

AGENDA

Sustainability Advisory Committee

MEETING OF THE SUSTAINABILITY ADVISORY COMMITTEE

TO BE HELD ON

MEETING DATE



THURSDAY, 17 APRIL 2008

commencing at 6 p.m.

in Conference Room 2

JOONDALUP CIVIC CENTRE,
BOAS AVENUE, JOONDALUP

Note:

Clause 77 of the City's Standing Orders Local Law 2005 states:

"Unless otherwise provided in this local law, the provisions of this local law shall apply to meetings of committees with the exception of:

- (a) clause 29 (Members seating;) and
- (b) clause 54 (Limitation on members speaking.)"



GARRY HUNT
Chief Executive Officer
11 April 2008

www.joondalup.wa.gov.au

CITY OF JOONDALUP

Notice is hereby given that a meeting of the **SUSTAINABILITY ADVISORY COMMITTEE** will be held in Conference Room 2, Joondalup Civic Centre, Boas Avenue, Joondalup on **Thursday, 17 April 2008** commencing at **6 p.m.**

GARRY HUNT
Chief Executive Officer
11 April 2008

Joondalup
Western Australia

AGENDA

Committee Members

Cr Brian Corr	Presiding Person
Cr Mike Norman	Deputy Presiding Person
Cr Albert Jacob	
Cr Russ Fishwick	
Mr Steve Magyar	Community Representative
Mr Rainer Repke	Community Representative
Mr Alan Green	Community Representative
Mr Brett Dorney	Community Representative
Mr John Chester	Community Representative
Vacant	Community Representative
Vacant	Community Representative
Vacant	Community Representative

Terms of Reference

- *To recommend to the City of Joondalup Council on policy, advice and appropriate courses of action that promote sustainability, which is (1) environmentally responsible, (2) socially sound and (3) economically viable*
- *To provide advice to Council on items referred to the Committee from the City of Joondalup administration*

DECLARATION OF OPENING

APOLOGIES/LEAVE OF ABSENCE

CONFIRMATION OF MINUTES

MINUTES OF THE SUSTAINABILITY ADVISORY COMMITTEE HELD 21 FEBRUARY 2008

RECOMMENDATION

That the minutes of the meeting of the Sustainability Advisory Committee held on 21 February 2008 be confirmed as a true and correct record.

ANNOUNCEMENTS BY THE PRESIDING PERSON WITHOUT DISCUSSION

DECLARATIONS OF INTEREST

IDENTIFICATION OF MATTERS FOR WHICH THE MEETING MAY SIT BEHIND CLOSED DOORS

PETITIONS AND DEPUTATIONS

REPORTS

Item 1	Presentation on City of Joondalup's Environmental Initiatives [00906]	Page 4
Item 2	Replacement of Mercury Vapour lamps with energy efficient lamps as part of the maintenance cycle [59091]	Page 7
Item 3	Incentives for fuel efficient vehicles [59091]	Page 13

MOTIONS OF WHICH PREVIOUS NOTICE HAS BEEN GIVEN

REQUESTS FOR REPORTS FOR FUTURE CONSIDERATION

CLOSURE

ITEM 1 PRESENTATION ON CITY OF JOONDALUP'S ENVIRONMENTAL INITIATIVES [00906]

WARD: All

**RESPONSIBLE
DIRECTOR:** Mr Ian Cowie
 Governance and Strategy

PURPOSE/ EXECUTIVE SUMMARY

The purpose of this presentation is to provide members of the Sustainability Advisory Committee with an overview of the City of Joondalup's environmental initiatives and their current status.

BACKGROUND

The first meeting of the re-established Sustainability Advisory Committee meeting was held on 21 February 2008.

In September of 2007 Council endorsed the City's Environment Plan 2007- 2011 and the City's Greenhouse Action Plan 2007 – 2010. In the past six months significant progress has been made on the implementation of these plans and a range of environmental initiatives.

