

HEARING STATEMENT FOR EREWASH CORE STRATEGY REVIEW HEARING SESSIONS – PROPOSED ACORN WAY DEVELOPMENT

David M. Clarke

Rep id 173

Matter 6 Acorn Way 1.3

6 December, 2023

1. INTRODUCTION

This document provides a hearing statement for the Erewash Core Strategy Review Hearing Sessions commencing in January 2024.

The comments in this hearing statement relate to the proposed development at Acorn Way near Oakwood, Derby and focus on the issue of **air quality / air pollution from traffic, which should be considered from early stages of planning.**

The issues described in this statement affect the health and life expectancy of real people, as well as the economy and environment.

Levels of air pollution arising from existing traffic and additional new traffic from the proposed development, worsened by exacerbating effects of concentration due to several local circumstances, appear well beyond what would be acceptable. It is concluded that, from an air quality perspective, the Acorn Way site is a poor one for housing development. Effective air quality mitigation measures are likely to be impractical, while practical measures would have limited benefits. It is questioned whether air quality has received adequate and sufficiently early attention in the Core Strategy Review.

A summary and conclusion with more details are provided at the end of the statement.

2. WHY AIR QUALITY MUST BE CONSIDERED IN DETAIL EARLY IN PLANNING AND NOT LEFT FOR LATER

The high importance of air quality in connection with health, economics and environment is identified in Section 3 below.

Reference 1 provides guidance from the government on how planning in the UK can take account of the impact of new development on air quality. Reference 2 states, "Air quality is a material planning consideration. An appropriate assessment of air quality must therefore be included with any application that may adversely affect local air quality or be significantly affected by existing levels. It is vital that the applicant considers the need for any assessment before any application is submitted.

Failure to include appropriate information on air quality could result in an invalid application or in the application being refused or delayed.” Absence of pre-existing air pollution problems are not necessarily grounds for delaying consideration of air pollution problems associated with a development because new ones can arise from the development (including by making substantial additions to existing air pollution and by creating or worsening existing concentrations of air pollution). Reference 2 also identifies cases in which applications for planning permissions were dismissed on grounds relating to air pollution (the particular circumstances in these examples differ from those at Acorn Way).

From a general perspective, as stated in Reference 3 by Birmingham University, **“Air quality should be considered at the earliest stages of planning and design, before the position of infrastructure and buildings is decided.”** From a specific perspective relating to the proposed Acorn Way development, air quality needs to be considered very carefully before any decision is made about proceeding with the development because **several local circumstances make the avoidance of unacceptable air pollution difficult or impracticable and limit the effectiveness of air pollution mitigation measures.** These circumstances include a) the nature of existing roads and traffic conditions and how they would be affected by a housing development, and b) the nature of the boundaries of the proposed site (details in Sections 4 and 5 below).

The Erewash Borough Council document, Reference 4, states in relation to the issues of traffic/roads (which relates to air quality) and some other matters, “these issues will need addressing in the event of any development, wherever growth occurs,” suggesting late consideration of air quality.

Late consideration of air quality in relation to a planned development can result in the creation of high levels of air pollution and limit the scope and effectiveness of mitigation measures.

On the basis of information available on the Erewash Borough Council website concerning the Erewash Core Strategy Review, and unless detailed work is reported elsewhere, it appears that air quality has been addressed only to a limited extent in a) comments submitted to Erewash Borough Council about the Core Strategy Review, and b) Erewash Borough Councils responses to those comments (for example in Reference 4).

It appears, therefore, that the issue of air quality has not been given sufficient attention early enough in the Erewash Core Strategy Review.

The comments about air quality in this hearing statement are relevant to all stages of planning in relation to the proposed development at Acorn Way. But the comments are presently aimed at the Hearing Sessions commencing in January 2024.

