

**Consultant's Brief**  
**Development of an air emissions inventory for the Greater Metropolitan Region in NSW**

**Objective**

To develop an air emissions inventory for the Greater Metropolitan Region (GMR) in NSW that will include criteria pollutant and air toxics emissions from mobile, industrial, commercial, domestic and biogenic sources.

**Background**

The NSW Government's Environmental Trust has allocated funding to the Department of Environment and Conservation (NSW) (DEC) for the development of an air emissions inventory. The main objectives of the inventory are to: prioritise sources and pollutants of concern; guide the development of policies and programs; assess the effectiveness of policies and programs; forecast future emission scenarios; estimate impacts within air pollution models and provide information for environmental reporting. The inventory will be used to develop new policies and programs, beyond those included in the NSW Government's *Action for Air* policy document, which was based on the findings of the *Metropolitan Air Quality Study* (MAQS).

As part of the delivery of the inventory, training, source documents and analysis tools will be provided to DEC and Local Government officers.

**Study Region**

The AMG co-ordinates which define the GMR, Sydney, Newcastle and Wollongong Regions are shown in Table 1, while each of the regions are shown in Attachment A, Figure 1.

**Table 1. Definition of Greater Metropolitan, Sydney, Newcastle and Wollongong Regions**

Region	South-west corner AMG coordinates		North-east corner AMG coordinates	
	Easting (km)	Northing (km)	Easting (km)	Northing (km)
Greater Metropolitan	210	6159	420	6432
Sydney	261	6201	360	6300
Newcastle	360	6348	408	6372
Wollongong	279	6174	318	6201

**Data Requirements**

A summary of the sources, pollutants and other data to be included in the inventory are listed in Table 2, while a more detailed specification is included in Attachment B.

**Table 2. Emission Inventory Requirements**

Source	Pollutants	Time Varying <sup>7</sup>	Source Release Parameters <sup>8</sup>	Gridded <sup>9</sup>
Off-road mobile <sup>1</sup>	Ambient Air Quality NEPM Air Toxics NEPM NPI NEPM VOC/NO <sub>x</sub> Speciation <sup>6</sup>	Yes Hourly Week day Weekend day Summer Winter Annual	No	Yes Source location Stack height Stack diameter Exit temperature Exit velocity
Commercial/Domestic <sup>2</sup>				
Biogenic <sup>3</sup>				
Industrial <sup>4</sup>	Ambient Air Quality NEPM Air Toxics NEPM NPI NEPM LBL CAPER			No
Commercial <sup>5</sup>				

<sup>1</sup>See Attachment B, Table 1 for breakdown of sources

<sup>2</sup>See Attachment B, Table 4 for breakdown of sources

<sup>3</sup>See Attachment B, Table 5 for breakdown of sources

<sup>4</sup>See Attachment B, Table 2 for breakdown of sources

<sup>5</sup>See Attachment B, Table 3b for breakdown of sources

<sup>6</sup>Air pollution modelling

<sup>7</sup>Hourly for air pollution modelling, weekday/weekend day for example variation in motor vehicles, summer/winter for example variation in evaporative motor vehicles, solid fuel home heaters etc

<sup>8</sup>Air pollution modelling from point sources

<sup>9</sup>Air pollution modelling from diffuse sources

### **Tasks**

Expressions of interest are sought from suitably qualified persons/organisations to develop an air emissions inventory and analysis tools as follows:

- develop emissions inventories and forecasting techniques for either one or more of the following source categories:
  - off road mobile
  - industrial
  - commercial
  - domestic
  - biogenic

Specific tasks are detailed in Attachment B for each source category.

- develop software and input data for one or more of the following data analysis and visualisation tools:
  - emissions data management system
    - emissions from all source categories and pollutants
    - time varying emissions
    - source release parameters
    - emissions forecasting
    - emission control factors
    - graphs, charts and summary tables
    - export data for modelling
  - geographical information system (GIS)

### **Timing**

Timing is to be agreed with the DEC, taking into account how many projects the consultant(s) is engaged to prepare. Attachment C provides an indicative timetable for each project.

