

CONFIRMATION OF PREVIOUS MINUTES

MINUTES OF THE ENVIRONMENTAL ADVISORY COMMITTEE MEETING HELD ON 19 JULY 2000 (Attachment 1).

MOVED Mr V Harman SECONDED Cr C Macintosh that subject to a correction on Page 4 (Item 5 Landsdowne corrected to read Landsdale) that the minutes of the Environmental Advisory Committee meeting held on 19 July 2000 be accepted as a true and accurate record.

The Motion was Put and CARRIED

BUSINESS OUTSTANDING FROM PREVIOUS MEETINGS

- 1. Advertisement seeking nomination of community representatives for the Environmental Advisory Committee.

Business Arising Item 1 was tabled for discussion.

Mr Goldsmith provided the committee with an update of nominations received for community representatives for the Environmental Advisory Committee. Nominations closed immediately prior to the Environmental Advisory Committee meeting, on 16 August 2000. A total of five nominations were received, as summarised below;

Name	Residential Suburb	Current Work Experience	Academic Qualifications
Janet Richards	Kingsley	Lab Technician Woodvale Senior High School	B Sc (Marine Biology/Zoology).
Roy France	Duncraig	Petroleum Geologist; Marine Sedimentology specialist	PhD, MSc, B Sc.
Stu Hawkins	Edgewater	Edith Cowan University Centre for Eco System Management	B Sc.
Marilyn Zakrevsky	Mullaloo	Co-ordinator Friends of Korella Park	-
Johnny Prefumo	North Beach (Work)	Ecosystems Environmental Consultants	B Sc

It was noted that since the nomination period closed immediately prior to the Environmental Advisory Committee meeting, it is possible that other nominations are yet to be forwarded to Mr Goldsmith.

General discussion ensued on the selection process.

Mr Kirton noted that a report would be prepared for the Environmental Advisory Committee, reviewing the community representative nominations, rating of nominations and selection process, including recommendations.

2. Briefing Paper; Perth Air Quality Management Plan.

Mr Goldsmith provided an overview of Business Arising Item 2, and general discussion ensued.

- A range of pamphlets are available from Minister Cheryl Edwards on air quality (Mr Harman).
- The administration would provide a submission on the Draft Air Quality Management Plan (Mr Kirton).
- The need for a measurement system for odours was recognised (eg for assessing waste water treatment plants). (Mr Harman).
- The City had recently commented on the Environmental Protection Authority Draft Guidance Statement No 47 Assessment of Odour Impacts (Mr Goldsmith).
- It was recognised that there was an opportunity for odour assessments to be conducted by or in conjunction with Universities, such as Edith Cowan University (Mr Kirton).
- The State Government had allocated \$3.6 million towards the implementation of the Perth Air Quality Management Plan. Benzene levels in Perth had been recorded at higher levels than in Sydney. It was suggested that actions LTP 1.8, LTP 1.9, LTP 1.10 and DAE 1.2 were relevant to Local Government, in addition to those detailed in attachment 2 of the briefing paper report (Mr Wake).
- Mr Wake forwarded a copy of;
 - (1) The Local Air Quality Management Plan for the City of Blacktown (1996).
 - (2) Lets Clear the Air, Putting Local Air Quality Management Plans Into Practice (Sydney Regional Organisations of Councils (undated).
 - (3) Local Air Quality Management Innovative Ways of Working Together (Sydney Regional Organisations of Councils, 1994).

MOVED Cr Mackintosh SECONDED Mr Vic Harman that it be recommended to Council that the Environmental Advisory Committee reviews the action items (Attachment 1 & 2 and a sample of 3, including actions LTP 1.8, LTP 1.9 and LTP 1.10) provided in Perth Air Quality Management Plan (2000), and prepares a recommendation to Council on the following matters:

1. **endorsement of the Perth Air Quality Management Plan;**
2. **identification of key action items;**
3. **priorities for implementation of action items;**

4. a review of budget and resource allocations required for the implementation of action items.

The Motion was Put and

CARRIED

3. Article for Council News regarding City of Joondalup Policy 4.6.1 (Burning of Garden Refuse and Cleared Vegetation).

Mr Goldsmith provided an update on the preparation of a newspaper article on the City of Joondalup Policy 4.1.6.

Mr Kirton noted that the article would be prepared for release in November.

4. Report; A Review of Native Fauna Sanctuaries.

Business Arising Item 4 was tabled for discussion.

General discussion ensued, as summarised below:

Mr Carman-Brown advised the committee of his imminent trip to Warrawong Sanctuary, to meet Bruce Jackson from Earth Sanctuaries Pty Ltd. It was noted that the maintenance of appropriate public access was an issue in relation to wildlife sanctuaries which require fencing of public land. Mr Carman-Brown advised that he would report back to the committee on the outcome of his discussions with Earth Sanctuary Pty Ltd.