DETAILS

An overview will be provided on the City's: Environment Plan, Greenhouse Action Plan and other key plans in development. Key initiatives that will be presented include:

- ICLEI Cities for Climate Protection Program;
- ICLEI Water Campaign and DOW Water Conservation Plan;
- Lake Goollelal Stormwater upgrade (DEH community water grants);
- ICLEI Local Action for Biodiversity project;
- Eco Business Program (Aus Industry Partnership funding);
- Yellagonga Integrated Catchment Management project (partnership COJ & COW);
- TravelSmart (partnership COJ & DPI);
- Living Smart (partnership COJ & DPI).

A copy of the City's Environment Plan and Greenhouse Action Plan will be provided.

Link to Strategic Plan:

Key Focus Area Natural Environment

Objective 1 To ensure the City's natural environmental assets are preserved, rehabilitated and maintained.

Objective 2 To engage proactively with the community and other relevant organisations in the preservation of the City's natural assets.

Legislation – Statutory Provisions:

Not Applicable.

Risk Management considerations:

Not Applicable.

Financial/Budget Implications:

Not Applicable.

Policy implications:

Not Applicable.

Regional Significance:

Not Applicable.

Sustainability implications:

Not Applicable.

Consultation:

Not Applicable.

COMMENT

Given the significant progress the City has made recently in addressing environmental issues and that the SAC committee has recently been re-established with new members, it is appropriate that the committee is given an overview of the City's current environmental initiatives and their status.

ATTACHMENTS

Attachment 1 City of Joondalup Environment Plan 2007 – 2011 *(will be provided separately)*

Attachment 2 City of Joondalup Greenhouse Action Plan 2007 – 2010 *(will be provided separately)*

VOTING REQUIREMENTS

Simple Majority.

RECOMMENDATION

That the Sustainability Advisory Committee NOTES the presentation provided on the City's environmental initiatives.

ITEM 2 REPLACEMENT OF MERCURY VAPOUR LAMPS WITH ENERGY EFFICIENT LAMPS AS PART OF THE MAINTENANCE CYCLE [59091]

WARD: All

RESPONSIBLE Mr Ian Cowie
DIRECTOR: Governance & Strategy

PURPOSE/ EXECUTIVE SUMMARY

To provide the Sustainability Advisory Committee with an overview of the feasibility of replacing mercury vapour lamps with appropriate energy efficient lamps as part of the maintenance cycle.

BACKGROUND

At the Sustainability Advisory Committee meeting held on 21 February 2008 a report on the South Australian Strategic Action Planning Guide for Sustainable Public Lighting was provided to the Sustainability Advisory Committee for their comment and review

In response the Sustainability Advisory Committee moved the following recommendations:

- 1 *Requests Council to monitor developments on high powered LED and defers making a decision until those developments occur;*
- 2 *Requests Council to investigate and report on the feasibility of replacing mercury vapour lamps with appropriate energy efficient lamps in the maintenance cycle taking into account colour rendition;*
- 3 *Encourages the City of Joondalup to take a leading role in encouraging the Western Australian Local Government Association to renegotiate better quality street lighting and improve safety and energy efficiency.*

The City will continue to monitor development in LED lighting (recommendation one) and has written to the Western Australian Local Government Association (WALGA) through the North Metro Zone requesting that WALGA takes a proactive approach to negotiating more efficient street lighting with Western Power (recommendation three). This report is in response to recommendation two above.

DETAILS

While local government is responsible for the provision of street lighting in Western Australia, Western Power owns, operates and maintains the street lighting network on behalf of local government. This is true for the majority of the City of Joondalup although there are small pockets of areas where the City or developer has installed and maintains street lighting (Attachment 1 refers).

Opportunities for replacing mercury vapour lamps with appropriate energy efficient lamps as part of the maintenance cycle are described below.

Issues and options considered:Options for Lighting based on Energy Efficiency and Safety

Mercury Vapour Lamps are used for most street lighting in Western Australia and have proven to be reliable. However the fittings that were initially used for mercury vapour lamps do not now comply with current Australian standards and are no longer used by Western Power. There are now newer fittings that use mercury vapour lamps in a more efficient manner and comply with Australian Standards but these would still not be considered truly energy efficient.

The future is likely to lie with a combination of compact fluorescent, metal halide and high pressure sodium lamps that are typically twice as efficient as Mercury Vapour Lamps. As the technology further develops, Light Emitting Diodes (LED's) are also a possibility.

