

Rule 6 Party: Saffron Walden Town Council & Swards End Parish Council



SAFFRON WALDEN
TOWN COUNCIL



THE TOWN AND COUNTRY PLANNING (INQUIRIES PROCEDURE) (ENGLAND) RULES 2000

APPEAL BY ROSCONN STRATEGIC LAND & T E BAKER AND S R HALL, THE EXECUTORS OF
MR E C BAKER & MRS J BAKER

AGAINST REFUSAL OF OUTLINE PLANNING PERMISSION APPLICATION
FOR THE ERECTION OF UP TO 233 RESIDENTIAL DWELLINGS INCLUDING AFFORDABLE
HOUSING, WITH PUBLIC OPEN SPACE, LANDSCAPING, SUSTAINABLE DRAINAGE SYSTEM
(SUDS) AND ASSOCIATED WORKS, WITH VEHICULAR ACCESS POINT FROM RADWINTER
ROAD. ALL MATTERS RESERVED EXCEPT FOR MEANS OF ACCESS.

ON LAND SOUTH OF (EAST OF GRIFFIN PLACE), RADWINTER ROAD,
SEWARDS END, SAFFRON WALDEN, ESSEX, CB10 2NP

LPA REF: UTT/21/2509/OP

PINS REF: APP/C1570/W/22/3296426

Core Documents References: Section F – Proofs of Evidence – Rule 6 Party CD F1 & CD F2

Review of Air Quality Assessment for Radwinter Road

In support of refusal of Planning Application

Project reference: APP/C1570/W/22/3296426
Project number: 60688564

2 August 2022

Quality information

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Prepared for:

Saffron Walden Town Council and Swards End Parish Council

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1. Introduction

- 1.1 This report has been prepared on behalf of Saffron Walden Town Council and Swards End Parish Council to inform their support of the refusal of planning application UTT/21/2509/OP - Land south of Radwinter Road (East of Griffin Place):

Outline planning application for the erection of up to 233 residential dwellings including affordable housing, with public open space, landscaping, sustainable drainage system (SuDS) and associated works, with vehicular access point from Radwinter Road. All matters reserved except for means of access.

- 1.2 Planning Appeal number: APP/C1570/W/22/3296426

- 1.3 The main documents reviewed are as follows:

- Environmental Statement Volume 1 Main Report – Land South of Radwinter Road, August 2021 (Rosconn Strategic Land) –
 - Chapter 7 Air Quality
 - Appendix 7.1 – Air Quality Technical Report
 - Appendix 7.2 – Locations of Receptors used in Modelling
 - Appendix 7.3 – Location of Saffron Walden AQMA and Monitoring
 - Appendix 7.4 – Results of Air Quality Modelling
 - Appendix 13.1 – Transport Assessment
- Environmental Statement Addendum Volume 1 Main Report – Land South of Radwinter Road, January 2022 (Rosconn Strategic Land) – Chapter 7 Air Quality
 - Appendix 7.5A – Air Quality Technical Note – Assessment of Impacts with no Link Road
 - Appendix 7.6A – Environmental Health Officer Response

- 1.4 All documents associated with the planning application are available at <https://www.uttlesford.gov.uk/article/4863/Comment-or-search-for-a-planning-application> by searching for UTT/21/2509/OP.

2. Examination of Traffic Data Informing the Air Quality Assessment

- 2.1 Appendix 13.1 of the ES (Transport Assessment) sets out the committed developments included in the future baseline traffic data. These are:

- UTT/13/3467/OP & UTT/16/1856/DFO Land South of Radwinter Road (Linden Homes)
- UTT/17/2832/OP Land North of Shire Hill Farm (Dianthus Land)
- UTT/18/0824/OP & 19/2355/DFO Land East of Thaxted Road (Bellway Homes)
- UTT/13/2423/OP Land at Ashdon Road
- UTT/16/2210/OP Land East of Little Walden Road