Cr Magyar noted community interest in the establishment of wildlife sanctuary parks, as indicated by Mr John Wood (Friends of Craigie Open Space) and Mr Dave Hancock (Friends of Shepherds Bush).

Cr Magyar led a discussion on the recent appointment of a consultant to investigate planning options for Craigie Open Space.

MOVED Mr Harman SECONDED Cr Mackintosh that it be recommended to Council to extend the Terms of Reference of the Consultant's Brief on Craigie Open Space, to consider a commercially operated wildlife sanctuary.

The Motion was Put and

CARRIED

5. Cities for Climate Protection discussion paper.

Mr Goldsmith provided an overview of Business Arising Item 5.

Mr Harman noted that farm animals are also a source of methane gas.

It was noted that at the conclusion of the Cities for Climate Protection, a presentation would be given to Council, presenting the results of the Milestone 1, inventory and forecast of Greenhouse Gas emissions.

Mr Wake queried the level of committed funds available for the Cities for Climate Protection programme.

Mr Kirton noted that Milestone 1 was funded, but there was no budget allocation for Milestone 2 and 3.

ITEMS OF BUSINESS

1. Administrative procedures relating to the Environmental Advisory Committee.

Business Item 1 was tabled for discussion.

Mr Kirton noted that following selection of the community representatives, Council Support Services (Mr M Smith) would provide the Environmental Advisory Committee with a briefing on administrative requirements on the operation of the committee.

2. Committee Membership, Mr Martin Bowman. Correspondence from Urban Development Institute of Australia, 21 July 2000.

Business Item 2 was tabled for discussion.

MOVED Mr Harman SECONDED Cr Mackintosh that it be recommended to Council that Council:

1. **NOTES the correspondence from the Urban Development Institute of Australia, dated 21 July 2000;**
2. **ENDORSES that a letter of thanks be forwarded to Mr Bowman for his involvement and contribution to the Environmental Advisory Committee.**

The Motion was Put and

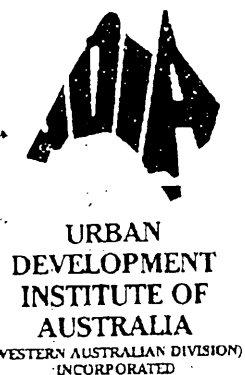
CARRIED

DATE OF NEXT MEETING

The next meeting of the Environmental Advisory Committee will be held in Conference Room 3, Joondalup Civic Centre, Boas Avenue, Joondalup on 20 September 2000.

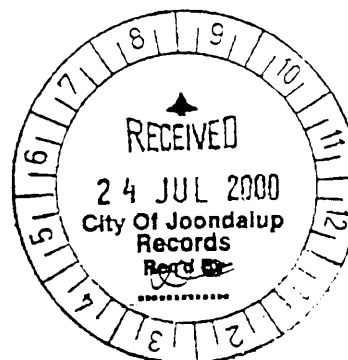
CLOSURE

There being no further business, the Chairman declared the meeting closed at 20:00 hrs.



21 July 2000

Mr Lindsay Delahunty
Chief Executive Officer
City of Joondalup
Boas Avenue
JOONDALUP WA 6027



City of Joondalup	DOCUMENT REGISTRATION
Ref	00906
No	019412
Action Officer	MOE ✓

Dear Lindsay

We have recently received documentation regarding a meeting of the City of Joondalup Environmental Advisory Committee.

Please be advised that Mr Martin Bowman is no longer able to continue on your Environmental Advisory Committee.

Currently, we are seeking a replacement for his position on the committee and UDIA will advise you accordingly.

If you have any further queries please contact me on 9367 1101.

Yours sincerely

JUDY CARR
Executive Director

Table 9: Perth Air Quality Management Plan (Consultation Draft) Proposed implementation schedule.

