WESTERN AUSTRALIAN
LOCAL GOVERNMENT ASSOCIATION

WALGA Submission on the Draft Design Guidelines for Collection and Storage Facilities for Household Chemical Waste at Landfills and Solid Waste Depots

Status of this submission

This submission has been prepared through the Municipal Waste Advisory Council (MWAC) for the Western Australian Local Government Association (the Association). The Municipal Waste Advisory Council is a standing committee of the WA Local Government Association with delegated authority to represent the Association in all matters relating to solid waste management.

To develop this submission MWAC, on behalf of the Association, conducted a faxback survey of all 144 Western Australian Local Governments. The survey assessed how many Local Governments currently provide a Household Chemical Waste (HCW) collection service and the level at which that service provided. A collated summary of the survey results are provided in Appendix 1 of the submission. In addition, MWAC held a workshop to elicit direct feedback on the Guidelines. The workshop was attended by 29 Local Government representatives (20 metropolitan and 9 non-metropolitan) and 7 Regional Government representatives.

Summary

Nearly 80% of Local Governments (112 of 144) across the State responded to the faxback survey. Results demonstrated that the range of household chemical waste (HCW) services offered by Local Governments varied considerably between districts. Responses ranged from no-service at all; to basic drop-off areas; to specialised collections and storage areas. However, of the respondents, only slightly less than half (48.21%) indicated that they offered at least some kind of HCW collection service for residents. In the vast majority of cases (77.78%), the service offered consisted of drop-off facilities at a landfill or transfer station. Most stored collected chemicals on-site and relied on programs such as 'Chemclear' and 'drumMUSTER' for eventual disposal. It is worth noting for the purposes of the report that some of these facilities are likely to be very rudimentary; being described once as 'a garden shed out the back'.

This submission is divided into two parts. The first part makes general comments regarding the Guidelines. The discussions at the workshop and, in particular, the results of the survey have been the key drivers of this part of the submission. It is primarily directed at the potential impact of the Guidelines on Local Government's role as a community service provider in providing a collection service. The second part of the submission addresses specific comments raised at the workshop on technical aspects of the Guidelines.

Submission Recommendations

Recommendation 1: *That the Guidelines incorporate site specific management guidance to enable practical considerations to be taken into account in meeting the principles of the Guidelines.*

Recommendation 2: *A strategy be developed to sit alongside the Guidelines to encourage their implementation and to provide a support mechanism. The strategy should–*

a. *Identify, as a part of a wider waste management strategy, regions where new HCW facilities are required or existing HCW require improvements.*
b. *Provide State Government funds for the upgrading or development of HCW facilities in the short-term;*
c. *Incorporate an education programme to teach the public about the correct disposal of HCW and to reduce the amount of HCW produced; and*
d. *Liaise with Local Government and industry to further develop EPR schemes (such as Chemclear and drumMUSTER) that assist in meeting the cost of HCW management and education programmes and ensures appropriate avenues for HCW disposal are provided.*

Recommendation 3: *The purpose of the document be amended to incorporate safe disposal or safe reuse.*

Recommendation 4: *The title be amended to ensure any facility collecting and storing HCW for disposal or reuse is incorporated under the Guidelines.*

Recommendation 5: *The Guidelines be amended to incorporate guidance for the collection and storage of all household hazardous waste.*

Recommendation 6: *The criteria used for guiding site selection be outcome focused and enable risk-based rather than prescriptive assessment.*

Recommendation 7: *The following changes are recommended to the Building and Facility Layout Guidelines –*

7.1. ***Building materials –*** *The doorways, and select walls, should be mesh to allow fire control from outside the building. Impervious materials should be used where it is necessary to maintain separation distances.*

7.2. ***Doorways –*** *Separate in and out doorways should be built into all facilities.*

7.3. ***Ventilation –*** *The ventilation guidance is fairly complicated. It is recommended it be simplified by providing a simple calculation on upper and lower vents required per metre squared of floor space.*

7.4 ***Containment -*** *The bunding guidance is overcomplicated and difficult to follow. The Guidelines are focused on temporary storage facilities at which the largest package can only be 20 litres or 20kg. This is considered a negligible amount when calculating the overall spillage containment capacity required for a facility. As such, it is recommended that the Guidelines be simplified to say that the spillage containment capacity should be at least 25% of the storage capacity of the*

facility. Expert opinion should be obtained to ensure 25% is sufficient to contain both spilled chemicals and the potential addition of water resulting from fire control.