3. IMPORTANCE OF AIR QUALITY (HEALTH AND ECONOMIC REASONS)

As stated in numerous government documents (including refs 5-9) and other sources (including Ref 10), air pollution is the largest environmental risk to public health and is highly costly to the NHS and social care system. It can cause chronic conditions such as cardiovascular and respiratory diseases as well as lung cancer, leading to reduced life expectancy. Air pollution has been linked to many other health issues, such as reduced cognitive function, dementia, diabetes and miscarriage. It also harms the natural environment, affecting waterways, biodiversity and crop yields. Vehicle emissions are a major source of air pollution. **The government documents cited above also call for action to reduce air pollution (which must include not creating it at harmful levels in the first place).**

The foregoing underlines the importance of air quality and why it must receive sufficient attention throughout the planning process.

4. LEVELS OF ADDITIONAL TRAFFIC FROM THE PROPOSED DEVELOPMENT AND HOW TRAFFIC AND AIR POLLUTION IS CONCENTRATED BY LOCAL CIRCUMSTANCES AROUND ACORN WAY AND MORLEY ROAD

Acorn Way and Morley Road run along long sections of the boundary of the proposed area for development.

Morely Road is already a busy road during the early morning and mid- to late afternoon, a proportion of the traffic resulting from cars taking pupils to and from Leesbrook Academy, which is a large secondary school. Parked cars and queuing are also issues at Leesbrook Academy. Large amounts of traffic enter Morely Road from Acorn Way, the Oakwood housing estate and Chaddesden.

As a general observation, **the effects of air pollution from traffic are exacerbated at junctions and as a result of queueing / standing traffic** (References 11 and 12). This effect already takes place as a result of heavy traffic at existing junctions and traffic queues on Morley Road and would be increased by the proposed development.

The six hundred houses proposed for the Acorn Way development would create a large amount of additional traffic and air pollution on roads leading out and away from the development, such as Morley Road.

Entry/egress roads associated with the proposed development would concentrate traffic and air pollution at the junctions on Morley Road. A major concern is that the proposed development site has few easy options for traffic to enter and exit the proposed area of new housing.

An Erewash Borough Council document referred to the use of two roads to provide entry/egress into and away from the proposed development, with both roads

forming junctions with Morley Road (I cannot presently identify this document so can't reference it). But as an example of one possible scenario for provision of entry/egress, consider two such entry/egress roads connecting to Morley Road. Assuming (conservatively) one journey (with outward and return stages) per household per day, this results in a) an additional 1200 passes per day along Morley Road, and b) 1200 slow-down and pull-away events per day at entry/egress junctions (accelerations generate more air pollution). Given current UK statistics on typical car ownership and journeys made per day (for example, in National Travel Surveys produced annually by the UK Government), these illustrative figures are likely to be underestimates and the actual numbers could be much greater. The extra vehicle movements and associated air pollution would be added to already high levels of traffic and air pollution, especially during busy periods.

Much of the existing pavement on Morley Road is very narrow (as little as three feet) and directly adjoins the road with no grass verge. For people using the pavement, this results in high exposure to vehicle emissions. (Even without extra traffic from a new development, walking along the majority of Morley Road is not a pleasant experience as a result of the high level of fumes).

Therefore, the proposed development will produce a large amount of additional air pollution that will affect an already busy Morley Road (early morning and mid- to late afternoon) as a whole, be concentrated at entry/egress roads and be further concentrated by queueing of traffic at several locations, which include the junctions of entry/egress roads for the proposed development; at Leesbrook Academy; at Acorn Way Island; at the Locko Road junction with Morley Road (already over capacity); at the junction at the top of Morley Road (already over capacity); and at the bottom of Morley Road in Chaddesden. The picture of air pollution overall, entailing the amount of additional air pollution and exacerbating effects of concentration due to local circumstances, appears well beyond what would be acceptable.