Code	Description	Output	Expected outcome	Expected impact on air quality	Agency responsible (support agency)	Timing-Start	Status after 5 years	Timing-End
	Investigate the relationship between Perth's daily air quality and mortality.	Report.	Defining air quality problem. Basis for future decision making.	Indirect impact on air quality.	DERM, DEWHA, EPAWA			
	Investigate the relationship between Perth's daily air quality and hospital admission.	Report.	Defining air quality problem. Basis for future decision making.	Indirect impact on air quality.	DERM, DEWHA, EPAWA			
	Investigate the relationship between Perth's daily air quality and hospital emergency department attendance.	Report.	Defining air quality problem. Basis for future decision making.	Indirect impact on air quality.	DERM, DEWHA, EPAWA			
	Undertake a project to trial the routine recording of GP health data in a standardised way.	Report.	Preliminary step to research.	Indirect impact on air quality.	DERM, DEWHA, EPAWA			
	Investigate the relationship between re-admission of patients and daily air quality.	Report.	Defining air quality problem. Basis for future decision making.	Indirect impact on air quality.	DERM, DEWHA, EPAWA			
	Investigate the potential for local variations in Perth's daily air quality to have any impact on human health.	Report.	Defining air quality problem. Basis for future decision making.	Indirect impact on air quality.	DERM, DEWHA, EPAWA, COASTWATCH, MARLBOROUGH, COUNCILS			
	Develop a program to investigate exposure of Perth's residents to air toxics and potential health effects.	Report.	Defining air quality problem. Basis for future decision making.	Indirect impact on air quality.	DERM, DEWHA, EPAWA			
	Investigate the relationship between personal exposure, ambient air quality and defined health outcomes.	Report.	Defining air quality problem. Basis for future decision making.	Indirect impact on air quality.	DERM, DEWHA, EPAWA			
	Develop a program to investigate the contribution of indoor air exposure to personal exposure.	Report.	Defining air quality problem. Basis for future decision making.	Indirect impact on air quality.	DERM, DEWHA, EPAWA			

Table 9: (continued).

Code	Description	Output	Expected outcome	Expected impact on air quality	Agency responsible (support agency)	Timing-Start	Status after 5 years	Timing-End
	Periodically review research needs.	Report, triennial review.	Basis for future decision making.	Indirect impact on air quality.	DEP, HERWG (HDWA)			
	Periodically review the health impacts of air pollution or potential airborne contaminants.	Report, triennial review.	Basis for future decision making.	Indirect impact on air quality.	DEP & HERWG (HDWA)			
	Facilitate the investigation and accessing of funds to undertake research.	Report, triennial review.	Preliminary step to research. Support action to all HER actions.	Indirect impact on air quality.	DEP & HERWG (HDWA)			
	Assess the community health impacts of smoke from prescribed burning and bushfire.	Report.	Defining air quality problem. Basis for future decision making.	Indirect impact on air quality.	DEP & HERWG (CALM, FESA, HDWA)			
	Undertake a comparative risk assessment of mortality and morbidity influenced by smoke from prescribed burning and bushfire.	Report.	Defining air quality problem. Basis for future decision making.	Indirect impact on air quality.	DEP & HERWG (CALM, FESA, Local Govt)			
	Update the Perth air emissions inventory.	Inventory, triennial review.	Support action to modelling. Basis for future decision making.	Indirect impact on air quality.	DEP (Industry, Local Govt)			
	Link data acquisitions of emissions inventories.	Inventory.	Improvement to system. Support action to modelling.	Indirect impact on air quality.	DEP (Industry, Local Govt)			
	Quantify significant emissions sources outside the Perth metropolitan region contributing to Perth's air quality.	Report, triennial review.	Defining air quality problem. Support action to modelling. Basis for future decision making.	Indirect impact on air quality.	DEP (CALM, FESA, BOM, Local Govt)			
	Investigate requirements for refining previous measurements and undertaking additional measurements within the Perth airshed.	Report.	Improvement to system. Support action to modelling.	Indirect impact on air quality.	DEP (Local Govt, WAMA, BOM, GCWA, Industry, PANI)			

Code	Description	Output	Expected outcome	Expected impact on air quality	Agency responsible (support agency)	Timing-Start	Status after 5 years	Timing-End
	Review current Perth ambient air quality monitoring data.	Report, triennial review.	Improvement to system. Support action to modelling.	Indirect impact on air quality.	DEP Perth City Council			
	Review and improve current monitoring equipment.	Report, 5 yearly review.	Improvement to system. Support action to modelling.	Indirect impact on air quality.	DEP (Perth City Council)			
	Encourage universities to be involved in air quality monitoring for educational purposes.	Campaign, annual review.	Improvement to system. Support action to modelling.	Indirect impact on air quality.	DEP (Perth City Council)			
	Evaluate the effectiveness of mobile monitoring stations.	Report, Monitoring program, triennial review.	Improvement to system. Support action to modelling.	Indirect impact on air quality.	DEP Perth City Council			
	Establish an effective air toxics monitoring program in Perth.	Monitoring program, Report, triennial review.	Support action to modelling. Defining air quality problem. Basis for future decision making.	Indirect impact on air quality.	DEP Perth City Council			
	Establish an indoor air quality monitoring program in Perth.	Monitoring program, one-year trial, triennial review.	Support action to modelling. Defining air quality problem. Basis for future decision making.	Indirect impact on air quality.	DEP Perth City Council			
	Periodically review modelling development and maintenance requirements, and update models as necessary.	Report, biennial review.	Improvement to system. Support action to modelling.	Indirect impact on air quality.	DEP Perth City Council			
	Develop a Perth haze model.	Air quality model & Report, triennial review.	Basis for future decision making.	Indirect impact on air quality.	DEP Perth City Council			

