

Module 3:

Guidelines for managing air pollution

Part 2: Practical regulation of air pollution sources

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1 Background

Regulating sources of local emissions to air is a vital part of local government air quality management. Chapter 4 of Module 1 of this Toolkit contains an overview of air quality management as a whole, outlining the broad role which local government plays in both local and regional air quality management, and covering management, legal, administrative and technical considerations.

This part of Module 3 is concerned specifically with the practical management of sources of air pollution for which local councils are the Appropriate Regulatory Authority (ARA) under the *Protection of the Environment Operations Act 1997* (POEO Act)—commonly called ‘non-scheduled premises and activities’.

A word of encouragement

Regulating non-scheduled premises and activities where operations are technologically complex can be challenging for council officers who have not had engineering or technological training. Without direct industrial experience some council officers feel slightly ‘out of their depth’ when addressing problems arising from these businesses, particularly in the area of air pollution. These feelings may have been exacerbated when the POEO Act came into operation and wider responsibilities for managing polluting premises were transferred to local councils. At this time councils became responsible for many classes and sizes of activities that were formerly regulated by DECC (EPA).

This Toolkit is intended to equip local council officers with sufficient skill and background to deal confidently with most of the air pollution issues they are likely to encounter.

The Toolkit does not set out to turn council officers into instant experts in the various activities covered—that is not necessary—but it does attempt to provide council officers with enough background to deal confidently with factory managers, business people and technologists.

General approaches and useful tips

Some general approaches and useful tips for investigating pollution and dealing with industry are offered here because they can help to build confidence in dealing with the issues. Many of these will already be known to council officers in another form or context.

Once difficult situations have been grappled with and problems solved, the satisfaction experienced by the people who have carried them through can be considerable. The rewards are both personal and professional.

There are many benefits to be gained, in addition to a personal sense of achievement:

- the community will be thankful that their local situation has been improved
- councillors will appreciate problems being solved effectively
- the reputations of staff involved will be enhanced among colleagues
- the industries involved, sometimes surprisingly, gain greater respect for the council officers involved.

Some officers may find that the technical and scientific knowledge gained opens up a new career path.

2 Context

The advice and guidance provided in the Toolkit is framed in terms of the broader context of local government administration and culture. It is recognised that each council has its own procedures and internal administrative policies for processing consent applications and dealing with problem industries and businesses. These vary widely between councils, depending on whether they are large or small organisations, based in an inner or outer metropolitan location, provincial city or rural area, and also depending on the particular style or character of the local community.

Larger councils tend to divide duties and functions according to their broad environmental responsibilities. Certain officers might develop expertise in dealing with specific types of industries in the area, e.g. smash repairers or poultry producers. They should be encouraged to share their expertise, both formally and informally, as already happens in regional networks.

Sharing knowledge and experience within and between councils will build the capability of all to better manage air pollution issues.

3 Investigating problems

For new installations, potential air quality problems are managed as far as possible from project inception using development consent conditions. However, the more common experience for most council officers will be dealing with air quality problems arising from existing industries. The experience gained from investigating existing problems becomes valuable knowledge when it comes to assessing new proposals.

3.1 Complaints—prime indicators of problems

Complaints that are either vexatious or hoaxes can usually be distinguished by their content and isolation.

The first indication of an air pollution problem often comes from public complaints. Most councils have a system for logging, documenting and following up complaints. This work could be regarded as an unpleasant chore, with the objective being to dispatch the paperwork with the minimum effort possible, but **a complaint from a member of the public is valuable intelligence.**

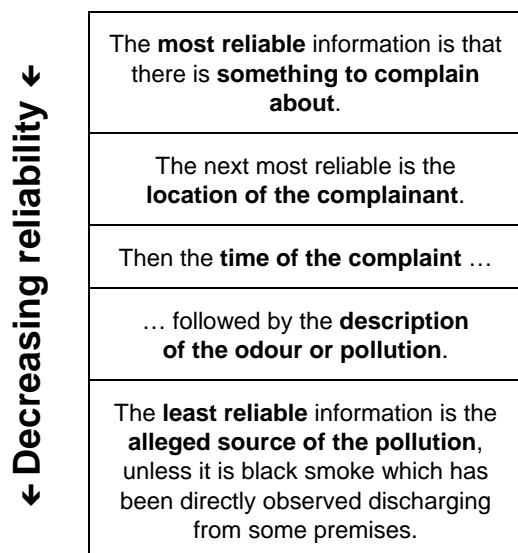
While it can be awkward dealing with members of the public who express their dissatisfaction—sometimes angrily—the information from complaints should be regarded as a basic, practical and useful form of monitoring.