7.5 ***Electrical wiring and fixtures –*** *For the purposes of fire safety, it is recommended that, if possible, no internal lighting should be used in the store. Sky lights are recommended as a preferable option. In instances where electricity use is unavoidable, such as on an alarm system, it is recommended that all wiring and switches are intrinsic. Further, no vehicle should be allowed to enter the store unless all wiring and switches are intrinsic. It is believed that currently no electrical forklift or pallet mover in use at a HCW storage facility in WA is able to meet that criterion.*

7.6 ***Compatibility of wastes –****Further guidance should be provided to indicate the preferred way in which chemicals should be separated.*

7.7 ***Separation of chemicals –*** *It is unclear if the bunding requirements for each individual storage area are in addition to the bunding requirements outlined under section 3.5 Containment. If so, then bunding would be required for each separate area, around the facility storage area generally and around the perimeter of the compound. Three separate containment mechanisms seem excessive and it is recommended that the level of bunding required be clarified.*

7.8 ***Separation of chemicals –*** *It is recommended that further guidance be provided on the drainage and treatment of spilled chemicals. It is considered that these are a major hazard and should be treated as such. The layout diagram in the Guidelines currently shows spilled wastes draining towards the public area. This is probably just an oversight, but demonstrates greater consideration should be given to this section of the Guidelines.*

7.9 ***Shelving –****It is recommended that a requirement be added to ensure shelving is set out so that all stored chemical containers are clearly visible.*

Recommendation 8: *Additional guidance should be provided to assist operators in scaling building specifications up or down to suit the expected types and quantities of HCW to be stored.*

Recommendation 9: *That the Guidelines incorporate site specific management guidance to enable risks to be minimised where practical considerations prevent the Guidelines being met in full.*

Recommendation 10: *That the Guidelines on signs and labels be focused on meeting the three specific outcomes of a safe working environment for staff; practical guidance for emergency services; and a safe environment for the public.*

Recommendation 11: *That the Guidelines recommend the use of automatically updated MSDSs databases and provide information on where such databases can be obtained.*

Recommendation 12: *That the Guidelines state redistribution of HCW to the general public is not recommended and that no HCW be redistributed for any purpose without prior testing.*

Part 1: Enabling Local Government's Role as a Community Service Provider

The introduction to the Guidelines states that 'the safe disposal of leftover chemicals…is a problem' in that HCW is likely to be accumulated in the home or disposed of inappropriately. Chemical collection services offered by Local Governments currently represent the only safe disposal alternative for most types of HCW in Western Australia. As such, the Association considers that the key purpose of the Guidelines should be to provide the necessary tools to enable Local Governments to continue to provide improved HCW services. However, care must be taken to ensure that the Guidelines are not so prescriptive as to deter Local Governments from offering this service to their community or to cease existing services.

Management-based guidance

Although it is understood that the Guidelines are not mandatory, their release will create a benchmark for the management of HCW collection and storage. The Association recognises the potential benefits of having management Guidelines with regard to improved safety and environmental protection. However, it is considered different facilities have vastly different management requirements depending on the type of service offered and the amount and types of materials dealt with.

As such, it is recommended that the Guidelines be amended so that they are more adaptable at a management level. That is, the Guidelines should be written in such a way that a small transfer station is as able (logistically and economically) to meet the safety benchmarks set as a large, high volume landfill. Under Section 2.2 'Buffers', the Guidelines suggest that separation distances be treated as a guide only, with actual distances being dependant on site specific factors. It is this type of facility-specific assessment that MWAC considers should be applied throughout the Guidelines.

It is considered that the principles on which the Guidelines are based should be upheld by any facility dealing with HCW. However, within those principles, greater flexibility should be provided through the inclusion of a 'Site Specific Management' section at the start of the document. This section should enable site specific considerations to be taken into account when applying the Guidelines; on the provision that the principles are maintained. Site specific management guidance should also be provided in each section of the Guidelines to maximise the flexibility of the advice. The first paragraph under section 4.0 'Facility Layout' provides a good, basic example of the type of management-based guidance that could be used to make the Guidelines more flexible and workable overall.

For example, a remote community may have just a single, unmanned transfer station capable of acting as a collection point for HCW in the district. Aspects of the Guidelines may be unobtainable; such as ensuring access to the site is restricted. However, guidance on overall site management should still be provided to assist in maximising safety were practicable. Although such a situation might not be ideal, providing the site is managed according to the principles of the Guidelines, it surely remains preferable to HCW being stockpiled in the home or dumped. Therefore, it is strongly considered that the Guidelines should be broadened to provide management guidance tools for HCW services at a range of levels rather than just a single ideal system.