Table 9: (continued)

Code	Description	Output	Expected outcome	Expected impact on air quality	Agency responsible (support agency)	Timing-Start	Status after 5 years	Timing-End
	Improve the graphical display of the Perth photochemical smog model.	Air quality model & Report, annual review.	Improvement to system.	Indirect impact on air quality.	DEP (Industry, AMEWA, HDWA, HWY, etc.)			
	Use output from the BoM mesoscale model as input to the photochemical smog model and other airshed models.	Air quality modelling improvements.	Improvement to system. Support action to modelling.	Indirect impact on air quality.	DEP (BoM, etc.)			
	Use air quality models as an educational tool.	Educational package, annual review.	Improvement to system.	Indirect impact on air quality.	DEP (BoM, etc.)			
	Commission research into the improvement of biogenic emissions estimates relevant to the Perth metropolitan region.	Inventory & Report	Support action to modelling.	Indirect impact on air quality.	DEP (University, etc.)			
	Commission research into air toxics (constituents, sources and impacts).	Inventory & Report.	Support action to modelling.	Indirect impact on air quality.	DEP (Industry, AMEWA, HDWA, HWY, etc.)			
	Commission research into fluoride emissions (sources and impacts).	Inventory & Report.	Support action to modelling.	Indirect impact on air quality.	DEP (Industry, etc.)			
	Undertake studies on weather and smoke modelling to improve burn decision processes.	Air quality modelling improvement & Report, annual review.	Improvement to system. Support action to modelling. Basis for future decision making.	Indirect impact on air quality.	CANU, AERON (DEP, SESA)			
	Periodically review the status of emerging air quality issues and actions available to address these issues.	Annual review, publicly accessible information.	Basis for future decision making. Defining air quality problem.	Indirect impact on air quality.	DEP (Universities, relevant government agencies, industry, councils and Community groups)			

Code	Description	Output	Expected outcome	Expected impact on air quality	Agency responsible (support agency)	Timing-Start	Status after 5 years	Timing-End
	Assess the environmental impact of the <i>Perth Metropolitan Transport Strategy</i> .	Report, 5 year review.	Basis for future decision making.	Indirect impact on air quality.	MTS WAP MPS			
	Prepare local Integrated Transport Plans within the framework of the <i>Metropolitan Transport Strategy</i> .	Reports, annual review.	Basis for future decision making.	Direct impact on air quality.	MTS WAP MPS			
	Assess local and regional air quality impacts when considering road network planning.	Reports.	Basis for future decision making.	Indirect impact on air quality.	MTS WAP MPS			
	Include transport impact assessment as performance criteria for new major development and redevelopment proposals.	Reports.	Basis for future decision making. Support action to modelling.	Indirect impact on air quality.	MTS WAP MPS			
	Monitor the implementation of the <i>Better Public Transport: Ten-Year Plan for Transperth</i> .	Report, triennial review.	Basis for future decision making. Support action to modelling.	Indirect impact on air quality.	MTS WAP MPS			
	Encourage the implementation of workplace policy adopting teleworking in government agencies.	Campaign, policy, annual review	Improvement to system.	Direct impact on air quality.	MTS WAP MPS			
	Encourage the further implementation of workplace policy adopting homebased employment and business.	Campaign, policies, annual review.	Improvement to system.	Direct impact on air quality.	MTS WAP MPS			
	Continue with travel behaviour programs, such as TravelSmart®.	Campaign, reports, annual review.	Improvement to system.	Direct impact on air quality.	MTS WAP MPS commercial & business sectors			

Table 9: (continued)