Surveys show that where complaints occur, only about 10% of the affected population is moved to register any sort of contact with the authority (by phone, letter, email or word of mouth to elected representatives or officers). **For every 10 people who complain it can be assumed that there are 90 others who probably have had the same experience and have the same attitude to the problem.**

Odour and noise complaints tend to dominate complaint services worldwide! The human anatomy is equipped with very sensitive, if difficult to calibrate, instruments for smell and sound.

3.2 Analysing complaints

The following diagram illustrates a ‘hierarchy of usefulness’ to help officers assess air pollution complaints (except hoax or vexatious complaints, where these can be identified as such). By analysing complaints effectively when they first arise, the risk of them developing into problematic long-term complaints can be significantly reduced.



Complainants tend to exaggerate

Many complainants tend to exaggerate the severity of the impact and they often claim it is affecting their health. Perhaps they think this will speed the response by the relevant authority, not realising that impacts on amenity are equally valid reasons for responding.

The pattern of complaints is important

In general the pattern of complaints received will indicate the seriousness of the problem. If several after-hours complaints are received by the DECC Environment Line, apparently about the same incident, it is a strong pointer to there being a pollution problem which needs urgent attention.

Care on first receiving a complaint

Of course care is required regarding the first complaint calls, to make sure there is not a serious health problem. Usually an ambulance will have been called in these circumstances. The police and fire brigades may also be involved.

Identifying the source

Identifying the likely source is often very difficult, especially in urban areas. It may require analytical work.

Once the pattern of complaints (location, date, time) can be established then hour-by-hour wind direction information can be used to point to a likely source. (General guidance to interpreting wind movements is contained in Module 1, Chapter 2.) The Bureau of Meteorology (BOM) can provide wind information on request.

3.3 Investigating complaints—immediately

It is desirable, from an investigative perspective, to respond to some complaints as soon as possible.

A trip to the location and the suspected polluting premises—even in the middle of the night when the complaint is occurring—is likely to lead straight to the source and often the cause of the problem.

After the event it may take many hours of reconstruction and sifting through information gathered over several interviews to learn what could have been discovered on the spot at the time.

Of course many local councils do not have 24-hour, 7-day a week complaint-receiving facilities, nor are officers always authorised to operate outside normal business hours. **But, if possible, immediate investigation of new problems is always worthwhile, despite the short-term inconvenience that can be involved.**

3.4 Odour complaints

Odour complaints are probably the most common to be encountered and are often made at night. A systematic approach should be followed in any investigation, including recording of information.

Council authorised officers should be aware of any occupational health and safety issues and their own safety when entering any premises to investigate a complaint.

In response to a complaint, the investigating officer might pursue a sequence of actions along the following lines:

- 1 **Phone the complainant to confirm the details** of the complaint (some discretion is warranted if it is late at night by the time the complaint has been referred).
- 2 From experience and knowledge, **identify whether the pollution is likely to be from an ongoing problem source** where the status is known and corrective action in hand. If so, call the complainant back to let them know this is the case.
- 3 **If the problem is new**, or the complaint appears to add a new dimension to a known problem (e.g. 10 complaints received in 30 minutes about a problem which normally results in one complaint a month) then **undertake a field investigation as soon as possible**.
- 4 **Drive to the location of the complainant** equipped with a street directory or map, camera, a torch (if at night) and identification/authorisation card or badge.

- 5 **Try to detect the odour** in the general locality (the wind direction may have shifted since the complaint). At least two windows of the vehicle should be open during observations (yes, it's cold some nights!). Note the following for each observation:
- **location** of detection (street directory, map, coordinates).
 - **time** of detection
 - **type of odour** by description ('acrid paint solvent', 'roasting coffee' and so on) or identification ('odour from unit PQR in factory XYZ' if the smell is known)
 - **duration** of odour (fleeting, continuous or periodic)
 - **strength** of odour (very faint, faint, medium, strong, very strong)
 - estimate of **wind speed** (use expressions such as 'nearly still', 'slight breeze', 'gentle wind', 'moderate wind', 'strong wind' or the Beaufort scale, if familiar with this from activities such as sailing)
 - estimate of **wind direction** (in light wind conditions use a handkerchief held in an extended hand and the street directory or map for the direction).