- 2.2 It is stated that the inclusion of these developments in the baseline provides a worst-case assessment. However, the following developments are not included:

- UTT/22/1939/DFO | Details following outline application UTT/17/3413/OP - details of layout, appearance, landscaping and scale, for the development of 55 dwellings together with

associated open space, landscaping, parking and supporting infrastructure | Land North Of
Ashdon Road Ashdon Road Saffron Walden

- This application has only been submitted recently but at the time the assessment was undertaken the outline planning application (3413/OP) was granted. As such it should have been included.
 - Section 62A Planning Application: S62A/22/0000002 Former Friends' School, Mount Pleasant Rd, Saffron Walden CB11 3EB - Conversion of buildings and demolition of buildings to allow redevelopment to provide 96 dwellings, swimming pool and changing facilities, associated recreation facilities, access and landscaping.
 - This application has recently been submitted to PINS, so would not have been included in the assessment, but shows that the included developments are unlikely to represent worst case conditions.
 - UTT/0400/09/OP | Mixed use development comprising the construction of 130 residential units (37 units of affordable housing) and approximately 3,800 square metres of Class B1 employment land with associated access points, play areas, open space, landscaping and associated ancillary works | Land At Ashdon Road Saffron Walden CB10 2NL (and UTT/1572/12/DFO | Details following outline application UTT/0400/09/OP)
 - Construction works have only recently been completed, so this should have been included in the committed developments.
- 2.3 The above shows that the future baseline has not accounted for traffic movements from an additional 281 dwellings and 3,800 square metres of employment land.

3. Review of the Air Quality Assessment

- 3.1 Overall the air quality methodology is good, and in line with current best practice and legislation. The air quality assessment was updated in response to comments from the Environmental Health Officer at Uttlesford District Council - principally that the Applicant should not rely upon the link road being completed. The updated air quality assessment was included in the ES Addendum (produced in full in Appendix 7.5A). It is important to note that the updated assessment did address the comments from Environmental Health, and Uttlesford DC therefore withdrew its objections on the grounds of air quality. However, there are a number of enhanced mitigation measures set out in the Environmental Health Officer Response (Appendix 7.6A) that should be enforced should the development go ahead.
- 3.2 The assessment predicts concentrations, even in the Air Quality Management Area (AQMA), to be well below the air quality strategy (AQS) objective. This is predominantly due to the low background concentrations predicted by Defra. Uttlesford DC maintains an urban background diffusion tube at the Town Hall. In 2019 the annual mean NO₂ concentration is reported as 15.5 µg/m³. The air quality assessment does not compare the Defra predictions, which are stated to vary between 8.3 and 11.3 µg/m³ across the model domain, to the Uttlesford DC urban background diffusion tube. A comparison to the monitored concentration against the Defra mapped background values would suggest that the Defra predictions are overly optimistic, and should be adjusted in line with the monitored data. This results in an under-prediction of the modelling assessment, and would also change the verification factors.
- 3.3 One technical aspect that is missing from the assessment is that it does not appear that any street canyons were included in the model set-up. The dispersion of pollution from a road source within a street canyon may be altered by channelling of the flow by the canyon walls and a recirculating flow region driven by the above-canopy flow perpendicular to the street. For street canyons with high aspect ratios, flow velocities may also reduce significantly near the ground. Saffron Walden is a traditional Market Town with many small roads not designed for modern road traffic. While not all roads in the modelled domain are "classic" canyons, where the height of the buildings is greater than the road width, LAQM.TG(16)¹ discusses in chapter 7 the importance of accounting for street canyons, with paragraph 7.418 stating:

¹ Defra, Local Air Quality Management Technical Guidance (TG16) (April 2021) - <https://laqm.defra.gov.uk/documents/LAQM-TG16-April-21-v1.pdf>

Although street canyons can generally be defined as narrow streets where the height of buildings on both sides of the road is greater than the road width, there are numerous examples whereby broader streets may also be considered as street canyons where buildings result in reduced dispersion and elevated concentrations (which may be demonstrated by monitoring data). Therefore, canyon effects can occur both in small towns or large cities.

