

Early Works Package & Stage 1 Residential



Environmental & Construction Management Overview

Final
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1 Introduction

1.1 Purpose of Document

This Environmental and Construction Management Overview (the 'Overview') has been produced in response to the Director-General's environmental assessment requirements (DGRs) for the following Part 3A project applications in relation to Concept Plan MP 05-0086 – 61 Mobbs Lane, Epping (Former Channel 7 site):

- MP 08_0257: Stage 1 Residential Development
- MP 08_0258: Early Works Package.

The relevant DGR for both of the abovementioned applications reads as follows:

'The EA shall provide an Environmental and Construction Management Overview for the proposed works and address the impact of the proposal upon:

- *Noise and vibration impacts on and off site*
- *Air quality impacts on the neighbourhood*
- *Water quality management for the site*
- *Waste and chemical management'*

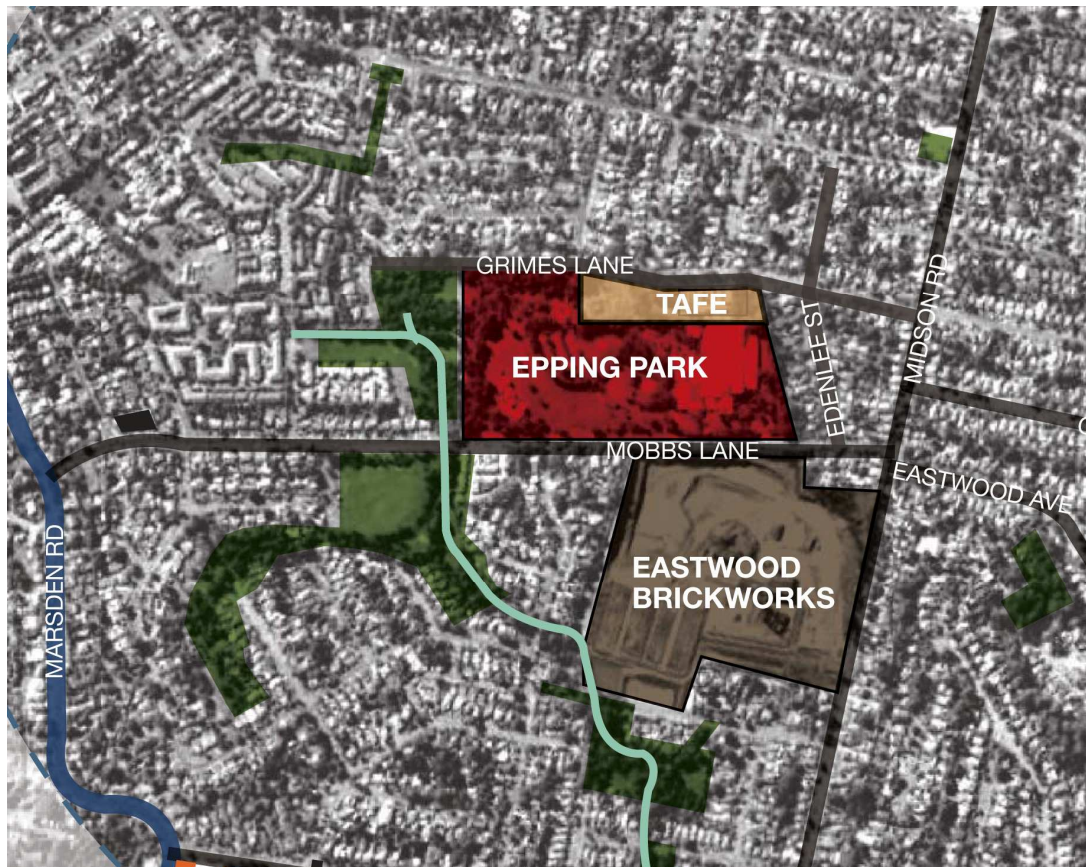
Whilst the construction programme for Epping Park is yet to be confirmed, the delivery of the works contained in the Early Works Package and Stage 1 Residential Development will likely occur concurrently as part of a single works package. For this reason, this Overview addresses both applications.

1.2 Context

This Overview has been produced by the consultant management team for and behalf of Sydney Broadcast Property (the 'Client'). It aims to provide an overview of the key issues that should be considered by the works contractor (upon their appointment) in developing the Construction Phase Environmental and Construction Management Plan.