See the relevant sections on meteorology in Module 1.

- 6 Several traverses of the likely odour plume at different distances from the suspected source can effectively **confirm the direction of a plume**. This is easiest in stable and neutral conditions but possible even in unstable conditions.
- 7 **Travel to a position upwind** of the suspected source and, by a traverse across the probable plume direction, **establish that the odour is not present**. If it is present, and the wind direction has not shifted, then the suspected source has been wrongly identified.
- 8 **Proceed to the suspected source and seek to gain entry** under the powers of an authorised officer. Of course, make sure any council procedures and guidelines for inspections are followed.

Consult the authorised officers' training materials for the legal and administrative procedures to be followed in the inspection.

- 9 **Identify yourself, indicate the legal authority and the nature of the investigation.** Authorised officers' training provides guidance about the legal requirements here. It is an offence to hinder an authorised officer by refusing access in the course of investigating such a situation, where it is reasonable to suspect the subject premises of being the cause of the emission.

At this stage keep the investigation purely to matters of facts, sequences of events and possible corrective action. Seeking evidence of management's knowledge or involvement in the events giving rise to the incident can follow later, if it is decided to pursue a prosecution.

- 10 **Identify the representative of the organisation and their authority, preferably the manager or supervisor on duty.** Ask them the possible reason for the reported emissions. Inspect the

relevant parts of the process and equipment, as advised by the manager or supervisor, as well as any parts you suspect may be the cause of the problem.

Things to investigate include:

- spills
- accidents (e.g. drums dropped while handling)
- visible discharges from vents
- any visible evidence of pollution fall out
- process problems or abnormal operations
- new materials or procedures
- large exposed surfaces of smelly liquid, soil or other material
- control equipment with monitoring/operating/maintenance records e.g. scrubbers, adsorbers, fume incinerators, etc.

Don't be embarrassed about ignorance of the process or the technical jargon which every industry uses—it's theirs not yours. They may be the party disturbing their neighbour's amenity!

- 11 **Keep asking questions.** If unsure of the answers, ask further for explanations. Don't be put off by 'smart' or dismissive answers. The occupier of the premises has an obligation to answer your questions truthfully, but you have to ask the questions.
- 12 **Advise the organisational representative to take corrective action and note what they recommend.** An authorised officer of council should not take responsibility for any specific action discussed, unless prepared to back it up with a legal direction; e.g. a Clean-up Notice or a Prevention Notice under the POEO Act.
- 13 Advise that there will be a **follow-up interview and discussion** with the organisation's management at an arranged time.
- 14 **Document actions** according to council policy and procedure.

While the above is focused on odours, developing a general inspection technique along these lines is useful for the investigation of many types of pollution complaints.

3.5 Fallout and other complaints

For **fallout complaints** a few different techniques are useful. Fallout complaints will often occur during daytime and not infrequently during windy weather. The pattern of complaint response is similar to that for odours, although the response can be less urgent because fallout evidence remains in place for a while.

In some cases where there are potential concerns for dust fallout, many councils include a requirement for dust deposition monitoring in consent conditions.

Where this is the case, it needs to be understood that this sort of monitoring is for calculating monthly or yearly averages and may not be useful for one-off fallout events that lead to complaints.

The investigating officer might pursue a sequence of actions along the following lines:

- 1 Establish whether **the complaint fits a wider pattern from a known problem**. If so, advise the complainant of the action in hand to correct the problem.
- 2 If it is a new problem, **note the pattern of complaints** and mark them on a copy of a map to establish whether they point to a likely source or sources.
- 3 **Visit the complainant and inspect the fallout** at the complainant's place.
- 4 **Features to note** in air pollution fallout cases include:
 - **appearance and characteristics** e.g. black oily spots, waxy spots, brown staining on concrete, gritty material, powder, sooty smudges, damage caused to surfaces such as paintwork and car duco, sticky globules, any odour associated with the fallout, etc.
 - **size** e.g. large lumps, fine powder, tiny stains, etc.
 - **patterns of deposition** e.g. most intense on vertical surfaces facing a particular direction; or only on horizontal surfaces; contained within condensation droplet stains; etc

If no progress can be made on site in identification then the samples can be sent to a professional laboratory for microscopic examination.

