot presume local air quality will improve because:

- a. the Government is required to comply with the law (ie the EU Directive), or
- b. that other schemes of regulatory control (of air quality) are legally effective

As far as ensuring air pollutants reduce in the development, as legally required, the responsibility lies with the planning system. In the words of Supperstone J at (B) above “*There is no separate licensing or permitting decision that will address the specific air quality impacts of the Claimant’s proposed development.*”

74 Likewise, the planning system cannot presume that air quality in Anglia Square area “can only get better”, especially when the development increases traffic and parking, simply because the Government is bound by law to reduce emissions nationally, or that there are other regulatory schemes (such as the LAQM in which Norwich participates), or that the council themselves have policies to reduce it. Therefore, the unevidenced optimism of argument iii cannot be lawfully relied upon.

75 Further, the *evidence of recent delivery against policy* in Norwich shows that the council’s policy has not been effective in reducing air pollutants in recent years across the city and in the Anglia Square hinterland. Therefore, there is no convincing evidence from recent years for optimism. As shown above:

- The 2018 Air Quality Annual Status report shows that NO<sub>2</sub> pollution levels increase in 2107 at most measured hotspots as above including St Augustine’s street where the development would be a long-term traffic and pollution generator. PM<sub>2.5</sub> pollution also increased in 2017.
- The council enacted a policy in 2015 to remove the dirtiest buses from the city by 2018. They have failed to do this, and, alarmingly, it was recently reported that bus companies had instead imported the dirtiest diesel buses into the city, cast off from London and elsewhere<sup>32</sup>. There is no case for optimism when the council appears unable to enforce its own policy.

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<sup>32</sup> “Old buses ‘dumped’ in Norwich after other cities get new vehicles”, Eastern Daily Press, 5<sup>th</sup> May 2019, <https://www.edp24.co.uk/news/environment/old-diesel-buses-dumped-in-norwich-1-6032100> [Core Document]

- National trends have also acted against any local policy delivery, with DEFRA reporting in April 2019<sup>33</sup> that roadside PM<sub>10</sub> and NO<sub>2</sub> levels had not improved nationally since 2015<sup>34</sup>.

## 6.2 DM11 non-compliance

76 DM11 11.16 includes:

*“Development which may give rise to airborne emissions of harmful substances will be required to assess their possible direct and indirect impacts on health, the natural environment and general amenity”.*

77 The council have conflated meeting regulatory requirements with public health obligations (see evidence from Centre for Health Services Studies). They have failed of both, as the development to meet regulation and law required by the NPPF, and the council have not properly assessed the health risks from increases in NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> with the development.

## 7 THE DEVELOPERS AIR QUALITY STATEMENT

78 The Developers Air Quality Assessment (ASA) suggests some superficial mitigation *within* the development buildings. However, it does not make any serious attempt to mitigate the illegal levels modelled in 2028, and beyond 2028, *on the local streets and community areas outside the buildings*. CHSS finds a case where the proposed outdoor mitigation may make things worse: see the CHSS report for more concerns on mitigation strategy. The bottom line is that the AQA shows the area can expect very high pollutant levels and regulatory exceedances to continue into the 2030s and beyond with the development.

A completely different development that directly addresses migrating car usage in the area to other transport modes, including substantially reducing car parking provision in the development, is required to have a chance of

- a) reducing air pollutants to legal levels with the development, and
- b) to maintain legality, and reduce pollution further, in the years after 2028.

79 The Developer’s claims in Supplementary Environmental Information (SEI) document on Air Quality (Chapter 10), section 10.7 that “The Air Quality Assessment Update and Chapter 10 of the Original ES comply with the NPPF 2018.” This is patently a false and erroneous claim as their modelling shows NO<sub>2</sub> and PM<sub>10</sub> levels to increase with the development. The Developer’s own modelling shows air pollutants levels going in the opposite direction to compliance with the EU Directive, as required for planning decisions by NPPF 181 and by the recent case law precedence.

<sup>33</sup> DEFRA Air quality statistics, 25th April 2019, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/796887/Air\\_Quality\\_Statistics\\_in\\_the\\_UK\\_1987\\_to\\_2018.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/796887/Air_Quality_Statistics_in_the_UK_1987_to_2018.pdf) [Core Document]

<sup>34</sup> “PM<sub>10</sub> and NO<sub>2</sub> levels not improved since 2015, O<sub>3</sub> at record highs, Defra says”, Air Quality News, 25<sup>th</sup> April 2019, <https://airqualitynews.com/2019/04/25/pm10-and-no2-levels-remaining-steady-defra-says/> [Core Document]

## 8 CONCLUSIONS

80 This development seeks to sustain existing illegal air quality exceedances not just to 2028, but beyond 2028. It seeks to increase them over the without-development scenario. It provides no serious mitigation for exceedances after the development is complete. The development is therefore contrary to:

- I. NPPF2/180 and 181: extremely dangerous health pollutants are shown by the Developer to increase with the development, and the development acts in the opposite direction to compliance with national laws and regulations for pollutants.
- II. DM11. When DM11 is considered properly in the context of the NPPF, and the EU Directive, it cannot allow a development that acts in the opposite direction to compliance with national laws and regulations for pollutants. Further, Norwich City Council have not assessed the health risks properly, under DM11 11.16 as they have conflated meeting regulatory requirements with public health obligations (see evidence from Centre for Health Services Studies). DM11 11.20 needs review by the council after the Gladman High Court and Appeal Court judgements, as discussed.
- III. European and UK legislation. The air pollutant levels for the development move in the opposite direction to legal and regulatory compliance. It therefore acts completely contrary to European and UK legislation that the UK must move to “*compliance within the shortest possible time*”, and which has been serially enforced by the UK High and Supreme courts without any doubt of judicial opinion. The application of the European and UK legislation, and the onus to move to “*compliance within the shortest possible time*”, for individual planning decisions has now been established by the courts with the Gladman case.
- IV. The public health obligations of Norwich City Council. The emerging consensus of health experts is that air pollution is a major health problem killing 7million people worldwide and over 40,000 in the UK each year. Norwich City Council have not taken their obligations seriously, under NPPF 180 and DM11 16, to improve public health within the planning system. Please see evidence from Centre for Health Services Studies for more on this.

We respectfully suggest the Inspector notes, foremost, that the courts are clear that the UK has an essential obligation “*to remedy this real and continuing danger to public health as soon as possible*” (Lord Carnforth, 2015, as above) following the ClientEarth judgements. This means within the planning system for individual developments, the precedent of the Gladman case must be followed too.

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