Compact Fluorescent Lamps and fittings give a “white light”, have excellent colour rendering and have a good efficiency and life span.

Metal Halide fittings have good colour rendition giving off a white light and are more energy efficient than Mercury Vapour Lamps.

High Pressure Sodium Lamps are lamps with a distinctive yellow colour and poor colour rendition and are commonly used on arterial roads and freeways where lighting for security is not an issue. (*Colour rendition is where the colour appearance of objects are graded under different lights in the scale of 100 for sunlight*).

Low Pressure Sodium Lamps have been rarely used (occasionally on pedestrian crossings) and are unlikely to be used in the future as they are mono-chromatic and have no colour rendition.

The ability of all these lamps to meet Australian standards depends on the type of fitting it is placed into and the height and spacing of the pole it is placed onto. This varies across the City dependent on when the street lighting was installed. Any solution to achieve Australian Standards will have to be customised to suit that particular area and that may change even within a suburb.

Western Power Bulk Lamp Replacement Program

The Bulk Lamp Replacement (BLR) program is configured on a 4 yearly lamp replacement basis for mercury vapour and 3 years for metal halide. Mercury vapour lamps are replaced every 4 years because of their lack of efficiency after 4 years. For example an 80W mercury vapour lamp would still be operating after 8-10 years putting out just 10% of its light output but still consuming 80W of energy. Metal Halide is replaced after three years as its output falls away quickly after that time and the lamp starts to flicker off and on. High Pressure Sodium lamps are not part of the BLR because of their long life and high output till end of life. Instead they are spot replaced as they fail.

The BLR is done suburb by suburb across two sectors in the City, see Attachment 1. It is done in this way to achieve efficiency in the use of contractors, elevating platforms, cherry pickers and traffic control. The BLR only works when a large number of similar type lamps in one area are replaced. To replace lamps one by one is very expensive.

Currently fluorescent lamps such as compact fluorescent and T5 fluorescent lamps are not a part of Western Power's available stock.

Using Energy Efficient lamps within the BLR program

The BLR program is controlled by Western Power and a local government does not have the power to change it or to make Western Power change it. Thus replacing the current mercury vapour lamps with more energy efficient light as part of the BLR program could only be done with Western Power's approval.

Western Power is unlikely to give their approval because:

- It is a lot more expensive (see details below);
- Western Power would have to increase the frequency of the BLR from 4 years to 3 years;
- Currently Western Power only have a small range of lamps in their stock. This allows them to purchase large numbers at cost effective prices. If across the metropolitan area there were lots of different types of lamps used, Western Power would have to have a large range of luminaires but in smaller quantities and this would affect their ability to purchase stock at lower cost;
- The City of Joondalup is only a small proportion of the area that Western Power manages and it would not be considered a high priority for them;
- It may create expectations from other local governments who wish to improve their street lighting before Western Power is prepared to deal with the issue at a large scale.

If Western Power was to agree it is highly likely that the City would have to meet the full costs including the cost of the lamps, upgrade of fittings and installation.

It is not currently possible to replace a mercury vapour lamp with another energy efficient lamp without upgrading the fitting. This means that if energy efficient lighting was to be installed through the BLR program it would require a significant initial outlay to upgrade all the light fittings across the City of Joondalup.

The Table below details what it would cost to upgrade lighting from mercury vapour to other types of energy efficient lighting. The cost is based on the 13, 958 lamps which are provided throughout the City. The total cost across the City of Joondalup in the initial year includes the cost of the lamp, the upgrade of the fitting, and the installation. The ongoing replacement cost does not include the upgrade of the fitting as this is a once-off cost. The cost of upgrading the fitting has been estimated at \$500 but could cost anywhere between \$500 and \$1000. This \$500 amount is a conservative estimate.

Lamp type	80W Mercury vapour	42W Compact Fluorescent	2 * 24W T5 Fluorescent	70W Metal Halide	50W High Pressure Sodium	70W High Pressure Sodium
Lamp life (years)*	4	5	5	2.5	5	5
Lamp cost*	\$2.95	\$6.99	\$12.50	\$33.00	\$15.00	\$14.50
Upgrade lamp fitting	N/A	\$500	\$500	\$500	\$500	\$500
Cost of installation*	\$75	\$75	\$75	\$75	\$75	\$75

Total cost across COJ in initial year	-	\$8,123,416	\$8,200,325	\$8,456,464	\$8,235,220	\$8,228,241
Ongoing replacement cost	\$1,088,026	\$1,144,416	\$1,221,325	\$1,507,464	\$1,256,220	\$1,249,241

(*Source: Sage Consulting Engineers, 2007)

(Note that those with a shorter lamp life will incur greater costs as they will have to be replaced more frequently).

