



Institute of
Air Quality
Management

Assessing Dust Impacts of Mineral and Waste Sites

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IAQM Meeting
23rd September 2014
London

Brook Cottage Consultants

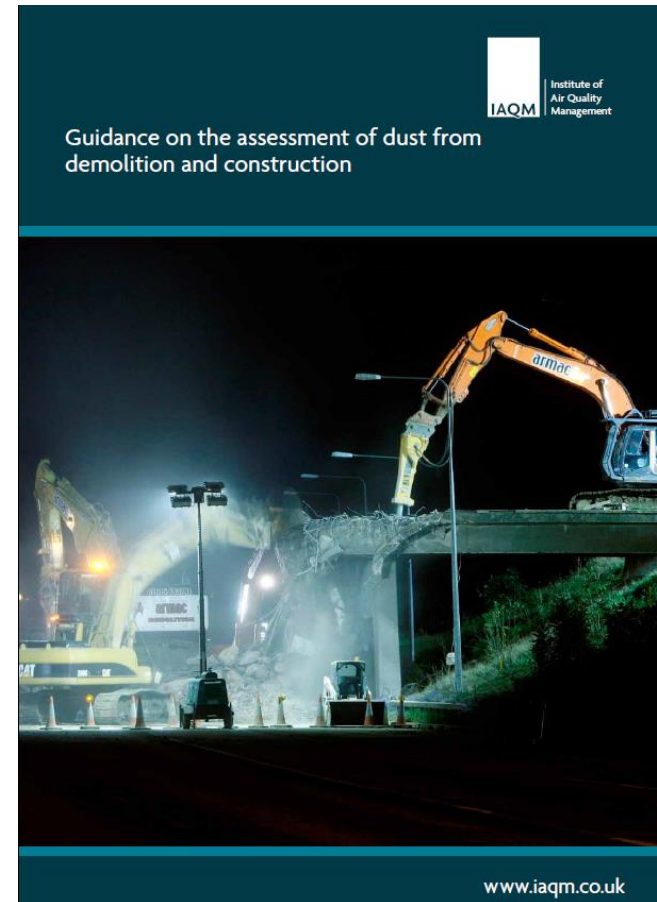
IAQM Guidance

Do we need guidance for assessing mineral and/or waste sites?

DISCUSS

Existing IAQM Guidance

- Dust from demolition and construction – 2012 & 2014
- Odour - 2014
- Description of air quality impacts and the assessment of their Significance - 2009



Assessing Impacts of New Developments

Mineral impacts

- Difficult to quantify
- Requires knowledge of site operations & effectiveness of mitigation measures
- Difficult for the inexperienced
- Often unexperienced staff do the assessment



Existing Guidance

The screenshot shows a web page titled 'Planning Practice Guidance' with a navigation menu including 'National Planning Policy Framework', 'Planning Practice Guidance', and 'About'. A search bar is present. The breadcrumb trail is 'Planning Practice Guidance > Guidance > Minerals > Assessing environmental impacts from minerals extraction > Dust emissions'. A sidebar on the left lists 'Minerals', 'Noise emissions', 'Dust emissions', and 'Quarry-slope stability'. The main content area features the title 'Assessing environmental impacts from minerals extraction' with a 'Print' icon, followed by the sub-section 'Dust emissions'. The text includes a paragraph reference (023) and a reference ID (27-023-20140306), followed by the question 'How should mineral operators seek to minimise dust emissions?' and a paragraph explaining the need for a dust assessment study. A list of five key stages is provided, with the first two stages partially visible.

Planning Practice Guidance

National Planning Policy Framework Planning Practice Guidance About Search site

Planning Practice Guidance > Guidance > Minerals > Assessing environmental impacts from minerals extraction > Dust emissions

Minerals
Noise emissions
Dust emissions
Quarry-slope stability

Guidance

Assessing environmental impacts from minerals extraction Print

Dust emissions

Paragraph: 023 Reference ID: 27-023-20140306

How should mineral operators seek to minimise dust emissions?