Fallout usually contains many identifying features which enable the source types to be identified: combustion soot; finely ground minerals; wood and fibre particles; insect droppings; etc.

- 5 If possible **take a sample of the fallout** using a small blade or fingernail to remove the fallout particles or globules and store them in prepared sample containers or a suitable clean container.
- 6 Look for **fallout on surfaces at other places in the vicinity** e.g. on parked cars or horizontal surfaces such as paths, fences, window sills, etc.
- 7 If a pattern emerges or there is a suspect factory or business, **proceed to an inspection of the premises** as described for odour investigations.
- 8 Consult the authorised officers' training materials for the legal and administrative procedures to be followed in the inspection. Of course, **make sure any council procedures and guidelines for inspections are followed**.
- 9 Identify the representative of the organisation and their authority, preferably the manager or supervisor on duty. Ask them the possible reason for the reported emissions.
- 10 **Inspect the relevant parts of the process and equipment**, as advised by the manager or supervisor, as well as any parts you suspect may be the cause of the problem.

Things to investigate include:

 - stacks discharging visible emissions
 - large exposed surfaces of loose or unconsolidated materials
 - land clearing in process

- dusty roads or yards and poor housekeeping
- staining or markings around stack tips or on roofs in which stacks are located
- evidence on the premises of fallout similar to the complaint
- process problems or abnormal operations
- new materials or procedures
- particulate control equipment with monitoring/operating/maintenance records e.g. scrubbers, fabric filters, inertial separators, watering carts, road sweepers, etc.

At this stage keep the investigation purely to matters of facts, sequences of events and possible corrective action. Seeking evidence of management's knowledge or involvement in the events giving rise to the incident can follow later, if it is decided to pursue a prosecution.

- 11 **Keep asking questions.** If unsure of the answers, ask further for explanations. Don't be put off by 'smart' or dismissive answers. The occupier of the premises has an obligation to answer your questions truthfully, but you have to ask the questions.
- 12 **Advise the organisational representative to take corrective action and note what they recommend.** An authorised officer of council should not take responsibility for any specific action discussed, unless prepared to back it up with a legal direction; e.g. a Clean-up Notice or a Prevention Notice under the POEO Act.
- 13 Advise that there will be a **follow-up interview and discussion** with the organisation's management at an arranged time.
- 14 **Document actions** according to council policy and procedure.

Natural fallout

Natural fallout can also lead to complaints. Wind-blown dust, and tree, bird and insect droppings are all reported to councils on occasion.

Insect droppings are a common manifestation of natural fallout that occurs in spring and early summer. In particular, bee excreta can be extensive and defacing. It appears as yellow droppings, hence its common name 'golden rain', although sometimes darker colours are encountered.

The phenomenon of 'golden rain' occurs because bees gorge themselves on fruiting and flowering plants and then develop in-flight diarrhoea, depositing the droplets in wide swathes along their flight paths. It is waxy to touch and is easily removed from smooth surfaces. Microscopic examination has repeatedly revealed telltale pollen and biological detritus in the droppings.

Many of the aspects to be checked for fallout can also be applied to investigations of **visible smoke emissions**.

4 Systematic investigations

Problems are not only investigated in response to complaints. Audits and campaigns by local councils can reveal air pollution problems related to businesses and industries in the area. Also, observations by individual officers as they go about their business in the council area can often suggest where there are problems: odours, visible emissions, fallout, unusual practices, etc.

4.1 Investigations initiated by council officers

A systematic approach to investigations initiated by council officers might involve the following steps:

- 1 **Review the background** of the premises and operations, using sources such as council files.
- 2 Build an **acquaintance with the type of activity and likely air pollution problems**, using sources such as:
 - this Toolkit
 - DECC website
 - other expert websites, such as those listed in ‘About the Toolkit’
 - web searches on processes involved, environmental problems typically encountered and suppliers of air pollution control equipment
 - informal information from colleagues working for council or for other councils that have had similar problems
 - benchmarking, that is, comparison with best-practice performance in similar industries and applications
 - text books.
- 3 Consider **the types of controls** which might be employed to overcome the problems, as suggested in the Toolkit and other sources.
- 4 Review **options for control with the business involved or an industry organisation**. Aspects to be aware of during this review process include:
 - A review might involve **two or three conferences and systematic inspections** with expert consultants and advisers attending on behalf of the management. Refer to the guidance notes at the end of this Module for inspection checklists and forms relating to specific types of operations and activities.