1.3 Site Location

The site is located at 61 Mobbs Lane, Epping in the Parramatta local government area and is currently occupied by the Seven Network television broadcast facility. The site is 89,190sqm in area, with a 500m primary frontage to Mobbs Lane which is accessed via Midson Road to the east and Marsden Road to the west. A site location plan is provided below with the site highlighted in red. The Client owns the site and is the proponent/applicant.



Site Location Plan
Source: Aspect Studios

1.4 Development Overview

The Epping Park development, previously referred to as The Parklands, consists of:

- Demolition of existing buildings and substructures on the site
- Construction of up to 650 dwellings in 2-6 storey buildings graded across the site with a maximum gross floor area of 80,000sqm and an FSR of 0.89:1
- Landscaped public open space (no less than 3.1 hectares) in addition to private open space
- Associated services and infrastructure such as roads, footpaths, car parking, and utilities to service the development.

1.5 Development Staging

Epping Park will be delivered in stages over a number of years with construction of the Early Works Package and Stage 1 Residential Development programmed to commence in 2010. This will be dependent to a large extent on market conditions. Staging will generally take place across the site from east to west.

The stages of the development are currently anticipated as follows:

- Early Works Package includes:
 - demolition of existing structures on the site
 - construction of final landform across the site
 - internal and external roads
 - reticulation of services across the site
 - landscaping of public and private communal open space
 - child care facility
 - private resident facilities

- Stage 1 Residential Development includes:
 - three residential flat buildings (Buildings 4, 5 & 7) of three to six storeys with basement parking
 - two storey townhouses (Building 3) with on-grade parking
 - landscaping of the private domain

- Remaining Residential – further stages of residential development as dictated by market conditions.

2 Management Overview

2.1 Objective

The Client's objective through the development is to ensure a considerate construction process in which the following principles will form the basis of the approach:

- Zero tolerance for accidents
- A process that supports environmental best practice
- Adherence to codes, standards and legislation
- Where appropriate, using innovation to minimise construction impact
- Open stakeholder communication and engagement

2.2 Works Procurement

The works contractors will be procured in a manner supported by best practice. Works contractors will be required as part of the tender process to supply documented evidence supporting:

- Construction methodology
- Community relations policies
- Suitable references
- Adequate insurances
- Health and safety policies and records

The successful contractor will take ownership of the Environmental and Construction Management Overview and further develop it in to a Construction Phase Management Plan which will form the main planning and control document for the construction works. Where different packages of work are let separately, a single point of site control will be prevalent at all times.

2.3 General Description of the Works

Although the detailed design is not yet complete, the following can broadly be described as the type of construction work that will be taking place throughout the duration of the development.

2.3.1 Early Works Package

The following schedule represents the indicative scope of the Early Works Package. The sequencing and programme of the works has not yet been determined:

Remediation & Demolition Works

- Seven Network studio building including basement, foundations and communications tower plus ancillary production equipment
- Brick café
- Brick building
- Carwash area
- Gate house
- Metal Shed
- Concrete grandstand and tennis court
- Petrol bowser and tanks
- Concrete foundations to satellite dishes
- General items such as flagpoles, street furniture etc
- Roads and pavements
- Removal of contaminated material and plant material.

(Note: prior to demolition Seven Network intends to archive materials deemed to be of historical importance to Seven Network).

Bulk Earthworks

- Bulk earthworks to construct the final landform and to minimise the need to import fill or export cut from the site.

Civil Work

- Main internal roads including kerbing
- Internal footpaths
- At grade parking
- Intersections
- Retaining walls.

Works to Local & State Government Assets

- Upgrade of intersection of Mobbs Lane and Marsden Road including installation of signalised traffic system
- Upgrade of traffic lights at intersection of Mobbs Lane and Midson Road
- Upgrade of Mobbs Lane.

Site Services (From Site Boundary to Building Lines)

- Potable water supply
- Stormwater drainage
- Stormwater detention/ bioretention system including detention basin
- Sewer mains from site boundary to buildings
- Hydrant ring main including hydrants and booster set

- Gas mains including connections
- Substations and associated HV/LV feeds
- Street lighting
- Site lighting
- Communications (trenches and pits)
- Upgrade existing sewer.