Code	Description	Output	Expected outcome	Expected impact on air quality	Agency responsible (support agency)	Timing-Start	Status after 5 years	Timing-End
	Review and improve access within the Perth metropolitan region for pedestrians and cyclists.	Report, triennial review.	Improvement to system. Basis for future decision making.	Indirect impact on air quality.				
	Manage regional parking in key destinations (CBD and strategic regional centres).	Program, report, annual review.	Improvement to system. Basis for future decision making.	Indirect impact on air quality.				
	Assess the cost-effectiveness of public money spent on transport modes and services in terms of air quality benefits.	Report.	Basis for future decision making.	Indirect impact on air quality.				
	Investigate the potential for implementing road pricing policies for urban road use.	Report, 5 yearly review.	Basis for future decision making.	Indirect impact on air quality.				
	On review of <i>Future Perth</i> , to consider air quality issues.	One initial report, review period to be determined.	Basis for future decision making.	Indirect impact on air quality.				
	Use research material on urban form to assess the potential for application to urban consolidation strategies in Perth metropolitan region.	Report.	Basis for future decision making. Supporting action to LTP 2.3.	Indirect impact on air quality.				
	Develop a government policy position on increased levels of urban infill, density and renewal.	Report.	Basis for future decision making.	Direct impact on air quality.				
	Identify the optimal public transport corridors and transport interchanges in Perth and undertake planning and reservation as a priority.	Report, annual review.	Basis for future decision making. Support action to modelling.	Indirect impact on air quality.				
	Review and revise non-statutory planning policies to encourage implementation.	Reports, one initial annual review.	Basis for future decision making.	Direct impact on air quality.				

Code	Description	Output	Expected outcome	Expected impact on air quality	Agency responsible (support agency)	Timing-Start	Status after 5 years	Timing-End
	Support the development and implementation of an appropriate education campaign on energy efficiency and environmentally sensitive design.	Campaign, annual review, change.	Improvement to system. Behaviour	Indirect impact on air quality. DEP, CCWA, PAN)				
	Support the preparation of guidelines guidelines and policies to include energy efficiency requirements in the Building Code, design of new dwellings, buildings, major renovations and redevelopments.	Guideline.	Improvement to system. Behaviour change.	Direct impact on air quality.				
	Support an increase in the use of energy rating schemes for buildings.	Campaign.	Improvement to system. Behaviour change.	Indirect impact on air quality.				
	Introduce the 'Ten second' regulations for visibly smoky vehicles.	Regulation & Report, one initial annual review.	Improvement to system.	Direct impact on air quality.				
	Review the DEP Smoky Vehicle reporting program.	One annual report.	Basis for future decision making.	Indirect impact on air quality.				
	Evaluate the potential for introducing a voluntary accelerated vehicle retirement (scrappage) program in Perth.	Report.	Basis for future decision making. Support action to VEM 2.2 and VEM 2.3.	Indirect impact on air quality.				
	Implement the committed outcomes of the evaluation process to encourage the removal of older vehicles from the Perth fleet.	Regulation.	Improvement to system.	Direct impact on air quality.				
	Assess and upgrade the light commercial vehicle (LCV) sector.	Report, five yearly review.	Basis for future decision making.	Indirect impact on air quality.				

Code	Description	Output	Expected outcome	Expected impact on air quality	Agency responsible (support agency)	Timing-Start	Status after 5 years	Timing-End
	Evaluate the various emission testing options for their cost effectiveness and environmental benefits, for introduction into Perth.	Review & Report.	Supporting action to VEM 3.2 and VEM 3.3.	Indirect impact on air quality.	DEP Perth/WA MOTORS/WA			
	Trial a random road-side emissions testing system as a screening method for comparison of on-road vehicle emissions against appropriate standards.	Trial of monitoring program, report.	Basis for future decision making.	Indirect impact on air quality.	DEP Perth/WA MOTORS/WA			
	Implement the committed outcomes of the evaluation process to reduce in-service emissions from the Perth motor vehicle fleet.	Monitoring program, review period to be determined.	Improvement to system.	Direct impact on air quality.	DEP Perth/WA MOTORS/WA			
	Establish a training program for the automotive industry to ensure sufficient expertise in emissions testing, maintenance and repairs.	Education program.	Improvement to system. Behaviour change.	Indirect impact on air quality.	DEP Perth/WA MOTORS/WA Automotive Industry			
	Periodically review emissions testing equipment and technology.	Report, triennial review.	Basis for future decision making.	Indirect impact on air quality.	DEP Perth/WA MOTORS/WA Automotive Industry			
	Develop a fuel formulation policy for locally produced and imported petrol and diesel automotive fuel.	Regulation.	Basis for future decision making.	Direct impact on air quality.	DEP Perth/WA MOTORS/WA Automotive Industry			
	Regulate fuel quality standards.	Regulation.	Basis for future decision making.	Indirect impact on air quality.	DEP Perth/WA MOTORS/WA Automotive Industry			
	Support stronger national moves towards regulating fuel formulation.	Regulation.	Basis for future decision making.	Indirect impact on air quality.	DEP Perth/WA MOTORS/WA Automotive Industry			
	Promote the introduction of Stage II vapour recovery through national forums.	Regulation.	Basis for future decision making.	Indirect impact on air quality.	DEP Perth/WA MOTORS/WA Automotive Industry			

Table 9: (continued).

