

SUMMARY
PROOF OF EVIDENCE
AIR QUALITY

I/AQ-01A

Mr Jonathan Brooks

On Behalf of It's Our City

Planning Inquiry APP/A2335/V/09/2095002

Canal Corridor North Site, Lancaster

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1. Introduction

My name is Jonathan Brooks. I was a Marine Systems Engineer by profession until 2003 and I hold a BSc (Hons) in Computer Science.

2. Scope of Evidence

2.1. Current Air Quality Issues

In section 2, I briefly describe Lancaster's existing air quality problems in meeting statutory air quality objectives and outline some concerns of Lancashire County Council who believe that with committed developments, this development will result in increased journey times, congestion, and queuing even with full S278 and S106 agreements.

We contend that this development will constitute a significant impediment to effectively addressing Lancaster's existing air quality problems.

2.2. Shortcomings of the Waterman Air Quality Assessment.

In section 3, I discuss the importance of the atmospheric dispersion model verification for accurate prediction of pollutant emissions. I explain in detail how the erroneous NO₂ data has been used to verify the model, and how adjustment factors derived from the erroneous data invalidate the model predictions for both NO₂ and PM₁₀.

I show that technical guidance on checking the input data, which should have picked up this error, were not followed.

I show that relevant data has been excluded from the assessment without good explanation.

I show that model verification is not consistent with Lancaster Council's 2006 Further Assessment as claimed, and that model verification was unsuccessful because post verification errors were still significant despite the model adjustment and results did not agree with measured data. Consequently, the model is not working correctly.

I show that the assessment uses meteorological data from Blackpool Airport on unsupported grounds when both County and City Councils rejected Blackpool as inappropriate for modelling air quality in Lancaster and I question why data from the Hazelrigg meteorological station only 3 miles from Lancaster is not used. The Wind Microclimate Desk Study may also be open to criticism on the same grounds.

There are no pollutant predictions for the demolition/construction phase. The qualitative approach adopted by the Waterman Assessment is not sufficient for an estimated 60 to 120 mainly HDV vehicles a day when it has been shown that HDV's comprise between 50 and 72% of NOx emissions for 5-7% of vehicle flows. Emission rates of HDV's also rise markedly when vehicles are slow moving or idling, as on a building site.

I show that Waterman's claims that construction traffic movements are likely to have a minor effect in the context of existing pollutant levels are not supported by experience and the facts and quote passages from DEFRA's Technical Guidance that support this.

The number of residential properties neighbouring the site and the hundreds of school children transiting the site daily, highlights the need for quantitative assessment.

2.3. Risk of Extension of AQMA

Section 4 discusses the risk of extension of the existing AQMA where Annual Mean NO2 levels continue to exceed the statutory Limit Value. This arises due to the multi-storey car park, existing and planned residential elements on St Leonard's Gate, and the new traffic flows with this and other committed developments.

Local traffic levels will inevitably be much higher due to 750 short stay parking spaces over existing provision on the site as well as increased HDV traffic servicing the development. Traffic improvements will contribute to extension of the AQMA by constraining car park traffic and servicing vehicles to pass existing and permitted residential units when going both to and from the development.

Imposing a 20 mph speed limit on St Leonard's Gate will contribute to higher pollution levels and may not deter rat-running to bypass the southbound gyratory because the widened link from Caton Road may suggest improved access to Stonewell.

The location of the new residential units means that they will be exposed to the pollution generated by the multi-storey car park right next door as well as the doubled traffic along St Leonard's Gate.

From the extra burden of traffic that the development will generate and the uncertainty of the predictions from the modelling there is a clear risk of St Leonard's Gate forming part of an expanded AQMA.

In the 2007 Air Quality Progress Report Lancaster Council states the importance of assessing and controlling new developments that could introduce new residents

to 'exceedence' areas but a firm line has not been taken on minimum acceptable requirements in regard to the Waterman Assessment.

Council records suggest that the risk of an extended AQMA has not been considered despite a warning given in the 2006 Further Assessment and given the Council's statutory duty to improve air quality this appears negligent. The issue has not been addressed in Waterman's Assessment either.

2.4. Air Quality Action Plan (AQAP)

In section 5, I show that Lancaster Council is relying on a report by consultants Faber Maunsell, who also worked on the developer's Environmental Assessment, to guide their air quality action planning.

The Lancaster 2008 Air Quality Progress Report says that the Council intends to prepare a longer-term action plan once the report is published during 2008.

It seems like a clear conflict of interest for Faber Maunsell to continue to influence Lancaster Council's air quality action planning, given their commercial interest in this development, when an AQAP and local policy should normally influence a developer's choice of options rather than the other way around, and the Council have said:

“It continues to be important that the council assesses and controls new developments that have the potential to worsen local air quality, to undermine local actions to achieve the air quality objectives...”

I have outlined how the 2007 AQAP shows that existing options to improve air quality would result in insignificant improvements even without the development which will hamper efforts to promote Lancaster as cycling demonstration town.

I point out that the Core Strategy says that a Lancaster City Centre Air Quality Zone is one of the key schemes for Lancaster District and that traffic to the development will undermine actions to establish an Air Quality Zone and impede the progress of an effective AQAP and the NO₂ Annual Mean will continue to exceed the statutory Objective Limit Value.

2.5. Policy

In section 6, I point out policy that is undermined by the plans.

Contrary to Core Strategy Policy E2, the multi-storey does not minimise the need to travel by car by, among other measures “Reducing local traffic impacts through the Lancaster Air Quality Management Plan”. The plans will instead magnify the environmental impact of traffic and diminish resident's quality of life.

There is no good reason given for rejection of a park and ride scheme which is a key proposal of the Core Strategy and Policy E2, though they are known to reduce car journeys into urban centres and help reduce congestion and pollution levels.

The development plans fail to properly consider the multi-storey car park in the context of Lancaster Council's integrated management of parking and park and ride or how the increased traffic will affect the Air Quality Management Area.

I explain how PPS 23 shows that air quality is a significant material planning consideration in this case because the proposed development:

- Could result in the designation of an extension to the AQMA;
- Is adjacent to an air quality management area designated under Part IV of the Environment Act 1995
- Will conflict with, or render unworkable, elements of the air quality action plan.

I argue that the 'Precautionary Principle', that PPS 23 says the government is committed to using, should be invoked because sound reasons exist to believe that harmful effects may occur to human health, and scientific uncertainty in the modelling results precludes assessing the risk with sufficient confidence to properly inform decision-making.

I explain how the multi-storey car park conflicts with objectives of the Lancashire Transport Plan by impeding promotion of public transport. Increased HDV and car journeys into the centre will increase transport related CO2 emissions which undermines RSS Policy DP9.

RSS Policy DP7 also requires environmental quality (including air quality) to be protected and enhanced. This development will have the opposite effect.

2.6 – Independent Report

In section 7 I summarize the observations of Dr Sarah Massey who is employed by the Environment Agency and prepared a short independent report on the Waterman Assessment for It's Our City.

Dr Massey's employer would not permit her to appear on behalf of It's Our City at the inquiry so her report is included as Appendix 1 to this Proof and her observations are summarized.