Construction of New Buildings

- Child care centre including play area
- Tennis court and associated facilities
- Central resident facilities including gym, changing facilities and 'community' room
- Pools.

Landscaping

- Publicly accessible open space (including play equipment)
- Private communal open space.

2.3.2 Stage 1 Residential Development

The following schedule represents the indicative scope of the Stage 1 Residential Development works. The sequencing and programme of the works has not yet been determined. An overview of the building elements is as follows:

Structure

- Reinforced concrete basement slab
- Reinforced concrete basement retaining walls
- Post-tensioned concrete suspended slabs
- Reinforced concrete columns
- Combination of pre-cast, steel and reinforced concrete staircases

Roof

- Post-tensioned concrete slab and membrane
- Structural steel frame with sheeting and/ or tiling

Facade

- Glazed, clad and traditional wall system to residential buildings

Site Works

- Bulk earthworks
- Atriums and façade features

- External works
- Private and private communal landscaping
- Footpath entrances to blocks.

2.4 Construction Risks & Mitigation Measures

The following indicative risks and mitigation measures (as a minimum) will need to be considered by the works contractor in developing the Construction Phase Management Plan.

Ref	Risks	Mitigation Measures
1	Noise from Demolition Activities	<ul style="list-style-type: none"> ▪ Cutting/sawing/pulveriser and crushing techniques vs. hydraulic breakers ▪ Noise mitigation equipment fitted to construction equipment ▪ Close consultation with all stakeholders during the demolition phase to inform of timing and any works which may impact on their operations and amenity ▪ Remove large sections of structure (pre-cast elements) from site and break up elsewhere ▪ Install noise sensors and alarms
2	Noise from Construction Activities	<ul style="list-style-type: none"> ▪ Implement a Noise Mitigation Strategy ▪ Noise mitigation equipment fitted to construction equipment ▪ Position concrete pumping operations in locations that minimize effect on neighbours ▪ Close consultation with all stakeholders during the foundations phase to inform of timing of any works that may impact on their operations and amenity ▪ Install noise sensors and alarms
3	Noise from Construction Plant & Equipment	<ul style="list-style-type: none"> ▪ Tower cranes may be electrically driven rather than diesel or suitably acoustically treated ▪ Temporary sound barriers for stationary equipment (compressors, generators, jack-hammers etc) if required ▪ Test, fix mufflers & maintain equipment ▪ Locate equipment as far as practicable from sensitive buildings
4	Vibration from Foundation Works	<ul style="list-style-type: none"> ▪ The use of bored piles considered in lieu of driven piles ▪ Close consultation with all stakeholders during the foundation phase to inform of timing of any works that may impact on their operations and amenity ▪ Install vibration monitors and alarms

Ref	Risks	Mitigation Measures
5	Dust from Demolition and Construction Works	<ul style="list-style-type: none"> ▪ Use of perimeter site screens/ shade cloth ▪ Removal offsite of precast elements to allow crushing elsewhere ▪ Hosing down of demolition vehicles ▪ A water cart for spraying to reduce dust generation on construction vehicle access routes ▪ Street sweeper vacuum truck to regularly clean external roads ▪ Regular cleaning of adjacent pavements ▪ Trucks transporting materials off site shall be covered ▪ Stockpiles shall be kept damp or stabilised, or covered or turfed, to prevent generation of dust
6	Stormwater Runoff	<ul style="list-style-type: none"> ▪ Use of silt socks and filter fabric in stormwater runoff pits and gutters ▪ Silt fences and sediment ponds to prevent runoff of sediment into drainage lines and bushland areas
7	Flora and Fauna	<ul style="list-style-type: none"> ▪ Tree protection zones established around all trees to be retained ▪ Equipment storage areas and stockpile areas located away from tree protection zones
8	Hazardous Materials Removal	<ul style="list-style-type: none"> ▪ Works not to commence until the hazardous material assessment has been completed and approved removal and disposal methods developed
9	Waste Water	<ul style="list-style-type: none"> ▪ Waste water from construction activities collected and treated prior to disposal
10	Air Quality	<ul style="list-style-type: none"> ▪ The burning of timber and other combustible materials not to be permitted on site at any time
11	Construction Traffic	<ul style="list-style-type: none"> ▪ Ensure appropriate traffic control measures are employed to ensure separation of construction activities and public ▪ Pre-agreed safe public access pathways to be established and maintained ▪ Make some parking available on site for construction workers ▪ Sign and police no parking of worker's vehicles in Mobbs Lane Reserve carpark.