### **Selection Criteria**

Applicants will be required to demonstrate an in-depth knowledge of and extensive experience in:

- emissions estimation and forecasting techniques for either one or more of the following source categories:
  - off road mobile;
  - industrial;
  - commercial;
  - domestic; and
  - biogenic.
- community/industry/commercial survey methodologies;
- data storage, handling, validation, analysis and visualisation techniques and software design requirements for:
  - emissions data management; and
  - geographical information system (GIS).
- any other expertise and experience of relevance to this project.

***Expressions of Interest***

Interested applicants are invited to submit a proposal addressing the objectives and the selection criteria by close of business Friday 30 January 2004. Applications are to be submitted in writing and include the following information:

- name and position of the person nominated to be responsible for the project;
- details of the qualifications and experience of the person(s) who would work on the project, and the role(s) they would undertake;
- proposed dates for beginning and completing the study;
- a detailed budget of all costs and fees, GST inclusive; and
- any other information the applicant considers would facilitate evaluation of the proposal or establishes their suitability for the project.

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Attachment A

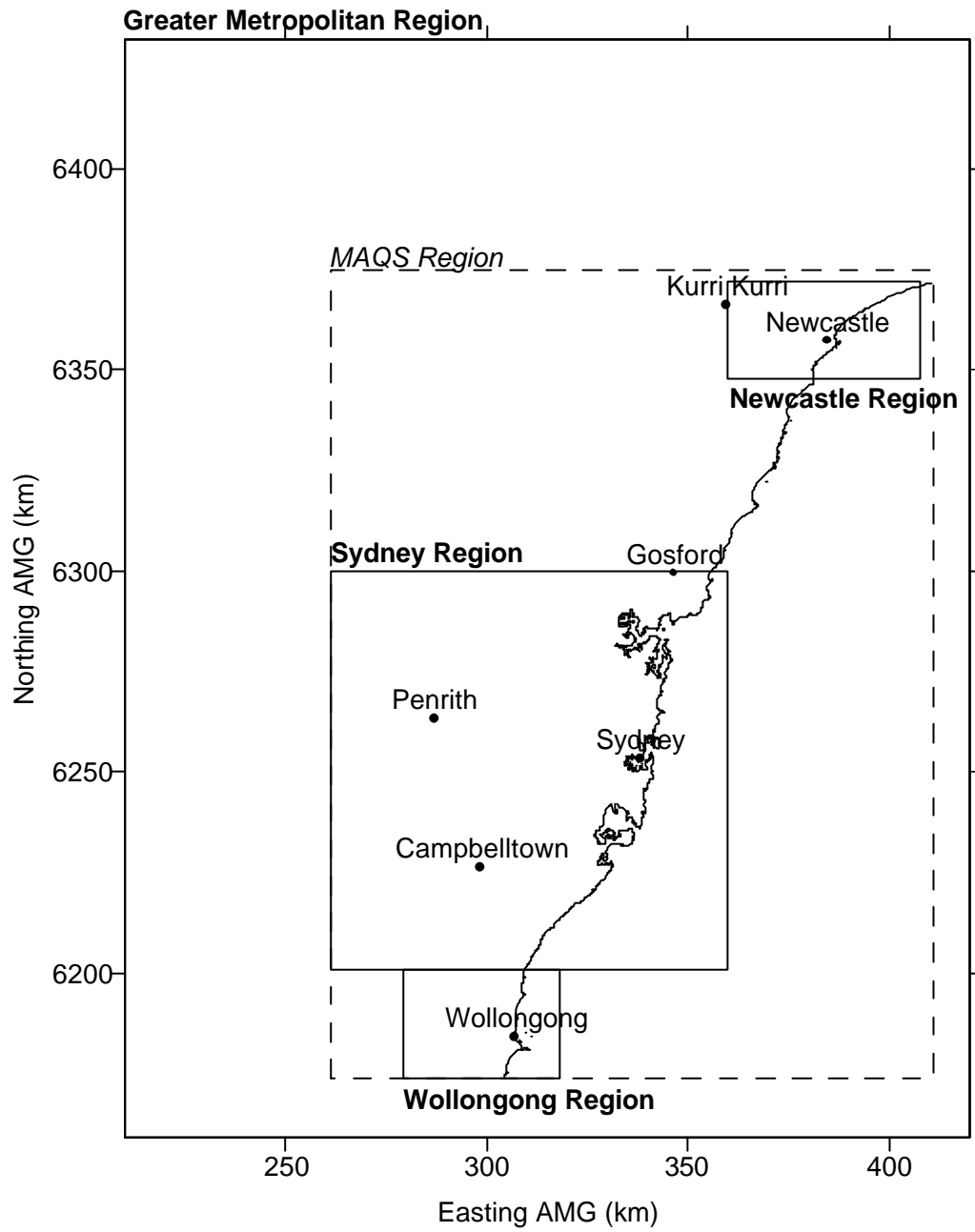


Figure 1. Definition of Greater Metropolitan, Sydney, Newcastle and Wollongong Regions