Recommendation 1: *That the Guidelines incorporate site specific management guidance to enable practical considerations to be taken into account in meeting the principles of the Guidelines.*

Provision of Assistance

Given that the Guidelines are not mandatory, it is questioned how they will be effectively implemented. Although an implementation strategy would not sit within the Guidelines themselves, the Association considers it essential that a corresponding implementation strategy be outlined. With the current disparity of HCW services across the State, it is difficult to envisage the Guidelines being widely adopted without some driving mechanism. There is also concern that the wrong type of driver could lead to many Local Governments refusing to deal with HCW rather than adopting the Guidelines. This is probable if the Guidelines create a legal or financial liability for Local Government without providing a corresponding support mechanism.

The Association strongly recommends that funds be identified to encourage and assist the adoption of the Guidelines. In addition to State funding, it is considered that HCW is ideally suited to the use of extended producer responsibility (EPR) to help meet the costs of HCW management. HCW tends to be low volume but highly problematic and expensive to dispose of. As such, Local Government is limited in its ability to deal with HCW beyond providing safe storage. The State and, in particular, industry are responsible for ensuring that appropriate avenues exist for the disposal of stored HCW. This has been identified as a particular issue for rural local governments given the difficulty of transporting HCW. They have identified a general willingness to provide a collection service for residents providing they are assured the waste they collect will have a final disposal destination. Existing EPR schemes involving chemical disposal, such as 'Chemclear', 'drumMUSTER' and 'Paintback', have shown industry involvement to be an efficient and effective strategy.

Recommendation 2: *A strategy be developed to sit alongside the Guidelines to encourage their implementation and to provide a support mechanism. The strategy should–*

e. *Identify, as a part of a wider waste management strategy, regions where new HCW facilities are required or existing HCW require improvements.*
f. *Provide State Government funds for the upgrading or development of HCW facilities in the short-term;*
g. *Incorporate an education programme to teach the public about the correct disposal of HCW and to reduce the amount of HCW produced; and*
h. *Liaise with Local Government and industry to further develop EPR schemes (such as Chemclear and drumMUSTER) that assist in meeting the cost of HCW management and education programmes and ensures appropriate avenues for HCW disposal are provided.*

Part 2: Specific Comments on the Guidelines

Section 1.0 Introduction

1.1. Purpose – The purpose of the document is to provide guidance for designing or upgrading a 'facility for collecting and storing household chemical waste (HCW) for eventual safe disposal'. The Association supports this statement, with the clarification that it should be amended to include reuse; that is 'eventual safe disposal or reuse'. This would then incorporate schemes such as 'Paintback'.

It is also considered there may be some conflict with the title of the Guidelines; which limits the focus of the document to collection and storage at 'landfills and solid waste depots'. Although landfills and solid waste depots are currently the primary avenue for collection and storage of HCW, other facilities could be used. For instances retailers, such as Bunnings or rural farm-stores, could provide effective short-term collection and storage depots for their customers as a part of an EPR scheme. The Association considers that the Guidelines would be more effective in the long-term if the title incorporated any facility collecting and storing HCW for disposal or reuse.

1.3. Definitions –The overwhelming Local Government opinion is that the separation of household chemical waste (HCW) from household hazardous waste (HHW) for the purposes of the Guidelines causes unnecessary confusion. The definition seems to make a fairly arbitrary split; allowing certain products, such as car batteries, used medicines and fire extinguishes to possibly fall outside the Guidelines (although it is unclear where they would fall). A facility operator is clearly likely to store all HHW in a single facility as the management requirements for HHW remain the same, regardless of whether or not it falls under the definition HCW. As such, the Association considers that it would be reasonable, and far simpler, for the Guidelines to address all HHW rather than focusing solely on HCW. Notwithstanding this, the Association supports the split between HHW and dangerous goods. The legislation covering dangerous goods and their management differs from HHW and separate guidance is therefore clearly required.

Recommendation 3: *The purpose of the document be amended to incorporate safe disposal or safe reuse.*

Recommendation 4: *The title be amended to ensure any facility collecting and storing HCW for disposal or reuse is incorporated under the Guidelines.*

Recommendation 5: *The Guidelines be amended to incorporate guidance for the collection and storage of all household hazardous waste.*

Section 2.0. The Site

As discussed in Part 1 of the submission; the Association is concerned that the introduction of the Guidelines may lead to the (voluntary) closure of some HCW storage facilities. It is understood that the Guidelines are not mandatory and are only intended to 'provide useful information for organisations wishing to upgrade their existing…facilities'. Nevertheless, the Guidelines will create a benchmark for HCW facility management, and will therefore create a potential liability for facilities operating below that benchmark. There is a risk that Local Governments will choose to stop operating HCW collection and

storage facilities rather than facing the potential liability of a below benchmark facility or the cost of relocating a facility to bring it up to standard.