2.5 Community Engagement & Consultation

Community consultation has to date and will continue to take place in accordance with the Engagement & Communications Strategy prepared for the Client by Elton Consulting, and subsequently approved by the Department of Planning in 2007 pursuant to Modification B3 of the Concept Plan Approval. This Strategy outlined consultation activities to be undertaken during both the planning and construction phases of the development.

3 Site Management

The project will be delivered in line with comprehensive environmental, health and safety policies and procedures.

The following are indicative areas in which the works contractor will pay particular attention in the development of their Plan.

3.1 Public Safety, Amenity & Site Security

The general public will be adequately protected from activities occurring on the site. The building site will be kept neat and tidy to maintain public safety and local amenity. Where activities occur outside of the site boundaries such as works to local authority assets, similar steps will need to be taken by the contractor to ensure the impact of the work is kept to a minimum.

Consultation will be undertaken with relevant stakeholders in the community as to what impact (if any) the proposed works will have. For example:

- Road closures and the impact on temporary traffic routes for vehicles, bicycles and pedestrians
- Rubbish/waste collection services etc.

Key Legislation: Occupational Health and Safety Act 2000

3.2 Permitting Systems

The works will be undertaken under a strict permitting system controlled by the works contractors. During the works, a number of permits will be issued both by the works contractor as well as certain authorities.

The following indicative permits and approvals may be applicable to the works:

- Consent for the development and use of the site
- Construction certificate(s) for the construction work (which may reference site safety provisions or specific CMP requirements)
- Permit to erect a gantry, overhead protective awning over the road or footpath
- Permit for a vehicular crossing (permanent or temporary)
- Permit to occupy space on road or footpath
- Permit for a road opening
- Permit for a road closure
- Permit for a construction zone
- Permit to use a mobile crane, travel tower or lift on or above a road
- Permit for rubbish skips
- Permit for works in adjoining Council reserves.

All permits relating to public domain protection will be issued by the local authority.

Key Legislation: Environmental Planning & Assessment Act 1979, Roads Act 1993

3.3 Site Hoarding/ Fencing & Barriers

Areas of the site where works will be undertaken will be securely fenced off using Best Practice Methodology. The following indicative issues will be considered with regard to site fencing:

- Where possible maintain the existing perimeter fencing and attach shade cloth, or erect local hoardings, to control views and manage dust
- The site hoardings, perimeter fencing or other site barrier systems will be kept tidy throughout the programme of works
- Before and during building work, all excavations will have safety fences
- Hoardings, barriers and other perimeter fencing will be suitably lined to limit public viewing to designated viewing areas. This will ensure pedestrian flow is not impeded and adequate site-public interaction is accommodated
- The hoarding/fences will be adjusted to suite the phases of the development.

3.4 Safety & Security

The following indicative issues will be considered with regards to the safety and security of the site:

- Adequate lighting, safety signage and traffic controls will be provided in accordance with Codes of Practice (from RTA, Council etc)
- Traffic controls and a traffic management plan will be developed and will comply with the relevant legislation
- Any temporary or permanent changes to street lighting will be approved by the relevant authority
- Security measures will be in place at all times when the site is not in operation.
- If the site cannot be fully secured, then consideration may be given to a security service, with patrols or fixed guards
- All hazardous chemicals will be stored in accordance with the relevant Australian Standard.

3.5 Signage

The following indicative issues will be considered with regards to signage:

- Specific signs will be displayed in a number of areas around the site advising of the 24hr contact details for the site
- All works related signage will comply with the relevant Codes of Practice
- With specific reference to works in public areas, signage related to pedestrian traffic, vehicular traffic etc will be approved with the local authority through the provision of a traffic management plan.

3.6 Unsightly Premises

In order to protect visual amenity, the following indicative issues will be considered by the works contractor:

- Materials will be stored in a safe and organised manner and prevented from dispersing into public areas
- Vehicles leaving the site will be cleaned to prevent spilling of mud and debris on to adjoining traffic routes
- Site hoarding and/or shade cloth will be reasonably maintained.

3.7 Works in Public Domain

Certain works will take place outside of the main site footprint such as road works and provision of site services.