It is important to prepare carefully for such conferences with a listing of issues to be covered and followed-up.

- **Outright denials that problems exist, where they are manifestly present, are rare nowadays.** Most businesses and industries have been educated to acknowledge their environmental responsibilities. The occasional ‘recalcitrant’ can usually be engaged in the process using various means available to local council officers to achieve cooperation, including persuasion from other quarters of council, correspondence and legal action as a last resort.
- More commonly, management may claim that the complaints or problems have arisen from a **short-term or one-off change in operations** and that normality has ‘now been restored’. This

may be the case, but other possibilities should nevertheless be explored and records checked for confirmation.

- 5 Assuming that management accepts that a problem does exist, **explore possible solutions**. Responsibility to come forward with options rests with the business or industry. However, council officers should assess these options using their experience and the guidance provided in this Toolkit and other sources.
 - **Options generated by management will tend to start with low-cost, low-difficulty solutions.** These should be examined carefully. For example, a proposal to deal with food odour by using simple water sprays should be seriously questioned and the management should be persuaded to be more realistic. As another example, fine, powdery fallout is unlikely to be fixed by patching a few holes in an old, low-efficiency cyclone collector.
- 6 Once realistic options have been proposed by the business or industry, **confirm the choice of solutions** using a Prevention Notice or Clean-up Notice under the POEO Act, or using an application to vary development consent conditions. Documentation about the proposed solutions should include:
 - benchmarks for progress
 - firm completion and commissioning dates, and
 - monitored or otherwise measurable performance outcomes.

The solution should include an audit process, to be carried out some time after completion of the works required, to make sure that a real solution has been achieved. (In relatively straightforward cases this may not be necessary.)

5 Developing solutions

It is possible to proceed down an investigative path by requiring, under the terms of a Prevention Notice or Clean-up Notice, that a report covering the various aspects of the proposed action be produced and reviewed by council before implementation is allowed to start.

These reports will usually be prepared for the organisation by consultants, thus introducing a measure of expertise to the situation.

In many cases it would be appropriate for consultants to be briefed to look for practical ways of fixing a problem, not merely 'to run a dispersion model' to determine whether there is a problem or not.

5.1 Expert advice from consultants

Several aspects of such an investigative procedure need to be watched closely.

- **Firstly**, the consultant is being employed by the industry or business and the clients interests will be uppermost in formulating any advice.
- **Secondly**, the advice will only be as sound or as comprehensive as the brief or terms of reference. It is worthwhile to spend some time negotiating and finalising these requirements before the notice is issued.

Considerations for the consultant's brief

Questions to be explored when preparing a brief or terms of reference for a consultant include:

- What is the objective of the corrective action proposed?
- How will this solution be assessed?
- Can council measure this assessment objectively?
- Are there better alternatives?

The professionalism of consultants can generally be relied upon, **within the terms of their brief**. Assessing consultants' advice is discussed in the following sections.

6 Assessing applications for consent

6.1 Statutory requirements

When new factories or businesses are established, or existing ones are significantly changed, an application for consent for the activity is required under the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Environmental impact is considered by local government, or another authority as determined under the Act, for any application.

There are two levels of environmental impact assessment:

- If the activity is **designated development** (as set out in Schedule 3 to the Environmental Planning and Assessment Regulation 2000) then an **Environmental Impact Statement** (EIS) must be prepared and an assessment made by the consent granting authority in accordance with the requirements of the EP&A Act and Regulation.
- If the activity is **not designated development** a **Statement of Environmental Effects** (SEE) is prepared by the applicant and considered by the authority in granting any consent.

The statutory requirements for granting development consent are familiar to councils.

An Environmental Impact Statement is generally more thorough than a Statement of Environmental Effects, although some SEE can become quite comprehensive when dealing with complicated or controversial cases.

