

Our reference  
MM/AN/AUST20742-9111600

Bourke Place  
600 Bourke Street Melbourne VIC 3000  
GPO Box 9925 Melbourne VIC 3001  
Tel +61 3 9672 3000  
Fax +61 3 9672 3010  
[www.corrs.com.au](http://www.corrs.com.au)

**CORRS  
CHAMBERS  
WESTGARTH**  
lawyers

Sydney  
Melbourne  
Brisbane  
Perth

29 June 2015

**By Email**

Dr Richard Chadwick  
General Manager, Adjudication Branch  
Australian Competition and Consumer Commission  
Level 35, The Tower  
360 Elizabeth Street  
MELBOURNE VIC 3000

**Contact**  
Alistair Newton (03) 9672 3483  
Email: [alistair.newton@corrs.com.au](mailto:alistair.newton@corrs.com.au)

**Partner**  
Mark McCowan

Dear Dr Chadwick

**National Paint Product Stewardship Scheme – application for authorisation**

We act for the Australian Paint Manufacturers' Federation Inc. (**APMF**).

APMF seeks authorisation on behalf of itself, Paint Stewardship Limited (**PSL**) and certain paint manufacturers/importers to apply a levy of up to \$0.15 per litre (plus GST) to certain architectural and decorative paint and woodcare products (together, **A&D paints**).

Proceeds from the levy are to be remitted to PSL to fund a National Paint Product Stewardship Scheme to provide a nationally co-ordinated approach to the collection and proper disposal of waste A&D paints.

The following are **attached**:

1. a Form B application for authorisation; and
2. public and confidential versions of the Annexure A to which the Form B refers (a confidential version of Annexure A is provided because one of its attachments is confidential; there are no redactions to Annexure A itself).

The prescribed lodgement fee of \$7,500.00 will be paid via EFT shortly.

Yours faithfully  
**Corrs Chambers Westgarth**



**Mark McCowan**  
Partner  
**attachments.**

## Form B

Commonwealth of Australia

*Competition and Consumer Act 2010 — subsections 88 (1A) and (1)*

### **AGREEMENTS AFFECTING COMPETITION OR INCORPORATING RELATED CARTEL PROVISIONS: APPLICATION FOR AUTHORISATION**

To the Australian Competition and Consumer Commission:

Application is hereby made under subsection(s) 88 (1A)/88 (1) of the *Competition and Consumer Act 2010* for an authorisation:

- to make a contact or arrangement, or arrive at an understanding, a provision of which would be, or might be, a cartel provision within the meaning of Division 1 of Part IV of the Act (other than a provision which would also be, or might also be, an exclusionary provision within the meaning of section 45 of that Act).
- to give effect to a provision of a contract, arrangement or understanding that is, or may be, a cartel provision within the meaning of Division 1 of Part IV of that Act (other than a provision which is also, or may also be, an exclusionary provision within the meaning of section 45 of that Act).
- to make a contract or arrangement, or arrive at an understanding, a provision of which would have the purpose, or would or might have the effect, of substantially lessening competition within the meaning of section 45 of that Act.
- to give effect to a provision of a contract, arrangement or understanding which provision has the purpose, or has or may have the effect, of substantially lessening competition within the meaning of section 45 of the Act.

*(Strike out whichever is not applicable)*

PLEASE FOLLOW DIRECTIONS ON BACK OF THIS FORM

#### **1. Applicant**

**(a) Name of Applicant:**  
*(Refer to direction 2)*

A91504

The Australian Paint Manufacturers' Federation Inc. (**APMF**) on behalf of itself, Paint Stewardship Limited (**PSL**) and certain paint manufacturers/importers.

**(b) Short description of business carried on by applicant:**  
*(Refer to direction 3)*

The APMF is an industry association that represents manufacturers of architectural and decorative (**A&D**) paint in Australia. The APMF's core activities include:

- creating industry guidelines to ensure the safety and well-being of member employees and consumers;
- educating the wider community on its members' products, technologies and environmental issues;

- reviewing legislation and tracking global trends that may impact the industry; and
- collecting and providing market data and information to members and other industry stakeholders.

PSL's main functions will be to:

- implement a National Paint Product Stewardship Scheme (**Scheme**) by receiving funds raised from a proposed levy of up to \$0.15 per litre (plus GST) on the sale of A&D paints and contracting with State and local governments and waste service providers for the collection and safe disposal of waste A&D paint;
- promote education, awareness and information activities for the Scheme;
- monitor, audit and report on the development of the Scheme; and
- administer a substantial program of research into new end-of-life uses for waste A&D paint and collection processes.

Manufacturers/importers proposing to participate in the Scheme supply A&D paint on a wholesale basis to retailers (who re-supply to domestic and trade customers) and, through company-owned trade centres, on a retail basis direct to trade customers. The proposed levy is to be applied by participating manufacturers/importers to these wholesale and retail supplies.

**(c) Address in Australia for service of documents on the applicant:**

Australian Paint Manufacturers' Federation Inc

Suite 604, Level 6, 51 Rawson Street

Epping NSW 2121

Attention: Richard Phillips, Executive Director

Email: [richard.phillips@apmf.asn.au](mailto:richard.phillips@apmf.asn.au)

**2. Contract, arrangement or understanding**

- (a) Description of the contract, arrangement or understanding, whether proposed or actual, for which authorisation is sought:**  
*(Refer to direction 4)*

Please refer to **Annexure A** for a detailed description of the Scheme and its elements (including the proposed levy).