## Attachment B

### 1. Mobile

Table 1 provides a broad specification for the mobile source emissions inventory. The tasks required to develop this component of the inventory would include:

- identify, obtain and process activity data for mobile sources;
- research to identify appropriate emission and speciation factors;
- develop a database to store activity data and calculate emissions data;
- compile the emissions inventory;
- input emissions into data management system and GIS;
- identify gaps in information;
- document the emissions inventory estimates in a report; and
- provide training to DEC staff.

**Table 1. Mobile Emissions Inventory - Specification**

Source Type <sup>1</sup>	Pollutants <sup>2,3</sup>	Time Varying	Gridded	Emissions Data Analysis and GIS
Aircraft	Ambient Air Quality NEPM  Air Toxics NEPM  NPI  VOC/NO <sub>x</sub> Speciation	Hourly  Week day  Weekend day  Summer  Winter  Annual	1kmx1km	<p><b>Analysis</b> Prepare summaries, prioritise sources and pollutants of concern, present data in tabular and graphical format for GMR, Sydney, Newcastle, Wollongong and Local Government Areas</p> <p><b>Modelling</b> Analyse the impacts of policies and programs</p> <p><b>Projection</b> Project emissions into the future</p> <p><b>GIS</b> Visually display spatial location of source and identification of 'hot spots'</p>
Construction Vehicles				
Commercial Boats				
Commercial Ships				
Loading and Ballast				
Pleasure Craft				
Rail				

<sup>1</sup>EA NPI aggregated emissions data (AED) manuals include guidelines for the conduct of domestic surveys

<sup>2</sup>EA NPI AED manuals available for all source types

<sup>3</sup>Databases for criteria pollutants/air toxics typically include: EA NPI AED manuals; USEPA VOC/PM Speciation Data System; EA Diesel NEPM Technical Report

### 2. Industrial

Table 2 provides a broad specification for the industrial source emissions inventory, including the type of activity data required. The tasks required to develop this component of the inventory would include:

- identify the scheduled premises to be included in the inventory;
- develop the industrial survey questionnaires for different ANZSIC types;
- mail out industrial survey questionnaire;
- research to identify appropriate emission and speciation factors;
- develop a database to generate mail merge letters, track progress of the survey, store and calculate emissions data;
- process industrial survey questionnaire;
- compile the emissions inventory;
- input emission into data management system and GIS;
- identify gaps in information;
- document the emissions inventory estimates in a report; and
- provide training to DEC staff.

**Table 2. Industrial Emissions Inventory - Specification**

Source Type <sup>1</sup>	Pollutants <sup>2,3</sup>	Time Varying	Source Release Parameters	Emissions Data Analysis and GIS
~ 300 Scheduled Premises	Ambient Air Quality NEPM	Hourly	Source location Stack height Stack diameter Exit temperature Exit velocity	<p><b>Analysis</b> Prepare summaries, prioritise sources and pollutants of concern, present data in tabular and graphical format for GMR, Sydney, Newcastle, Wollongong and Local Government Areas</p> <p><b>Modelling</b> Analyse the impacts of policies and programs</p> <p><b>Projection</b> Project emissions into the future</p> <p><b>GIS</b> Visually display spatial location of source and identification of 'hot spots'</p>
	Air Toxics NEPM	Week day		
	NPI	Weekend day		
	LBL	Summer		
	CAPER	Winter		
VOC/NO <sub>x</sub> Speciation	Annual			

<sup>1</sup>EA NPI Industry Handbooks include guidelines for the conduct of industrial surveys. MAQS inventory provides questionnaires according to ANZSIC code

<sup>2</sup>EA NPI Industry Handbooks available for 82 industry types

<sup>3</sup>Databases for criteria pollutants/air toxics typically include: LBL; NPI; EA NPI Industry Handbooks; USEPA VOC/PM Speciation Data System; USEPA L&E; USEPA AP-42; CARB Speciation Manual; CARB ATEF database