The Association considers that this situation could be effectively avoided if the criteria for evaluating a facility site were made more risk-based. The Guidelines for site-selection already do this to some degree. For example, in looking at proximity to surface water, the recommendation is a separation distance of 200 metres or, if closer, a careful consideration of the biophysical characteristics of the surrounding area.

However, it is considered that any inclusion of 'rule of thumb' figures creates unnecessary complications. Using the 'proximity to surface water' example again, the desired outcome of this guideline is to ensure run-off from the facility does not reach surface water. In practice, the 200 metres figure has little relevance to the achievement of this outcome. It is the biophysical characteristics of the site in combination with engineering works which will determine the appropriate distance to achieve the outcome. As such, it is considered that the site selection criteria would be far more relevant if they were made outcome-based with guidance focused on a risk-based assessment of relevant factors.

Recommendation 6: *The criteria used for guiding site selection be outcome focused and enable risk-based rather than prescriptive assessment.*

3.0. The Building and 4.0. The Facility Layout

Both these sections provide helpful reference points to guide the improvement or construction of a HCW facility. However, it is considered there are a number points on which the guidance is incorrect or could be improved upon. These recommendations are outlined in full under *Recommendation 7*.

In addition to these specific points, it is considered that the building specification and layout guidance would be more effective generally if it incorporated information on how to scale a building up or down according to the needs of the facility. Guidance is required, possibly through a template, to assist in estimating the likely types and quantities a facility is likely to receive. The guidance provided under Section 4.3 – Separation of Chemicals is oversimplified and insufficient to fulfil this purpose. Factors to take into account might include current and predicted population serviced, community demographics, major local industries and the availability of a ready disposal routes. This estimation could then be used to assist in predicting the overall capacity required for the facility and the individual capacities required for each chemical type. This prediction could then be used to estimate requirements for the building specifications throughout.

Recommendation 7: *The following changes are recommended to the Building and Facility Layout Guidelines –*

7.1. ***Building materials –*** *The doorways, and select walls, should be mesh to allow fire control from outside the building. Impervious materials should be used where it is necessary to maintain separation distances.*

7.2. ***Doorways –*** *Separate in and out doorways should be built into all facilities.*

7.3. ***Ventilation –*** *The ventilation guidance is fairly complicated. It is recommended it be simplified by providing a simple calculation on upper and lower vents required per metre squared of floor space.*

7.4 ***Containment -*** *The bunding guidance is overcomplicated and difficult to follow. The Guidelines are focused on temporary storage facilities at which the largest package can only be 20 litres or 20kg. This is considered a negligible amount when calculating the overall spillage containment capacity required for a facility. As such, it is recommended that the Guidelines be simplified to say that the spillage containment capacity should be at least 25% of the storage capacity of the facility. Expert opinion should be obtained to ensure 25% is sufficient to contain both spilled chemicals and the potential addition of water resulting from fire control.*

7.5 ***Electrical wiring and fixtures –*** *For the purposes of fire safety, it is recommended that, if possible, no internal lighting should be used in the store. Sky lights are recommended as a preferable option. In instances where electricity use is unavoidable, such as on an alarm system, it is recommended that all wiring and switches are intrinsic. Further, no vehicle should be allowed to enter the store unless all wiring and switches are intrinsic. It is believed that currently no forklift or pallet mover in use at a HCW storage facility in WA is able to meet that criterion.*

7.6 ***Compatibility of wastes –F****urther guidance should be provided to indicate the preferred way in which chemicals should be separated.*

7.7 ***Separation of chemicals –*** *It is unclear if the bunding requirements for each individual storage area are in addition to the bunding requirements outlined under section 3.5 Containment. If so, then bunding would be required for each separate area, around the facility storage area generally and around the perimeter of the compound. Three separate containment mechanisms seem excessive and it is recommended that the level of bunding required be clarified.*

7.8 ***Separation of chemicals –*** *It is recommended that further guidance be provided on the drainage and treatment of spilled chemicals. It is considered that these are a major hazard and should be treated as such. The layout diagram in the Guidelines currently shows spilled wastes draining towards the public area. This is probably just an oversight, but demonstrates greater consideration should be given to this section of the Guidelines.*

7.9 ***Shelving –****It is recommended that a requirement be added to ensure shelving is set out so that all stored chemical containers are clearly visible.*