The works contractor will consider the following indicative issues with regards to local authority assets:

- Local authority assets such as roads, kerbing and channels etc, stormwater drains and street furniture will be protected and made good if damaged as a direct result of the building work
- Priority repair will be given to those areas relied upon by pedestrians, cyclists and motorists' safety
- Any services installation such as electrical, drainage etc that extends over footpaths will be temporarily covered over and pedestrian and disability access facilitated by a ramp until such time as full reinstatement is complete.

3.8 Works in Public Parks & Reserves

If works are required in public reserves and/or parks the following indicative issues will need to be considered by the works contractor:

- Park protection measures will be put in place for flora, fauna and services. All necessary approvals will be obtained from the relevant local authority to carry out works in these areas.
- Trees will be protected if they are close to a proposed demolition, excavation and construction works. This will be undertaken in line with the relevant tree protection guidelines.

3.9 Waste & Chemical Management

The contractor will provide a Waste Management Plan as part of the Construction Phase Management Plan.

The Plan should address the following issues:

- Adhere to relevant legislation
- Avoid waste through design
- Avoid waste through innovative construction techniques
- Recycle and reuse as much waste as possible, hence reducing landfill waste
- Protection of workforce and public.

The following indicative issues should be considered when using skips or rubbish bins to prevent disruption to public areas:

- Skips and rubbish bins will be placed away from public thoroughfares
- Where possible, a schedule for skip delivery and collection will be developed
- Shute locations and heights will be indicated.

Key Legislation: Protection of the Environment Operations Act 1997, Waste Avoidance and Resource Recovery Act 2001.

3.10 Stormwater & Sediment Control

The containing sediment will be detailed in the Construction Phase Management Plan. An Erosion and Sediment Control Plan has been prepared by Worley Parsons to identify the indicative control measures that will be used on site. This Plan will be further developed and finalised by the works contractor as part of the Construction Phase Management Plan.

In summary, the objectives of the Plan are as follows:

- Meet legislative and environmental standards
- Minimise areas disturbed by excavation
- Avoid erosion, contamination and sediment pollution of adjoining waterways and the local stormwater system
- Protect groundwater from contamination which could result from construction activities.

The following indicative measures will be considered by the works contractor in developing the Plan:

- Minimise site entry points
- A wheel washing system
- Silt fences/barriers and sediment ponds
- Settlement tanks and sedimentation basins
- Filtration of stormwater and waste water.

Key legislation: Protection of the Environment Operations Act 1997, Catchment Management Act, 1997, Soil Conservation Act 1938.

3.11 Noise & Vibration Management

A Noise and Vibration Management Plan will be included in the Construction Phase Management Plan.

The following issues are to be considered in the development of the Plan:

- Minimise the generation of noise and vibration from construction activities
- Community engagement and stakeholder management.

A Construction Noise and Vibration Impact assessment will be prepared by an independent Acoustic Consultant on behalf of the works contractor prior to the development of the Plan.

The following indicative measures will need to be considered:

- Erection of sound barriers in specific locations around the site
- Plant and equipment for site works should be fitted with acoustic treatments
- Crushing and saw techniques for demolition vs. hydraulics and explosive techniques
- Installation of an early noise detection system.

Key Legislation: Protection of the Environment Operations Act 1997, Occupational Health and Safety Act 2000, NSW Industrial Noise Policy.

3.12 Air Quality Management

An Air Quality Management Plan will be included in the Construction Phase Management Plan.

The following issues are to be considered in the development of the Plan:

- Take all reasonable steps to ensure the air quality is not deteriorated due to construction works
- Implement appropriate controls to minimize dust and other air borne pollutants.

The following indicative measures will need to be considered in delivery of a successful air quality management plan:

- Construction of temporary hoardings and screens
- Use of exhaust systems for plant and equipment
- Minimise stockpiling of dust producing materials
- Use of water attachments on tools.

Key Legislation: Protection of the Environment Operations Act 1997, Occupational Health and Safety Act 2000, Environmental Protection (Air) Policy 1997.

3.13 Flora & Fauna Management

In order to protect flora and fauna the following indicative issues will be considered by the works contractor:

- Silt fences and sediment ponds appropriately placed around construction areas to prevent runoff of sediment into nearby drainage lines and bushland areas
- Establishment of appropriately identified and secured tree protection zones around trees to be retained on site
- The storage of materials, stockpiling, siting of site sheds will not be located within tree protection zones.