### 3. Commercial

Tables 3a and 3b provide a broad specification for the commercial source emissions inventory, including the type of activity data required. The tasks required to develop this component of the inventory include:

- identify the non scheduled premises to be included in the inventory;
- develop the commercial survey questionnaires for different ANZSIC types;
- mail out commercial survey questionnaire;
- research to identify appropriate emission and speciation factors;
- develop a database to generate mail merge letters, track progress of the survey, store and calculate emissions data;
- process commercial survey questionnaire;
- compile the emissions inventory;
- input emission into data management system and GIS;
- identify gaps in information;
- document the emissions inventory estimates in a report; and
- provide training to DEC staff.

**Table 3a. Commercial Emissions Inventory - Specification**

Source Type <sup>1,2,3</sup>	Pollutants <sup>4,5</sup>	Time Varying	Source Release Parameters <sup>2</sup>	Emissions Data Analysis and GIS
~ 7100 Non-scheduled Premises	Ambient Air Quality	Hourly	Source location	<p><b>Analysis</b> Prepare summaries, prioritise sources and pollutants of concern, present data in tabular and graphical format for GMR, Sydney, Newcastle,</p>
	NEPM	Week day	Stack height	
	Air Toxics NEPM	Weekend day	Stack diameter	
	NPI	Summer	Exit temperature	

Source Type <sup>1,2,3</sup>	Pollutants <sup>4,5</sup>	Time Varying	Source Release Parameters <sup>2</sup>	Emissions Data Analysis and GIS
	LBL  CAPER  VOC/NO <sub>x</sub> Speciation	Winter  Annual	Exit velocity	Wollongong and Local Government Areas  <b>Modelling</b> Analyse the impacts of policies and programs  <b>Projection</b> Project emissions into the future  <b>GIS</b> Visually display spatial location of source and identification of 'hot spots'

<sup>1</sup>Table 3b lists the non scheduled premises that were included in MAQS 1992 and NPI 2001/2002 commercial source inventories plus individual sources such as poultry farming (meat); bread manufacturing; fabricated wood manufacturing; printing; plastic product rigid fibre reinforced manufacturing; concrete slurry manufacturing; metal coating and finishing; road and bridge construction; petroleum product wholesaling; automotive fuel retailing; smash repairing; and laundries and dry cleaners

<sup>2</sup>Except for those shown in bold in Table 3b

<sup>3</sup>EA NPI Industry Handbooks include guidelines for the conduct of commercial surveys. MAQS inventory provides questionnaires according to ANZSIC code

<sup>4</sup>EA NPI Industry Handbooks available for 82 industry types

<sup>5</sup>Databases for criteria pollutants/air toxics typically include: LBL; NPI; EA NPI Industry Handbooks; USEPA VOC/PM Speciation Data System; USEPA L&E; USEPA AP-42; CARB Speciation Manual; CARB ATEF database

**Table 3b. Commercial Emissions Inventory – Source Type**

Code/Description	Code/Description	Code/Description
01/agriculture	014/poultry farming	<b>0141/poultry farming (meat)</b> <sup>1</sup>
14/other mining	141/construction material mining	1411/gravel and sand quarrying
		1419/construction material mining nec
21/food, beverage and tobacco	212/dairy product manufacturing	<b>2121/milk and cream processing</b> <sup>1</sup>
		<b>2122/ice cream manufacturing</b> <sup>1</sup>
	213/fruit and vegetable processing	<b>2129/dairy product manufacturing nec</b> <sup>1</sup>
		2130/fruit and vegetable processing
	216/bakery product manufacturing	<b>2161/bread manufacturing</b> <sup>1</sup>
		<b>2162/cake and pastry manufacturing</b> <sup>1</sup>
		<b>2163/biscuit manufacturing</b> <sup>1</sup>
	217/other food manufacturing	2172/confectionary manufacturing
		2174/prepared animal and bird feed manufacturing
		<b>2179/food manufacturing nec</b> <sup>1</sup>
2181/soft drink, cordial and syrup manufacturing		
218/beverage and malt manufacturing	2182/beer and malt manufacturing	
	2183/wine manufacturing	
	2184/spirit manufacturing;	
	221/textile, fibre, yarn and woven fabric manufacturing	
22/textile, clothing, footwear and leather manufacturing	224/clothing manufacturing	2214/wool textile manufacturing
	226/leather and leather product manufacturing	2249/clothing manufacturing nec
	232/other wood product manufacturing	2261/leather tanning and fur dressing
23/wood and paper product manufacturing	2321/plywood and veneer manufacturing	2321/plywood and veneer manufacturing