5. PEOPLE AFFECTED BY AIR POLLUTION AROUND ACORN WAY AND MORLEY ROAD

People affected by air pollution from vehicles using Morley Road comprise existing Oakwood residents and new residents in the proposed development as well as various other road users, whether pedestrians or drivers. Specific groups include:

- a) Existing and new residents, particularly those located on or close to Morley Road, but also those in the vicinity (air pollution spreads).
- b) At still greater exposure and risk due air pollution concentration, existing and new residents near (i) road junctions providing entry/egress into and from the proposed development, and (ii) several other busy junctions on Morley Road.

- c) Hundreds of existing and new school pupils of Leesbrook Academy (likely to be more vulnerable to air pollution due to age) who walk along Morley Road twice per day, many of them for long distances / exposure times, using narrow pavements right next to the road, when the road is at its most busy and produces most air pollution. The drop off /pick up of pupils by parents, also resulting in concentrated air pollution exposure, takes place on Morley Road.
- d) Drivers in traffic queues at several locations, who, despite being inside a vehicle, are affected by air pollution, which already occurs and will be worsened at existing queueing locations and added to by new queueing locations.
- e) Other users of Morley Road, such as numerous pedestrians, dog walkers and joggers. Also, people waiting at bus stops on Morley Road, often elderly people who are more vulnerable to air pollution due to age (the young and elderly are most vulnerable).

Therefore, with additional traffic arising from the proposed development, many people, including especially vulnerable people, will be exposed to high levels of air pollution.

Air quality problems such as those described in this statement already exist at some locations in Derby as a result of building and development practices in the past (legacy) but must be avoided in new developments.

6. MITIGATION OF AIR POLLUTION AND HOW MITIGATION IS CONSTRAINED BY LOCAL CIRCUMSTANCES AROUND ACORN WAY AND MORLEY ROAD

Erewash Borough Council document, Reference 4, states that increases in vehicles on the road network “will be dispersed across the Borough rather than concentrated as a result of the proposed strategy and this will help to ensure any increases in air or noise pollution within any single locality are limited.” Also, “Development does also present opportunities to improve the existing road network such as by way of further dispersing traffic away from residential areas (such as onto a new relief road at Kirk Hallam) or improving flows in general through junction and layout improvements.”

However, in the case of the proposed development at Acorn Way, local circumstances are likely to prevent these objectives being achieved. **Because of local circumstances described in Section 4 above, including the size of the proposed development, limited means of entry/egress to/from the proposed development at Acorn Way, high traffic levels and major traffic queueing, implementation of the planned development will not adequately disperse traffic and limit air pollution. Rather, air pollution will be added to (along the length of Morley Road) and concentrated at**

several locations on Morley Road (at entry/egress road junctions and at various traffic queueing locations identified in Section 4 above).

In principle, these problems could be solved, for example, by a new road between Morley Road and the proposed development with suitable spaces between the road and houses on Morley Road and houses on the new development; and by a school drop-off / pick up space off rather than on Morley Road. But, in practice, such measures may be deemed impractical.

Other existing approaches to reducing air pollution that can be achieved at present can go only so far. Given the extent of existing traffic and air pollution and the addition of further air pollution from a new development, even with additional entry/egress roads and other mitigation measures, air pollution would still likely be high in general and concentrated at several locations.

It is noted that traffic lights are sometimes suggested as a mitigation measure, but they concentrate air pollution at the site of the lights because they create standing traffic (Reference 11).

It is further noted that air pollution mitigation measures should target hotspots (Ref 13, Goyal et al), and their creation in development should be avoided in the first place (e.g., when created by hot spots arising from concentration of air pollution at entry/egress junctions that are insufficient in number and poorly sited).

7. RELATED ISSUES

Air pollution and climate change are linked (Reference 10). In the present context, queueing of traffic leads to both additional air pollution and vehicle emissions affecting climate change.

There may be other uses of the land near Acorn Way that would avoid problems with air pollution (and other problems).

8. SUMMARY

The messages of Sections 2 to 6 above may be summarised as follows.