Where dust emissions are likely to arise, mineral operators are expected to prepare a dust assessment study, which should be undertaken by a competent person/organisation with acknowledged experience of undertaking this type of work.

There are five key stages to a dust assessment study:

- establish **baseline conditions** of the existing dust climate around the site of the proposed operations;
- identify site activities that **could lead to dust**

PPG / Air Quality

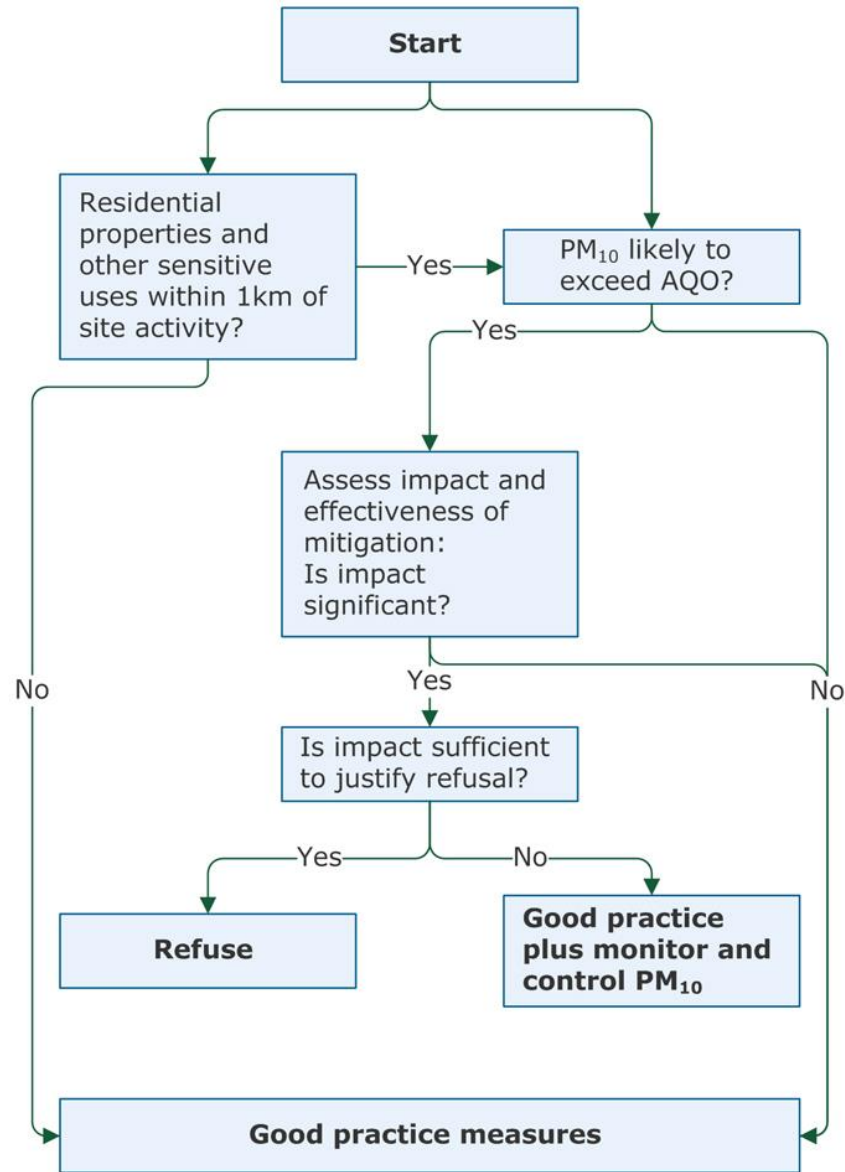
What could be in an assessment

- A description of **baseline conditions** and how these could change;
- **Relevant air quality concerns**;
- The **assessment methods** to be adopted and any requirements around **verification** of modelling air quality;
- **Sensitive locations**;
- The **basis for assessing impact** and determining the **significance of an impact**;
- **Construction phase impact**; and/or
- **Acceptable mitigation measures**.