Code/Description	Code/Description	Code/Description
		<b>2322/fabricated wood manufacturing<sup>1</sup></b>
		<b>2323/wooden structural component manufacturing<sup>1</sup></b>
		<b>2329/wood product manufacturing nec<sup>1</sup></b>
		2332/solid paperboard container manufacturing
		2339/paper product manufacturing nec
24/printing, publishing and recording media	241/printing and services to printing	<b>2412/printing<sup>1</sup></b>
25/petroleum, coal, chemical and associated product manufacturing	252/petroleum and coal product manufacturing nec	<b>2520/petroleum and coal product manufacturing nec<sup>1</sup></b>
	253/basic chemical manufacturing	2531/fertiliser manufacturing
		2532/industrial gas manufacturing
		2533/synthetic resin manufacturing
		2534/organic industrial chemicals manufacturing nec
		2535/inorganic industrial chemicals manufacturing nec
	254/other chemical product manufacturing	2541/explosive manufacturing
		2542/paint manufacturing
		2543/medicinal and pharmaceutical product manufacturing
		2545/soap and other detergent manufacturing
		2547/ink manufacturing
	2549/chemical product manufacturing nec	
	255/rubber product manufacturing	2559/rubber product manufacturing
	256/plastic product manufacturing	2563/plastic bag and film manufacturing
		<b>2564/plastic product rigid fibre reinforced manufacturing<sup>1</sup></b>
		<b>2566/plastic injection moulded product manufacturing<sup>1</sup></b>
26/non-metallic mineral product manufacturing	261/glass and glass product manufacturing	2610/glass and glass product manufacturing
	262/ceramic manufacturing	2621/clay brick manufacturing
		2622/ceramic product manufacturing
		2623/ceramic tile and pipe manufacturing
		2629/ceramic product manufacturing nec
	263/cement, lime, plaster and concrete product manufacturing	2631/cement and lime manufacturing
		2632/plaster product manufacturing
		<b>2633/concrete slurry manufacturing<sup>1</sup></b>
2634/concrete pipe and box culvert manufacturing		
27/metal product manufacturing	271/iron and steel manufacturing	2711/basic iron and steel manufacturing
		2712/iron and steel casting and forging
		2713/steel pipe and tube manufacturing
	272/basic non ferrous metal manufacturing	2722/aluminium smelting
		2729/basic non ferrous metal manufacturing
	273/non-ferrous basic metal product manufacturing	2733/nonferrous metal casting



Code/Description	Code/Description	Code/Description
	274/structural metal product manufacturing	<b>2742/architectural aluminium product manufacturing<sup>1</sup></b>
		<b>2749/structural metal product manufacturing nec<sup>1</sup></b>
	275/sheet metal product manufacturing	2751/metal container manufacturing
		2762/spring and wire product manufacturing
	276/fabricated metal product manufacturing	2763/nut, bolt, screw and rivet manufacturing
		<b>2764/metal coating and finishing<sup>1</sup></b>
		<b>2769/fabricated metal product manufacturing nec<sup>1</sup></b>
	281/motor vehicle and part manufacturing	2819/automotive component manufacturing nec
		2821/shipbuilding
	282/other transport equipment manufacturing	2824/aircraft manufacturing
		2829transport equipment manufacturing nec
28/machinery and equipment manufacturing	284/electronic equipment manufacturing	2849/electronic equipment manufacturing nec
	285/electrical equipment and appliance manufacturing	2852/electric cable and wire manufacturing
		2853/battery manufacturing
		2859/electrical equipment manufacturing nec
	286/industrial machinery and equipment manufacturing	2862/mining and construction machinery manufacturing
29/other manufacturing	292/furniture manufacturing	<b>2921/wooden furniture and upholstered seat manufacturing<sup>1</sup></b>
		<b>2922/sheet metal furniture manufacturing<sup>1</sup></b>
		<b>2929/furniture manufacturing nec<sup>1</sup></b>
41/general construction	412/non building construction	<b>4121/road and bridge construction<sup>1</sup></b>
		4122/non building construction nec
45/basic material wholesaling	452/mineral, metal and chemical wholesaling	<b>4521/petroleum product wholesaling<sup>1</sup></b>
		<b>4523/chemical wholesaling<sup>1</sup></b>
66/services to transport	662/services to water transport	6622/water transport terminals
53/motor vehicle retailing and services	532/motor vehicle services	<b>5321/automotive fuel retailing<sup>1</sup></b>
		<b>5323/smash repairing<sup>1</sup></b>
57/accommodation, cafes and restaurants	573/cafes and restaurants	<b>5730/cafes and restaurants<sup>1</sup></b>
86/health services	861/hospitals and nursing homes	8611/hospitals
		8613/nursing homes
95/personal services	952/other personal services	<b>9521/laundries and dry cleaners<sup>1</sup></b>
		9524/funeral directors, crematoria and cemeteries