- 3.4 The inclusion of street canyons can significantly increase modelled concentrations, and while it is impossible to say by how much the results would be affected by the inclusion of canyons in the model without reassessing, the potential for increased air quality impact is present and cannot be dismissed.
- 3.5 Changing the background concentrations and including street canyons may not individually have much affect on the model predictions, but doing both may result in changes. The combined effect would increase total concentrations and would affect the model verification adjustment factor. This could mean that larger differences between the future baseline and with-scheme scenarios are revealed. This could potentially lead to adverse impacts under the IAQM guidance.
- 3.6 The presence of the AQMA has not been given much weight in the assessment. Only the closest section of the AQMA to the development has been included in the modelling. However, there appears to be no discussion about how the traffic disperses through the town. There is a potential for traffic from the development to continue further into the AQMA, especially given that the M11 motorway is located to the west of both the development and AQMA, and, therefore into, an area already sensitive to changes in air quality. This has not been assessed quantitatively or qualitatively.

4. Consideration of Health Impacts

- 4.1 Current air quality objectives were set based on NO₂ in particular being a “threshold” pollutant – i.e. that there is a “safe” level of NO₂ in the ambient air that will not damage the health of an average person. In recent years this has been called into question, and the WHO² Guidelines, while not statutory, are considerably lower (10 µg/m³ compared to 40 µg/m³ for NO₂). While using the current objectives is not technically incorrect, there is an argument to be made that any worsening of air quality, particularly within an AQMA, should not be allowed to occur as the potential to damage health is clear.
- 4.2 In addition, the UK Government has made a commitment in the Environment Act 2022 to introduce a long term target for PM_{2.5} concentration that is lower than the current air quality objective of 20 µg/m³. This is due to mounting evidence that particulate matter is particularly damaging to health. The WHO Guidelines (section 1.3.3) states:

To date, strong evidence shows causal relationships between PM_{2.5} air pollution exposure and all-cause mortality, as well as acute lower respiratory infections, chronic obstructive pulmonary disease (COPD), ischaemic heart disease (IHD), lung cancer and stroke (Cohen et al., 2017; WHO, 2018).

A growing body of evidence also suggests causal relationships for type II diabetes and impacts on neonatal mortality from low birth weight and short gestation (GBD 2019 Risk Factors Collaborators, 2020). Air pollution exposure may increase the incidence of and mortality from a larger number of diseases than those currently considered, such as Alzheimer’s and other neurological diseases (Peters et al., 2019). The burden of disease attributable to air pollution is now estimated to be competing with other major global health risks such as unhealthy diet and tobacco smoking, and was in the top five out of 87 risk factors in the global assessment (GBD 2019 Risk Factors Collaborators, 2020).

- 4.3 Air Quality is now the leading environmental risk factor globally, and the issue is rising in prominence all the time. As such worsening the air quality within an existing AQMA, even by a small amount should be carefully considered.

² World Health Organization. (2021). WHO global air quality guidelines: particulate matter (PM_{2.5} and PM₁₀), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide. World Health Organization. <https://apps.who.int/iris/handle/10665/345329>
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5. Conclusion

- 5.1 The review of the Application documents has shown the following potential factors which could affect the conclusions of the Air Quality Assessment:
- Potential underestimation of future baseline traffic volumes;
 - Underestimation of background concentrations (baseline and future), resulting in underestimation of total concentrations, and affecting the verification factors;
 - Lack of consideration for street canyons within Saffron Walden, potentially under estimating pollutant concentrations;
 - Lack of weight given to the whole AQMA;
 - Lack of consideration of health impacts of air quality and WHO guidelines suggesting harm is caused at much lower concentrations than the current air quality objectives account for.
- 5.2 The combined impact of all of the above is that it is considered that Air Quality has not been given sufficient weight in the decision process, and that impacts of the development on air quality have likely been underestimated.