It appears that air quality has been given insufficient attention in the Erewash Core Strategy Review. Late consideration of air quality in relation to a planned development can result in the creation of high levels of air pollution and limit the scope and effectiveness of possible mitigation measures. Failure to include appropriate information on air quality could result in an invalid application or in the application being refused or delayed. Detailed and site-specific considerations of air quality shouldn't be left for later (see Section 2 above).

Air pollution is damaging to human health and life expectancy as well as the environment. It leads to major economic costs. Hence the need to give it appropriate attention, including at early stages of the planning process (see Section 3).

The proposed new development, in combination with several local circumstances around Acorn Way and Morley Road, would lead to high levels of air pollution and particularly high concentrations at several locations. Specifically, the Acorn Way site is not a suitable one for housing development because of the several ways in which air pollution will be worsened, newly created and concentrated, including through high levels of traffic in early morning and mid- to late afternoon; limited practical options for entry/egress roads to and from the proposed new development; and several locations where existing high levels of traffic queuing will be increased or newly created (see Section 4).

With additional traffic and air pollution arising from the proposed development, many people, including many with particular vulnerability (young and old people), will be exposed to high levels of air pollution. These include existing and new residents on or near Morley Road; hundreds of existing and new school pupils of Leesbrook Academy (those walking along Morley Road and those dropped off and picked up by car); drivers in traffic queues at several locations; and various categories of pedestrians who use Morley Road (see Section 5).

Because of local circumstances described in Section 4 above, including the size of the proposed development, limited means of entry/egress to/from the proposed development at Acorn Way, high traffic levels and major traffic queueing, implementation of the planned development will not adequately disperse traffic and limit air pollution. Rather, air pollution will be added to and concentrated on Morley Road (along the length of Morley Road; at entry/egress road junctions; and at several traffic queueing locations). Practical mitigation measures are not likely to solve the problem (see Section 6).

9. CONCLUSION

The Acorn Way site is a poor one for housing development and unsuitable from an air quality perspective because of the several local circumstances described in this statement. It may be possible to develop the land in another way that does not create air pollution issues or other problems.

If, nevertheless, housing development took place, extensive measures would be needed to avoid unacceptable air pollution, such as multiple entry/egress roads in widely separated locations (not just on Morley Road). But, due to practical limitations relating to the roads and general locality concerned, as well as other practicalities, the benefits of this measure and others would be limited, to the detriment of many

people in Oakwood and others who pass through the area, as well as the local and wider economy and the environment. First and foremost, the issues described in this statement affect the health and lives of real people.

David M. Clarke, 171 Morley Road, Oakwood, Derby DE21 4QY

REFERENCES

1. Air Quality: Provides Guidance on How Planning Can Take Account of the Impact of New Development on Air Quality (GOV.UK, 2019)
2. Air Pollution Considerations in Planning and Development' (Rix&Kay Solicitors, 2020; available at rixandkay.co.uk)
3. Appendix D, Statement of Consultation for the Growth Options Consultation, Regulation 18 Part I (Erewash Borough Council)
4. Urban Design for Air Quality (Birmingham University)
5. Policy paper: Clean Air Strategy (GOV.UK, 2019)
6. Air Pollution: Applying All Our Health (GOV.UK, 2022)
7. The state of the environment: the urban environment (GOV.UK, 2023)
8. Health matters: air pollution (GOV.UK, 2018)
9. Pollution and Air Quality (Erewash Borough Council)
10. Breathless: Why Air Pollution Matters – And How it Affects You, book by Chris Woodford (2021)
11. Sitting in a traffic jam really is bad for you: motorists breathe in 40% more deadly pollutants when sat at red lights, By Stephen Matthews, Daily Mail (MailOnline), 25 August 2016.
12. Air Quality, Erewash Bough Council (Erewash Borough Council website: Homepage / Environment Section / Air Quality)
13. Identification of air pollution hotspots in urban areas - An innovative approach using monitored concentrations data, Prachi Goyal et al (2021) Science of the Total Environment, Volume 798, 1 December 2021