The compact fluorescent and fluorescent lamps listed in the Table above are not currently available from Western Power (not part of their stock). They are unlikely to order them in for a small area as the costs would be very high.

Thus to replace mercury vapour with more energy efficient lighting would cost over \$8 million (this is a conservative estimate and could in reality cost over \$10 million). As this would simply be utilising the existing poles where the pole height and spacing is inadequate to meet Australian Standards, the lighting would remain sub standard. Thus the City would spend over \$8 million dollars and improve our energy efficiency but would still have sub standard lighting. The City would also incur higher ongoing replacement costs than the existing mercury vapour lamps. This is estimated to range from a 5% increase for compact fluorescent to a 44% increase for metal halide. Finally it should be noted that the cost to replace the existing street lighting system for the City could be equated to an approximate 20% increase in rates per household.

Even without the consideration of cost it would be highly inappropriate for the City to upgrade lighting and not upgrade it to Australian Standards. The City has a duty of care to its residents and the public to ensure that any new lighting installations or upgrades of lighting meet Australian Standards. To meet Australian Standards would require a comprehensive on-ground assessment of current street lighting and a re-design and re-installation of the street lighting system so that the lighting coverage meets Australian Standards. The cost of this is not possible to determine without a thorough analysis but it would be anywhere between \$20 - \$80 million dollars.

City of Joondalup Public Lighting Practices

The City of Joondalup only manages small areas of street lighting, see attached map. The City has been proactive in installing and/or trialling energy efficient lighting in these areas. All new lighting installations funded out of the Capital works program utilise energy efficient lighting and upgrades of lighting are undertaken on a cost effective basis. Some examples are detailed below:

- Metal Halide and High Pressure Sodium lamps have been used at Sorrento Beach North Redevelopment, Tom Simpson Park (which also uses power switching to reduce energy costs after 9.00pm), Kanangra Park path lighting to Greenwood Train Station as well as most carpark lighting;
- The newer suburbs of Burns Beach and Harbour Rise Estate, Hillarys have Metal Halide;
- Metal Halide and Fluorescent lamps are being trialled in the City Centre as a replacement for mercury vapour lamps;
- The Beach Road - Felgate Place public access way lighting project is currently under development and will use LED fittings on a trial basis;

- The City is currently undertaking trials of new luminaires for parts of Boas Avenue, Reid Promenade, Upney Mews and Joondalup Drive which will be finalised in April/May 2008;
- The remaining stages of Iluka will use metal halide or compact fluorescent.

Link to Strategic Plan:

Key Focus Area	Natural Environment
Strategy 2.1.5	The City reduces its greenhouse emissions and assists the public to reduce community emissions.

Legislation – Statutory Provisions:

Not Applicable.

Risk Management considerations:

If the City is installing new lighting or upgrading existing lighting it should meet AS/NZS 1158.

Financial/Budget Implications:

The cost of street lighting to local government is large. Any upgrades to street lighting whether for energy efficiency or safety and security reasons will have substantial financial implications. To obtain an accurate estimate of costs will require Western Power to provide a cost estimate for the work.

Policy implications:

Not Applicable.

Regional Significance:

The issue of poorly designed street lighting and inefficient lamps which are owned and maintained by Western Power is common to all Perth Metropolitan Councils.

Sustainability implications:

The installation of energy efficient public lighting assists in the reduction of greenhouse gas emissions. However any decision to attempt to change the current status quo would require a thorough cost-benefit analysis.

Consultation:

Not Applicable.

COMMENT

Western Power is unlikely to be enthusiastic to any approach to change the types of fittings they use in the Bulk Lamp Replacement program. If Western Power was to agree it is highly likely that the City would have to cover the cost. The cost to upgrade the lighting as part of the maintenance schedule is high and will still not deliver quality Australian standard lighting for the City.