PPG / Minerals

Key stages to a dust assessment

1. Establish **baseline conditions** of the existing dust climate around the site of the proposed operations;
2. identify **site activities that could lead to dust emissions** without mitigation;
3. identify site parameters which **may increase potential** impacts from dust;
4. recommend **mitigation measures**, including modification of site design;
5. make proposals to **monitor and report dust emissions** to ensure compliance with appropriate environmental standards and to enable an **effective response to complaints**.



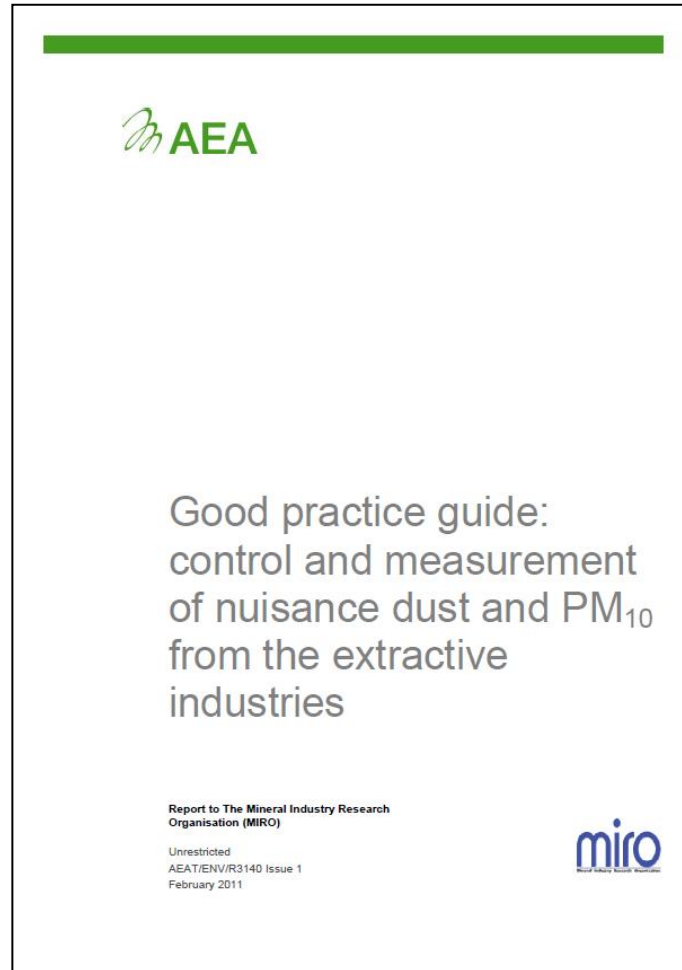
Waste

- No PPG Guidance
- PPG 10 – Virtually nothing
- Waste sites require Environmental Permit



Institute of
Air Quality
Management

Minerals Industry Research Organisation



Why produce guidance?

- Mineral / waste sites can increase local PM₁₀ concentrations
- Increasing evidence of health effects of PM_{2.5-10}
- Cause loss of amenity due to dust deposition
- Local residents typically oppose new sites or extensions

What is needed:

- **Consistent framework**
- **Good quality assessments**
- **Every site is different**
- **Insufficient hard evidence of source –receptor relationship**

Visible Dust and Track-out



Photo: Gary Fuller
Kings College London



Dust Management Plan

Contents?

- Site Management
- Training
- Mitigation Measures
- Complaints procedure
- More?



For Discussion

- Is guidance needed for the assessment of these sites in the planning process?



For Discussion - Scope

- Mineral sites only?
- Mineral and aggregate recycling sites?
- All types of waste sites?
- Mineral/Waste sites separate guidance?
- UK / International?
- Restrictions on the size / type of site?
- Quantitative vs qualitative assessment methods?