Code	Description	Output	Expected outcome	Expected impact on air quality	Agency responsible (support agency)	Timing-Start	Status after 5 years	Timing-End
	Support the consistency and early adoption of Australian Design Rule emission standards with international best practice emission standards.	Regulation.	Basis for future decision making.	Indirect impact on air quality.	DEP (MVEI, Transport WA)			
	Support national moves to encourage the co-ordination of vehicle emission engine standards with automotive fuel standards.	Regulation.	Improvement to system.	Basis for future decision making. Indirect impact on air quality.	DEP (MVEI, Transport WA, NTC)			
	Report on the effectiveness of the Government fleet LPG trial.	Report, biennial review.	Basis for future decision making.	Indirect impact on air quality.	DEP (GAMS, Code, Transport WA)			
	Investigate whether there are benefits arising from the use of CNG and LPG as fuel sources for the road passenger transport and freight sectors.	Report.	Basis for future decision making.	Indirect impact on air quality.	DEP (Transport WA, HDWA, CoE, Alpha Gas Industry)			
	Investigate the use of electric/alternate fuel vehicles and ultra-light vehicles.	Report.	Basis for future decision making.	Indirect impact on air quality.	Transport WA (RACV, State, HDWA, MVEI, CoE)			
	Conduct a full lifecycle analysis of all available domestic heating alternatives.	Report.	Basis for future decision making.	Indirect impact on air quality.	DEP (CoE, Air Quality, Environment, Energy, Transport, WAHA)			
	Develop incentives to encourage home owners to use alternative forms of heating.	Campaign, review period to be determined.	Behaviour change.	Indirect impact on air quality.	DEP (HDWA, Energy, Environment, Air Quality)			
	Establish a mediating process for the resolution of domestic smoke nuisance complaints as a component of the annual "Halt the Haze" campaign.	Report, biennial review.	Improvement to system.	Indirect impact on air quality.	DEP (Environment, Air Quality)			
	Advocate and adopt the upgraded Australian Standards for solid fuel heater emissions when introduced.	Regulation.	Basis for future decision making.	Direct impact on air quality.	DEP (MVEI, Transport WA)			

Table 9: (continued)

Code	Description	Output	Expected outcome	Expected impact on air quality	Agency responsible (support agency)	Timing-Start	Status after 5 years	Timing-End
	Develop an industry Code of Practice for the proper installation of wood heaters.	Guideline.	Improvement to system. Behaviour change.	Indirect impact on air quality.	DER (Local gov, OoE)			
	Implement an accredited course or equivalent for wood heater installers as a means of increasing industry awareness.	Campaign, review period to be determined.	Improvement to system. Behaviour change.	Indirect impact on air quality.	DER (Local gov, OoE)			
	Introduce amendments to current legislation to ensure adequate powers are given to Local Government officers to deal with domestic smoke nuisance.	Regulation.	Improvement to system.	Indirect impact on air quality.	DER (Local gov, OoE)			
	Enhance the awareness of wood suppliers in the Perth metropolitan region.	Campaign, review period to be determined.	Behaviour change.	Indirect impact on air quality.	DER (Local gov, OoE)			
	Introduce a total ban on backyard burning in all urban residential properties in the Perth metropolitan region by 2001.	Regulation.	Improvement to system. Behaviour change.	Direct impact on air quality.	DER (Local gov, OoE)			
	Promote effective frequent greenwaste collection services and support a co-ordinated approach by all local government authorities in Perth.	Campaign, review period to be determined.	Improvement to system. Behaviour change.	Indirect impact on air quality.	DER (Local gov, OoE)			
	Support the enhancement of the existing voluntary program to promote energy efficiency in building design and the construction of new dwellings.	Program, Report, one review at 5 years.	Improvement to system. Supporting action to DAE 4.1.	Direct impact on air quality.	DER (Local gov, OoE)			
	Support the establishment of minimum standards for energy efficiency for all new houses by the adoption of the standards to be introduced into the Building Code of Australia.	Regulation.	Improvement to system.	Direct impact on air quality. (Local gov, OoE)	DER (Local gov, OoE)			
	Advocate the introduction of energy efficiency standards into the Building Code of Australia.	Regulation.	Improvement to system.	Direct impact on air quality.	DER (Local gov, OoE)			

Table 9: (continued).