The financial position of the City does not readily allow for new activities and services to be undertaken without impacting on rates levied, service levels or provisions of community facilities already in adopted programs. It is important that the City does not position itself to incur cost shifting from State Government agencies.

It would be prudent for the City to wait until Western Power was willing to upgrade the street light system including adding additional lights where needed so that lighting meets Australian Standards rather than just upgrading the fitting and the lamps to a sub standard level.

Given that the issue is prevalent to the entire metropolitan area the most effective way to reach a solution is through a high level government approach including WALGA, the State Government and local politicians.

ATTACHMENTS

Attachment 1 Map – City of Joondalup Street Lighting Responsibilities

VOTING REQUIREMENTS

Simple Majority.

RECOMMENDATION

That the Sustainability Advisory Committee NOTES:

- 1 that the City will CONTINUE to install energy efficient lighting in the areas in which it has responsibility;**
- 2 that the City has encouraged the Western Australian Local Government Association to negotiate with Western Power for improved street lighting that improves safety and energy efficiency.**

ITEM 3 INCENTIVES FOR FUEL EFFICIENT VEHICLES [59091]

WARD: All

**RESPONSIBLE
DIRECTOR:** Mr Ian Cowie
 Governance & Strategy

PURPOSE/ EXECUTIVE SUMMARY

The purpose of this report is to provide an overview of the different options for providing incentives for fuel efficient vehicles as part of the CBD parking policy, other than assignment of parking bays for motorcycles and scooters.

It is recommended that due to administrative difficulties with delivery and enforcement that no incentives are included in the CBD parking policy at this time.

BACKGROUND

At the Sustainability Advisory Committee meeting held on 21 February 2008 it was requested that the City *“explores the opportunity for incentives for fuel efficient vehicles to be included in the CBD parking policy currently being developed”*.

The City is introducing paid parking within the Joondalup City Centre as a means of regulating parking use and to provide additional revenue for the provision of future parking facilities as demand requires.

The introduction of paid parking is an important step in managing transport in the City of Joondalup. Creating a cost for parking increases the cost of the journey for visitors and commuters to the City Centre and creates an incentive for people to use alternative transport to the City Centre.

With the Joondalup train station nearby, a free bus service (Joondalup CAT) and numerous cycling routes leading to the City Centre, opportunities for using alternative transport are high.

DETAILS

There are several options for introducing incentives within the CBD parking policy for fuel efficient vehicles. These options and the potential for their implementation are detailed below, however, consideration is still required as to what would be classified as a fuel efficient vehicle i.e. 2 cylinder or 4 cylinder vehicles, LPG, bio diesel and hybrid vehicles.

Issues and options considered:

Option 1: Restrict inefficient vehicles from parking in the City Centre

As part of the parking policy inefficient vehicles could be restricted from parking in the City Centre. This would not only be difficult and expensive to administer and monitor

but would, most likely, be highly unpopular with many members of the public. This option is not recommended.

Option 2: Lower parking rate for fuel efficient vehicles

The CBD parking policy will utilise differential parking rates for short term parking and long term parking. It is also possible to utilise differential parking rates for different vehicles dependent on their fuel efficiency.

The benefit of this is that it would create a financial incentive for people who park in Joondalup City Centre to have more fuel efficient vehicles. However, given that the proposed parking rates are quite low, this financial incentive may not be high enough to make a significant difference (even if fuel efficient vehicles were given a discount of 50%).

There are a number of difficulties with this option. Firstly, there could be confusion from the public when purchasing their ticket as to whether the vehicle is a 'fuel efficient' vehicle or not. Clear information would have to be given to the public at the time of purchasing the ticket as to what vehicles are considered fuel efficient.

Secondly, Parking Officers who are providing infringements would have to be able to identify what vehicles are fuel efficient. In some instances this may be difficult particularly for LPG or bio diesel vehicles.

Thirdly, due to long lead times, parking machines have already been purchased for the CBD area. Consequently, it is not possible at this stage to change the type and value of parking rates. One way to overcome this would be to provide 'refunds' to people on presentation of their ticket and proof of the fuel efficiency of their vehicle. This would require a fair amount of inefficient administrative work as people would have to provide 'proof' that their vehicle is fuel efficient. Such a proposal would also be expensive.