6.2 Integrated development and scheduled premises

If the proposal also involves activities which will be scheduled under the POEO Act then the application becomes 'integrated development'. Such activities will be managed for pollution control under the POEO Act by DECC for licensing purposes. Local government is involved in this situation where it is the consent granting authority for licensed premises.

In most applications involving integrated development DECC takes full account of air pollution impacts, so that councils do not need to consider air quality in granting development consent—except as specified by DECC requirements.

However, councils may encounter situations where there could be cumulative impacts from related multiple developments, such a new or recently established industrial estate.

In this case council may have to consider, from a planning perspective, how air pollution impacts from a specific development could affect related future developments.

6.3 Council as both the ARA and the consent authority

In granting consent for proposals involving activities which are non-scheduled under the POEO Act, council can be both the Appropriate Regulatory Authority (ARA) and the consent granting authority under the EP&A Act.

In these circumstances council needs to assess air quality impacts. Some proposals may be designated development and will therefore require an EIS. More commonly, because there is a significant overlap between Schedule 3 of the EP&A Regulation and Schedule 1 of the POEO Act, such applications will not be designated and a SEE will be required.

Setting the terms for a Statement of Environmental Effects

In setting the terms for a SEE, and in assessing impacts on air quality, council needs to consider the following parameters:

- If there will be significant emissions, an assessment should be made according to the *Approved methods for the modelling and assessment of air pollutants in New South Wales*. This may involve dispersion modelling and assessment to demonstrate that the relevant DECC ambient goals will be met.
- The control measures proposed must meet the emissions limits for non-scheduled premises set out in the Protection of the Environment Operations (Clean Air) Regulation 2002.
- Any odour emissions must comply with the requirements of the DEC *Draft Policy: Assessment and Management of Odour from Stationary Sources in NSW*. This may also involve dispersion modelling to demonstrate acceptable impacts.
- Where relevant, the guidelines and management practices contained in the Toolkit guidance notes for specific activities should be followed.
- Public concerns, elicited through public consultation during the 30-day exhibition period specified in the EP&A Act, and by other means, should be adequately acknowledged and taken into account in any determination.

Assessing the technical merits of proposals

While the technical and scientific aspects of a proposal will generally be prepared by the applicant's consultant, **it is essential that council officers involved in the assessment make their own judgments**—based on their experience and the information they can obtain from this Toolkit and other sources.

In some situations councils may wish to commission independent professional advice from a consultant, particularly where the situation is complicated or officers feel the issues are beyond their technical experience and capability. Councils may be able to recover reasonable costs for obtaining this advice from the applicants.

Considerations when reviewing EIS and SEE

Questions for council officers to consider when reviewing EIS and SEE include:

- Have all reasonable measures to minimise emissions been adopted?
- Is the control equipment suitable for achieving the predicted emissions? For example:
 - low-efficiency cyclones or low-energy scrubbers are not usually adequate for collecting fine particles
 - food processing odours are unlikely to be removed by simple wet scrubbing.

The cross-reference tables and the descriptions of air pollution control techniques contained in this Module can provide further guidance here.

- Is the management likely to have the capability to operate and monitor the complex control equipment proposed?
- Is adequate monitoring for performance assessment proposed or required?
- Has a management plan for the site been proposed?
- Are there likely to be regional impacts beyond the local effects? For example:
 - Will solvent emissions from a surface coating operation contribute to VOCs and hence regional oxidant concentrations?
 - Will increased traffic resulting from the project contribute PM₁₀ and NO_x to regional pollution levels?
- Does the process incorporate cleaner production and waste minimisation principles?

Refer to Chapter 2, 'Avoidance—Cleaner Production' in Part 1 of this Module.

- In terms of the environmental safeguards proposed, how does the process compare with identical types of activities established elsewhere?
- If modelling has been undertaken:
 - Is the model appropriate?
 - Are the assumptions and characterisation of the emissions appropriate?

Reading consultants' advice

Council staff will frequently be presented with reports and proposals from professional consultants having specialised expertise in air quality science and engineering. The specialist advice will cover modelling, control equipment and monitoring techniques. The consultants will also have expertise in the specific industries involved, such as agriculture, manufacturing, and so on.

Professional consultants can be expected to conform to the ethical codes of their professions and to provide advice which is impartial, objective and within their area of expertise.

However, typically their clients are the proponent industry and this may influence the impartiality of the advice given. (Many consultants belong to a professional organisation with a code of ethics aimed at preventing this type of problem.)