		outcome	on air quality	responsible (support agency)	Start	5 years	End
Provide an information package for consumers regarding the pollution potential of domestic products.	Information package, biennial review.	Improvement to system. Behaviour change.	Indirect impact on air quality.	FESA (CALM, DEP, BoM, Local gov.)	2001	2006	2006
Develop a rating scheme for domestic appliances and recreational equipment according to relative impacts on air quality.	Regulation & Report, biennial review.	Improvement to system. Behaviour change.	Indirect impact on air quality.	DEP (CALM, FESA, Local gov., CCWA, PAN)	2001	2006	2006
Implement an active community education campaign.	Campaign, annual review.	Improvement to system. Behaviour change.	Indirect impact on air quality.	FESA (in collaboration with DEP, CALM, BoM, Local gov.)	2001	2006	2006
Support the development of an information leaflet to be attached to all burning permits.	Information leaflet, annual review.	Improvement to system. Behaviour change.	Indirect impact on air quality.	FESA (DEP, CALM, BoM, Local gov.)	2001	2006	2006
Develop information on burning activities to be included in local government information services.	Information package and advice, annual review.	Improvement to system. Behaviour change.	Indirect impact on air quality.	FESA (DEP, CALM, BoM, Local gov.)	2001	2006	2006
Include air quality components in FESA/CALM training program and guidelines.	Guideline, training program.	Improvement to system. Behaviour change.	Indirect impact on air quality.	FESA (DEP, CALM, BoM, Local gov.)	2001	2006	2006
Include air quality components in FESA and CALM run training workshops.	Workshop, annual review.	Improvement to system. Behaviour change.	Indirect impact on air quality.	FESA (CALM, DEP, BoM, Local gov.)	2001	2006	2006
Develop environmental codes of practice for use of fire in horticultural and agricultural practices within the Perth metropolitan region.	Guideline.	Improvement to system. Behaviour change.	Indirect impact on air quality.	DEP (Local gov, FESA)	2001	2006	2006

Code	Description	Output	Expected outcome	Expected impact on air quality	Agency responsible (support agency)	Timing-Start	Status after 5 years	Timing-End
	Require burning permits throughout the year in areas within and surrounding the Perth metropolitan region.	Regulation.	Improvement to system. Basis for future decision making.	Direct impact on air quality.	DEP	2000		
	Regulate the use of fire on development sites.	Regulation.	Improvement to system. Basis for future decision making.	Direct impact on air quality.	DEP	2000		
	Promote the development of environmental management plans for all regionally and locally significant remnant bushland in the Perth metropolitan region.	Program, reports.	Improvement to system. Basis for future decision making.	Direct impact on air quality.	DEP	2000		
	Support the development of a model policy for adoption by local government to encourage consistency in smoke management.	Report.	Improvement to system. Basis for future decision making.	Indirect impact on air quality.	DEP	2000		
	Support the development of agreed consistent approaches and procedures for smoke management in all burning activities.	Report, review period to be determined.	Improvement to system. Basis for future decision making.	Indirect impact on air quality.	DEP	2000		
	Support the development of a uniform approach to the assessment of smoke management conditions used to issue burning permits.	Trial, report.	Improvement to system. Basis for future decision making.	Direct impact on air quality.	DEP	2000		
	Establish a working group to raise awareness amongst agencies regarding smoke management issues.	Program, annual review.	Improvement to system. Basis for future decision making.	Indirect impact on air quality.	DEP	2000		
	Include local government representation in the Smoke Management Liaison Group.	Program, annual review.	Improvement to system. Basis for future decision making.	Indirect impact on air quality.	DEP	2000		
	Review the effectiveness of the existing CALM, DEP, FESA & BoM inter-agency agreement.	Report, annual review.	Basis for future decision making.	Indirect impact on air quality.	DEP	2000		

Table 9: (continued).

Continue to promote risk assessment of bushfire impacts, taking into account air quality and other environmental impacts.	Report, review period to be determined.	Improvement to system. Basis for future decision making.	Indirect impact on air quality.
Develop a series of best practice emissions management guidelines to be used jointly by the DEP and industry.	Guideline, review period to be determined.	Improvement to system. Basis for future decision making. Behaviour change.	Indirect impact on air quality.
Establish the impact of the Kwinana Power Station and other key NO _x emitters on air quality in the Perth airshed.	Reports.	Basis for future decision making.	Indirect impact on air quality.
Establish the most cost effective emission reduction options for the Kwinana Power Station and other key NO _x emitters, pending conclusions of the updated inventory.	Reports.	Basis for future decision making.	Indirect impact on air quality.
Implement appropriate action plans to address significant industrial sources of NO _x in Perth.	Reports.	Basis for future decision making.	Indirect impact on air quality.
Develop emission guidelines for future power generation in the Perth airshed.	Guideline & Report, 5 yearly review.	Improvement to system. Basis for future decision making.	Direct impact on air quality.
Develop a position paper on co-generation and its implications for the Perth airshed.	Policy.	Improvement to system. Basis for future decision making.	Direct impact on air quality.
Continue to work with BP Kwinana Refinery to ensure continuous improvement in ROC control measures.	Program, review period to be determined.	Improvement to system. Basis for future decision making.	Direct impact on air quality.