<sup>1</sup>Limited commercial surveys in a small number of council areas. Obtain information from peak groups, chemical, coatings, solvents, fuel and raw material manufacturers/wholesalers, ABARE, ABS and extrapolate survey to entire GMR

#### 4. Commercial/Domestic

Table 4 provides a broad specification for the commercial/domestic source emissions inventory. The tasks required to develop this component of the inventory include:

- identify, obtain and process activity data for commercial/domestic sources;
- develop commercial/domestic survey questionnaires for different source types;
- mail out commercial/domestic survey questionnaire;
- research to identify appropriate emission and speciation factors;
- develop a database to generate mail merge letters, track progress of the survey, store and calculate emissions data;

- process commercial/domestic survey questionnaire;
- compile the emissions inventory;
- input emissions into data management system and GIS;
- identify gaps in information;
- document the emissions inventory estimates in a report; and
- provide training to DEC staff.

**Table 4. Commercial/Domestic Emissions Inventory - Specification**

Source Type <sup>1</sup>	Pollutants <sup>2,3</sup>	Time Varying	Gridded	Emissions Data Analysis and GIS
Aerosols (domestic/commercial)	Ambient Air Quality NEPM Air Toxics NEPM NPI VOC/NO <sub>x</sub> Speciation	Hourly Week day Weekend day Summer Winter Annual	1kmx1km	<p><b>Analysis</b> Prepare summaries, prioritise sources and pollutants of concern, present data in tabular and graphical format for GMR, Sydney, Newcastle, Wollongong and Local Government Areas</p> <p><b>Modelling</b> Analyse the impacts of policies and programs</p> <p><b>Projection</b> Project emissions into the future</p> <p><b>GIS</b> Visually display spatial location of source and identification of 'hot spots'</p>
Architectural surface coating (domestic/commercial)				
Backyard incinerators				
Barbeques				
Cutback bitumen				
Domestic/commercial solvents				
Gaseous fuel combustion (domestic)				
Lawn mowing and garden equipment (domestic)				
Lawn mowing and garden equipment (public open space)				
Liquid fuel burning (domestic)				
Natural gas/town gas leakage				
Solid fuel burning (domestic)				
Solvent use (domestic/commercial)				
Unaccounted gaseous, liquid and solid fuel burning (industrial/commercial)				

<sup>1</sup>EA NPI aggregated emissions data (AED) manuals include guidelines for the conduct of domestic surveys

<sup>2</sup>EA NPI AED manuals available for all source types

<sup>3</sup>Databases for criteria pollutants/air toxics typically include: EA NPI AED manuals; USEPA VOC/PM Speciation Data System

## 5. Biogenic

Table 5 provides a broad specification for the biogenic source emissions inventory. The tasks required to develop this component of the inventory include:

- obtaining land use, vegetation and bush fire data for biogenic sources;
- developing a database to store and calculate emissions data;
- compiling the emissions inventory;
- identify gaps in information;
- document the emissions inventory estimates in a report; and
- provide training to DEC staff.