Recommendation 8: *Additional guidance should be provided to assist operators in scaling building specifications up or down to suit the expected types and quantities of HCW to be stored.*

5.0 Security and Safety

The Association's primary concern with the guidance provided on security and safety relates to unmanned and remote sites. It is logistically not possible for such sites to meet all the standards set in the Guidelines. Many remote rural sites, for example, are off the grid and therefore cannot practically meet the requirement of having an alarm

system with an automatic connection to FESA. Further, unmanned sites are clearly unable to provide a secure, manned drop-off area. However, as discussed in more detail under Part 1 of the submission, encouraging such sites to provide a HCW service for their communities may still be preferable to the alternative options of chemicals being dumped unchecked into the landfill, illegal dumping or stockpiling. The Association recommends that the Guidelines on security and safety are made less prescriptive and more management-based. Guidance for an unmanned site could focus on minimising risks through, for example, ensuring the site is well-signed and clearly segregated, with individual storage containers provided for unknown chemicals; properly bunded and drained; and cleared as regularly as practicable with the HCW being moved to a secure storage shed. Notwithstanding this, the Association does acknowledge that the management questions raised by unmanned sites present issues that extend far beyond hazardous waste management.

It is also considered that the Guidelines on signs and labels could be improved by making the guidance more outcome-based. It is considered three main outcomes should be achieved through good signage design – a safe working environment for staff; practical guidance for emergency services; and a safe environment for the public. It is recommended that this section of the Guidelines be re-written with reference to meeting these outcomes. That is, what types of signs are required and where should they be placed to ensure these outcomes are met? For example, it is considered that, for both worker and emergency services safety, signage indicating where different chemicals are stored should be easily identifiable at distance from both inside and outside the building.

Recommendation 9: *That the Guidelines incorporate site specific management guidance to enable risks to be minimised where practical considerations prevent the Guidelines being met in full.*

Recommendation 10: *That the Guidelines on signs and labels be focused on meeting the three specific outcomes of a safe working environment for staff; practical guidance for emergency services; and a safe environment for the public.*

6.0 Record keeping

The Association has been advised that there are a number of manufacturer databases available that provide constantly updated material safety data sheet (MSDS) information. It is recommended that the Guidelines should provide guidance on where such databases can be obtained. Guidance may also be required on the cost of purchasing and updating such databases. If this cost is significant, financial assistance from the State may have to be identified to assist in the purchase. However, it is considered that using a database with automatic updates should be recommended over-and-above obtaining physical MSDSs, as these become out of date more easily.

Recommendation 11: *That the Guidelines recommend the use of automatically updated MSDSs databases and provide information on where such databases can be obtained.*

7.0 Material Redistribution to the Public

The overwhelming majority of Local Government is of the opinion that HCW should not be redistributed to the public. It is considered that this creates an unnecessary liability; as it is not possible to be absolutely sure a product has not been tampered with.

Some Local Governments currently reuse HCW internally for use in district projects or may allow industrial reuse if they have a large quantity of a chemical. This system is considered far preferable to public redistribution as it allows far greater assurance that the HCW will be used appropriately with adequate safety provisions. However, even in this instance, it is recommended that the HCW should be tested by a chemical laboratory before reuse is allowed.

Recommendation 12: *That the Guidelines state redistribution of HCW to the general public is not recommended and that no HCW be redistributed for any purpose without prior testing.*

Appendix 1: Collated Results of Local Government Household Chemical Waste Services Survey

Of the 144 Local Governments surveyed:

Number of respondents	112	77.78%

Of the 112 respondents to the survey:

Number providing no service	58	51.79%
Number providing a service	54	48.21%

Of the 54 respondents* providing a service:

Number providing a collection service from residences	5	9.26%	
Number providing a drop-off service at a landfill or transfer station	42	77.78%	Drop-off facilities varied greatly. Some only collected only oil or drumMuster drums. Others collected everything and most ranged in-between.
Number proving a collection day	10	17.24%	
Number providing a different type of collection service	10	18.52%	

*** Some respondents indicated they provided more than 1 type of service.**

Of the 54 respondents* providing a service:

Number storing HCW in on-site facility	29	53.70%	
Number transferring HCW to different storage facility	13	24.07%	Redhill and Tamala Park were the most common sites to receive transferred waste.
Number landfilling HCW	11	20.37%	
Number providing a different disposal method	19	35.19%	Programmes such as Chemclear and drumMUSTER and collection by recyclers were the most common alternative disposal options.

*** Some respondents indicated they used more than 1 disposal method, depending on the chemical.**