Code	Description	Output	Expected outcome	Expected impact on air quality	Agency responsible (support agency)	Timing-Start	Status after 5 years	Timing-End
	Identify and work with the other major emitters of ROCs in the Perth airshed.	Inventory.	Improvement to system. Supporting action to IEM 4.3 and IEM 4.4.	Indirect impact on air quality.	DEP (Industry)			
	Work with industry to identify and analyse cost-effective options for ROC management.	Reports, review period to be determined.	Basis for future decision making.	Indirect impact on air quality.	DEP (Industry)			
	Work with industry to develop and implement cost-effective emission management plans for industrial ROC emissions.	Program, review period to be determined.	Basis for future decision making.	Indirect impact on air quality.	DEP (Industry)			
	Amend the <i>Environmental Protection Act 1986</i> to include the principle of provide objectives for waste minimisation and cleaner production.	Regulation.	Improvement to system. Behaviour change.	Direct impact on air quality.	DEP (Industry)			
	Encourage the industrial use of solar and wind power in the Perth metropolitan region.	Program, review period to be determined.	Improvement to system. Behaviour change.	Direct impact on air quality.	DEP (DEP, City of Perth, City of Fremantle, City of Goswami)			
	Develop a discussion paper on the range of financial and economic mechanisms available for industrial emission control.	Report.	Basis for future decision making.	Indirect impact on air quality.	DEP (Industry)			
	Promote the awareness of industry achievements in atmospheric emission reductions through 'green industry' awards.	Awards.	Improvement to system. Behaviour change.	Indirect impact on air quality.	DEP (Industry)			
	Review existing air quality community education programs.	Review and report.	Basis for future decision making. Support action to CIE 1.2.	Indirect impact on air quality.	DEP (Industry)			

Table 9: (continued).

Develop a Community Education Strategy.	Program, review period to be determined.	Improvement to system. Behaviour change. Supporting action to all CIE actions.	Indirect impact on air quality.
Co-ordinate the ongoing education campaign communicating the importance of good air quality.	Campaign, review period to be determined.	Improvement to system. Behaviour change.	Indirect impact on air quality.
Identify and pursue opportunities to encourage alternative transport choices within the community.	Campaign, annual review.	Improvement to system. Behaviour change.	Indirect impact on air quality.
Initiate an education campaign focussing on vehicle maintenance.	Campaign, annual review.	Improvement to system. Behaviour change.	Indirect impact on air quality.
Evaluate the benefits of all community programs which aim to reduce transport-related emissions.	Report, annual review.	Basis for future decision making.	Indirect impact on air quality.
Establish a central clearing house for public dissemination of information regarding various transport modes, programs and actions.	Information centre, triennial evaluation.	Improvement to system. Behaviour change.	Indirect impact on air quality.
Advise the community of the risk to drivers and passengers from exhaust emissions.	Campaign, 5 yearly review.	Behaviour change.	Indirect impact on air quality.
Educate the community on correct wood heater operation and maintenance.	Campaign and review.	Behaviour change.	Indirect impact on air quality.

Code	Description	Output	Expected outcome	Expected impact on air quality	Agency responsible (support agency)	Timing-Start	Status after 5 years	Timing-End
	Continue to inform and advise the community of the benefits of alternative heating options.	Campaign, review period to be determined.	Behaviour change.	Indirect impact on air quality	OoE (Alinta Gas, WP, DEP, Heating industry, CCWA, PAN)	1999	Campaign and reviews in progress.	
	Increase community awareness of the effects of emissions from garden maintenance and household activities.	Campaign, review period to be determined.	Behaviour change.	Indirect impact on air quality.	DEP (Industry, CCWA)	2001	Campaign and reviews in progress.	2005
	Develop an indoor air quality awareness program.	Program & report, triennial review.	Behaviour change. Improvement to system.	Indirect impact on air quality.	DEP (HDWA, DLG, Universities)	2001	Report completed, program and reviews in progress.	2010
	Review current curriculum materials and advise on how air quality issues can better be included.	Report.	Basis for future decision making. Improvement to system.	Indirect impact on air quality.	EDWA (Curriculum Council, DEP, CCWA, Industry, Gov., PAN)	2001	Report completed.	2002
	Identify missed target audiences within the community, industry, and government.	Report.	Improvement to system.	Indirect impact on air quality.	DEP (CCWA, Industry, Gov., PAN)	2001	Report completed.	2003