Table 5. Biogenic Emissions Inventory - Specification

Source Type	Pollutants <sup>1,2</sup>	Time Varying	Gridded	Emissions Data Analysis and GIS
Burning (fuel red.,regen.,agric) wildfires	Ambient Air Quality NEPM	Hourly Week day	1kmx1km	<p><b>Analysis</b> Prepare summaries, prioritise sources and pollutants of concern, present data in tabular and graphical format for GMR, Sydney, Newcastle, Wollongong and Local Government Areas</p> <p><b>Modelling</b> Analyse the impacts of policies and programs</p> <p><b>Projection</b> Project emissions into the future</p> <p><b>GIS</b> Visually display spatial location of source and identification of 'hot spots'</p>
Soil	Air Toxics NEPM NPI VOC/NO <sub>x</sub> Speciation	Weekend day Summer Winter Annual		
Vegetation				

<sup>1</sup>EA NPI AED manuals available for burning and wildfires

<sup>2</sup>Databases for criteria pollutants/air toxics typically include: EA NPI AED manuals; USEPA VOC/PM Speciation Data System; NSW Environmental Trust research grant "Biogenic Emissions in the Greater Sydney Region"

**Attachment C**

The key projects, tasks, responsibilities and timing are listed in Table 1.

**Table 1. Project Plan**

Project	Task	Responsibility	Start date	Finish date
Emission data management system	Draft project brief, evaluate tenders and select Consultants	Project team	14/12/03	13/2/04
	Develop draft system and user's manual	Consultant	14/2/04	14/5/04
	Review draft system and user's manual and approve	Project team	15/5/04	31/5/04
	Input data	Consultant	1/6/04	28/2/05
GIS system	Draft project brief, evaluate tenders and select Consultants	Project team	14/12/03	13/2/04
	Develop draft system and user's manual	Consultant	14/2/04	14/5/04
	Review draft system and user's manual and approve	Project team	15/5/04	31/5/04
	Input data	Consultant	1/6/04	28/2/05
Commercial inventory	Draft project brief, evaluate tenders and select Consultants	Project team	14/12/03	13/2/04
	Develop draft inventory methodology	Consultant	14/2/04	31/3/04
	Review draft inventory methodology and approve	Project team	1/4/04	30/4/04
	Develop draft inventory	Consultant	1/5/04	31/12/04
	Review draft inventory and approve	Project team	1/1/05	31/1/05
	Inventory analysis and program development	Atmospheric Science & Air Policy	1/1/05 -	
Industrial inventory	Draft project brief, evaluate tenders and select Consultants	Project team	14/12/03	13/2/04
	Develop draft inventory methodology	Consultant	14/2/04	31/3/04
	Review draft inventory methodology and approve	Project team	1/4/04	16/4/04
	Develop draft inventory	Consultant	17/4/04	17/7/04
	Review draft inventory and approve	Project team	18/7/04	31/7/04
	Inventory analysis and program development	Atmospheric Science & Air Policy	19/7/04 -	
Off-road mobile sources inventory	Draft project brief, evaluate tenders and select Consultants	Project team	14/12/03	13/2/04
	Develop draft inventory methodology	Consultant	14/2/04	12/3/04
	Review draft inventory methodology and approve	Project team	13/3/04	31/3/04
	Develop draft inventory	Consultant	1/4/04	31/8/04
	Review draft inventory and approve	Project team	1/9/04	30/9/04
	Inventory analysis and program development	Atmospheric Science & Air Policy	1/9/04 -	

<b>Project</b>	<b>Task</b>	<b>Responsibility</b>	<b>Start date</b>	<b>Finish date</b>
Commercial/domestic inventory	Draft project brief, evaluate tenders and select Consultants	Project team	14/12/03	13/2/04
	Develop draft inventory methodology	Consultant	14/2/04	12/3/04
	Review draft inventory methodology and approve	Project team	13/3/04	31/3/04
	Develop draft inventory	Consultant	1/4/04	31/7/04
	Review draft inventory and approve	Project team	1/8/04	31/8/04
	Inventory analysis and program development	Atmospheric Science & Air Policy	1/8/04 -	
Biogenic inventory	Draft project brief, evaluate tenders and select Consultants	Project team	14/12/03	13/2/04
	Develop draft inventory methodology	Consultant	14/2/04	12/3/04
	Review draft inventory methodology and approve	Project team	13/3/04	31/3/04
	Develop draft inventory	Consultant	1/4/04	30/6/04
	Review draft inventory and approve	Project team	1/7/04	31/7/04
	Inventory analysis	Atmospheric Science & Air Policy	1/7/04 -	