Further, consultants will generally be constrained by the terms of their brief. In order to obtain the advice that council requires to make an impartial assessment it is important that these terms are clear and in writing.

Checking credentials and experience

The credentials and experience of consultants should be checked.

- Most consultants are required to include a **curriculum vitae** (CV) in their reports, giving their:
 - qualifications
 - experience
 - referees for previous work.
- Some professional bodies operate **accreditation and registration schemes** for their members in the areas of their expertise, for example:
 - The Institution of Engineers, Australia
 - The Environment Institute of Australia and New Zealand
 - The Clean Air Society of Australia and New Zealand.
- Some jurisdictions require government registration of consultants for specific purposes, but in NSW this does not apply in for air quality.

Questions to ask

Council officers should not hesitate to ask consultants critical questions. For example:

- Dispersion modellers could be asked about the extent of their experience and how their previous predictions have performed against monitored results, where these have been available.
- When considering modelling reports, some simple commonsense checks can be used to gauge whether the consultant's assumptions about topography and building heights conform with the officer's observations.
- If consultants have industry-specific expertise, they can be asked about their expertise in relation to the air pollution control equipment they are recommending.
- Referees and previous clients can and should be contacted to gather feedback on consultants' experience.

With these tensions understood, consultants can make an invaluable contribution to environmental decision-making by bringing a high level of training and extensive, accumulated experience and knowledge to bear on specific tasks. Usually only academics and specialised government experts will have comparable experience and expertise.

6.4 Consent conditions

Appropriate conditions attached to development consents under the EP&A Act are an important tool for local government in managing air quality. Further conditions can be applied subsequently as needed, using Prevention and Clean-up Notices under the POEO Act.

However, for some types of development there are limited opportunities for practical avoidance or control of emissions, for example this is the case in many agricultural industries.

In these situations, **evaluating air pollution potential** and **siting of the operation**, considered as part of the development consent assessment process, can be the **single most important factor in the management of air quality**.

At the consent stage a realistic appreciation of what control is possible can be coupled with an understanding of local meteorology and topography.

Years of irritation and impact on amenity can be avoided if appropriate separation is maintained when granting consent for a particular development at a particular site. Where such separation is not available the applicant should be encouraged to look for an alternative site.

Considerations for consent conditions

Although the development consent process is fundamental, **model consent conditions have not been drafted as part of the guidelines for each industry**. There are two reasons for not providing 'ready-made' consent conditions:

- Many councils have developed their own formats and style of drafting for consent conditions. It is not appropriate to attempt to match these in general guidelines.
- A 'menu' of ready-made conditions may present a temptation to attach the whole set as a default action. This is not appropriate. Some conditions in a menu would have little practical value in certain situations. For example, requiring a monitoring device to detect bag failure for a small fabric filter in an isolated rural plant is usually just a waste of money. But the same requirement in a closely settled urban situation can make a lot of sense in avoiding complaints from near neighbours, as the situation may warrant. Officers applying conditions from a menu need to think carefully about relevance for every condition.

Lists of 'options to consider for consent conditions' are provided in each guidance note. These can be adopted, modified, expanded, tailored or omitted as appropriate to each specific application.

The lists aim to help officers to think about each situation so that the resulting conditions can be more effective than conditions which are merely drawn from a standardised menu.

The wording for each condition will also need some modification for incorporation into a consent or notice. This is so that officers will need to think about each condition as they draft it.

Note on odour conditions

Odours from non-scheduled premises are statutorily governed by the general requirements:

- ‘to operate and maintain plant in a proper and efficient manner which does not cause air pollution (including odour)’ and
- ‘to handle materials in a proper and efficient manner which does not cause air pollution (including odour).’

Offensive odour provisions do not apply to non-scheduled premises.

A practical requirement at local government level is to require that odours from premises, other than domestic premises, should not be detectable at sensitive receptors. This can be an effective and practical measure.

However, in certain circumstances, requiring non-detectability of odours as a consent condition may result in the application of excessively stringent control measures. Caution needs to be exercised, especially where the nominated control measures are determined using odour modelling and assessment based on a criterion of non-detectability.

For guidance in assessing odour impacts refer to the DEC draft policy *Assessment and management of odour from stationary sources in NSW*.