3.14 Traffic Management

Halcrow MWT has produced transport and accessibility reports to inform the environmental assessments for the Early Works Package and Stage 1 Residential Development. From these reports a Construction Traffic Management Plan will be produced by the works contractor and included in the Construction Phase Management Plan.

The objectives of the Plan will include:

- Ensure pedestrian activity in and around construction access driveways is well managed
- Develop optimum travel plans for delivery vehicles
- Minimise the need for delivery vehicles to reverse into busy streets; where in the rare case a vehicle reverses onto Mobbs Lane, safety will be managed by RTA Certified Traffic Controllers
- Separate, where possible on site construction traffic from public traffic
- Use RTA Certified Traffic Controllers for on and off site traffic management
- Manage construction related traffic on public roads to minimise the impact on traffic efficiency of public traffic.

Other than the odd peak flow, the volumes of truck traffic would be relatively low and would not have any significant impact on traffic conditions although the extent of any road and footpath closures will affect traffic flow along Mobbs Lane. Specific controls along Mobbs Lane to minimise the impact area described below.

The Construction Traffic Management Plan will vary depending on the works stage. Appropriate traffic controls in accordance with *RTA Traffic Control at Worksites, 2003* will be in place during demolition and construction to avoid congestion in Mobbs Lane and other surrounding traffic routes.

It is proposed that the final entry and egress points to Epping Park will be used as the site access points during construction. These entry points will vary depending on the stage of the development. Sight distances at Mobbs Lane are excellent and in this respect will be adequate for construction access.

Any proposed temporary driveways will be constructed in accordance with RTA requirements and approved separately by the relevant authority.

As part of the Construction Phase Management Plan, the works contractor will detail the location of the site office and associated car parking for staff and visitors. As far as reasonably practical this parking will be contained within the site.

4 Regulatory, Licensing & Legislative Requirements

The works contractors should as a minimum consider the following regulatory, licensing and legislative requirements:

- Occupational Health and Safety Act 2000
- Occupational Health and Safety Regulation 2001
- Protection of the Environment Operations (Clean Air) Regulation 2002
- Protection of the Environment Operations (Waste) Regulation 2005
- Contaminated Land Management Act 1997 and Regulation 2008
- Contaminated Land Management Amendment Act 2008 No 111
- Road and Rail Transport (Dangerous Goods) Act 1997
- Road and Rail Transport (Dangerous Goods) (Road) Regulation 1998
- Environmentally Hazardous Chemicals Act (1985)
- Waste Avoidance and Resource Recovery Act 2001

5 Codes of Practice

All work shall be conducted, as appropriate, in accordance with (but not limited to) the following environmental codes of practice:

- Australian Standard AS 2436-1981: Guide to Noise Control on Construction, Maintenance and Demolition Sites
- Australian Standard AS 2601 – 2001: Demolition of Structures
- WorkCover, NSW (1993). Code of Practice: Safe Work on Roofs, Part 1, Commercial and Industrial Buildings
- AS/NZS 3012- 2003: Electrical Installations - Construction and Demolition sites, and Associated Codes of Practice
- WorkCover, NSW (1997). Code of Practice: Amenities for Construction Work
- WorkCover, NSW (2007). Code of Practice: Electrical Practices for Construction Work
- WorkCover, NSW (2000). Code of Practice: Excavation Work
- WorkCover, NSW (2004). Code of Practice: Safe Work on Roofs, Part 2, Residential Buildings
- NSW Department of Environment and Climate Change (1992): Urban Erosion Control and Sediment Control
- NSW Department of Environment and Climate Change (2007): Noise Guide for Local Government
- National Environment Protection Council (2003): National Environment Protection Measure (NEPM) on Ambient Air Quality
- NSW Department of Housing (1998): Managing Urban Stormwater – Soils and Construction
- NSW Department of Environment and Climate Change (2008): Waste Classification Guidelines
- NSW Department of Environment and Climate Change (2005): Approved Methods for the Modelling and Assessment of Air Pollutants in NSW
- NSW Department of Environment and Climate Change (2007): Approved Methods for the Sampling and Analysis of Air Pollutants in NSW.