Option 3: Free parking for fuel efficient vehicles

Given the difficulty with providing differential parking rates, an alternative is to make fuel efficient vehicles exempt from parking fees. Depending on the scope of what is designated as a fuel efficient vehicle, this could result in a considerable loss in revenue for the City. It would also require a high degree of enforcement to ensure it is not taken advantage of. Rangers would need to be able to clearly identify what is classed as a fuel efficient vehicle.

One way to overcome this would be to define what a fuel efficient vehicle is and invite residents to apply for a sticker that they could place on the vehicle identifying it as a fuel efficient vehicle. They could then park for free and the Ranger will be able to identify that they are exempt from parking fees. However this would not work for people who drive fuel efficient vehicles but were only occasional visitors to the City as they are unlikely to apply for a sticker in advance. Thus it would only work for regular visitors with fuel efficient cars who applied for the sticker.

While this option is likely to be highly popular with those who have fuel efficient vehicles, those who do not currently have fuel efficient vehicles may consider it unfair. It could even be considered inequitable for lower income earners who cannot afford vehicle models that are more likely to be fuel efficient.

For someone who commutes to Joondalup every day for work (230 days per year) and was to pay \$3 per day for parking the saving in parking fees would be \$690. This may not be enough to encourage someone to purchase a different vehicle unless they were already considering it.

Option 4: High priority parking for fuel efficient vehicles

Rather than altering the parking rates, an alternative incentive is to reserve high priority parking spaces for fuel efficient vehicles, similar to how shopping centres have recently started reserving high priority parking spaces for mothers with prams.

This option will provide a reward for those who have fuel efficient vehicles and as demand for parking in the City Centre grows, the value of these high priority bays will grow and create more and more of an incentive.

These bays would have to be clearly identified and information would have to be provided as to what types of vehicles are allowed to park there. Again, Rangers who are providing infringements would have to be able to identify what vehicles are fuel efficient. If the bays are not monitored and enforced effectively it is likely that they will be used inappropriately and their ability to provide an incentive will be negligible.

Link to Strategic Plan:

Key Focus Area	Natural Environment
Strategy 2.2.4	The City will promote and support sustainable transport opportunities.

Key Focus Area	Economic Prosperity and Growth
Strategy 4.1.4	The City implements its CBD Parking Strategy

Legislation – Statutory Provisions:

Not Applicable.

Risk Management considerations:

There is the risk that the City could marginalise low income earners who cannot afford fuel efficient vehicles.

Financial/Budget Implications:

If financial incentives are included in the CBD parking policy the amount of revenue collected through parking fees may be reduced. This would be dependant on the type and value of incentives offered.

Policy implications:

If fuel efficiency incentives are to be pursued it would need to be included in the CBD parking policy.

Regional Significance:

Not Applicable.

Sustainability implications:

The introduction of incentives for fuel efficient vehicles, if effective, could lead to a reduction in greenhouse gases by encouraging people to move towards more fuel efficient vehicles.

Consultation:

Not Applicable.

COMMENT

The introduction of incentives for fuel efficient vehicles is likely to be expensive as well as administratively difficult to deliver and enforce. The incentives are unlikely to be significant enough to encourage people to change their vehicle type; however, it would provide a reward to those who are already utilising fuel efficient vehicles as their main source of transport.

The introduction of incentives may create some positive publicity for the City and show that it is genuinely trying to create positive environmental outcomes. However it may also be unpopular with the majority of the community that do not have fuel efficient vehicles and may feel that they are being unfairly targeted.

ATTACHMENTS

Not Applicable.

VOTING REQUIREMENTS

Simple Majority.

RECOMMENDATION

That the Sustainability Advisory Committee NOTES that due to administrative difficulties with delivery and enforcement that no incentives are included in the CBD parking policy at this time.

**APPENDICES FOR AGENDA OF
SUSTAINABILITY ADVISORY COMMITTEE**

ITEM	TITLE	APPENDIX	PAGE
Item 2	Replacement of Mercury Vapour lamps with energy efficient lamps as part of the maintenance cycle [59091]	1	1