- (b) Description of those provisions of the contract, arrangement or understanding described at 2(a) that are, or would or might be, cartel provisions, or that do, or would or might, have the effect of substantially lessening competition:**  
*(Refer to direction 4)*

Please refer to **Annexure A**.

- (c) **Description of the goods or services to which the contract, arrangement or understanding (whether proposed or actual) relate:**

Please refer to **Annexure A** for a list of A&D paint products that are proposed to fall within the Scheme (and to which the proposed levy would be applied).

- (d) **The term for which authorisation of the contract, arrangement or understanding (whether proposed or actual) is being sought and grounds supporting this period of authorisation:**

Authorisation is sought until 1 June 2021. This approximate six-year period comprises:

- a period for the completion of the planning and negotiation process (it is currently proposed that the Scheme will be launched by around May 2016); and
- a five-year term during which the proposed Scheme would be operational.

### **3. Parties to the proposed arrangement**

- (a) **Names, addresses and descriptions of business carried on by other parties or proposed parties to the contract or proposed contract, arrangement or understanding:**

Please refer to **Annexure A**.

- (b) **Names, addresses and descriptions of business carried on by parties and other persons on whose behalf this application is made:**  
*(Refer to direction 5)*

Please refer to **Annexure A**.

### **4. Public benefit claims**

- (a) **Arguments in support of authorisation:**  
*(Refer to direction 6)*

The proposed Scheme will have substantial public benefits, including environmental benefits associated with increasing the volume of waste A&D paint and containers that are returned for proper disposal, and thereby diverting waste A&D paint from landfills, sewers and stormwater infrastructure. Other public benefits include public health and efficiency benefits.

Please refer to **Annexure A** for further details.

- (b) **Facts and evidence relied upon in support of these claims:**

Please refer to **Annexure A**.

**5. Market definition**

**Provide a description of the market(s) in which the goods or services described at 2 (c) are supplied or acquired and other affected markets including: significant suppliers and acquirers; substitutes available for the relevant goods or services; any restriction on the supply or acquisition of the relevant goods or services (for example geographic or legal restrictions):**

*(Refer to direction 7)*

Please refer to **Annexure A**.

**6. Public detriments**

- (a) Detriments to the public resulting or likely to result from the authorisation, in particular the likely effect of the contract, arrangement or understanding, on the prices of the goods or services described at 2 (c) and the prices of goods or services in other affected markets:**

*(Refer to direction 8)*

The proposed Scheme will have very limited public detriments, including for the reasons that:

- the proposed levy will represent a very low proportion of wholesale and retail prices for A&D paint; and
- beyond the proposed levy, there will be no broader agreement about wholesale or retail prices (which will continue to be set absolutely independently).

Please refer to **Annexure A** for further details.

- (b) Facts and evidence relevant to these detriments:**

Please refer to **Annexure A**.

**7. Contract, arrangements or understandings in similar terms**

**This application for authorisation may also be expressed to be made in relation to other contracts, arrangements or understandings or proposed contracts, arrangements or understandings, that are or will be in similar terms to the abovementioned contract, arrangement or understanding.**

- (a) Is this application to be so expressed?**

No

- (b) If so, the following information is to be furnished:**

- (i) description of any variations between the contract, arrangement or understanding for which authorisation is sought and those contracts, arrangements or understandings that are stated to be in similar terms:**

*(Refer to direction 9)*

N/A

- (ii) Where the parties to the similar term contract(s) are known — names, addresses and descriptions of business carried on by those other parties:**

N/A

- (iii) **Where the parties to the similar term contract(s) are not known — description of the class of business carried on by those possible parties:**

N/A

**8. Joint Ventures**

- (a) **Does this application deal with a matter relating to a joint venture (See section 4J of the *Competition and Consumer Act 2010*)?**

No

- (b) **If so, are any other applications being made simultaneously with this application in relation to that joint venture?**

N/A

- (c) **If so, by whom or on whose behalf are those other applications being made?**

N/A

**9. Further information**

- (a) **Name and address of person authorised by the applicant to provide additional information in relation to this application:**

Australian Paint Manufacturers' Federation Inc

Suite 604, Level 6, 51 Rawson Street

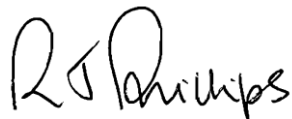
Epping NSW 2121

Attention: Richard Phillips, Executive Director

Email: [richard.phillips@apmf.asn.au](mailto:richard.phillips@apmf.asn.au)

Dated 29 June 2015

Signed by/on behalf of the applicant



.....  
(Signature)

**Richard Phillips**

(Full Name)

**Australian Paint Manufacturers' Federation Inc**

(Organisation)

**Executive Director**

(Position in Organisation)

## DIRECTIONS

1. Use Form A if the contract, arrangement or understanding includes a provision which is, or might be, a cartel provision and which is also, or might also be, an exclusionary provision. Use Form B if the contract, arrangement or understanding includes a provision which is, or might be, a cartel provision or a provision which would have the purpose, or would or might have the effect, of substantially lessening competition. It may be necessary to use both forms for the same contract, arrangement or understanding.

In lodging this form, applicants must include all information, including supporting evidence that they wish the Commission to take into account in assessing the application for authorisation.

Where there is insufficient space on this form to furnish the required information, the information is to be shown on separate sheets, numbered consecutively and signed by or on behalf of the applicant.

2. Where the application is made by or on behalf of a corporation, the name of the corporation is to be inserted in item 1 (a), not the name of the person signing the application and the application is to be signed by a person authorised by the corporation to do so.
3. Describe that part of the applicant's business relating to the subject matter of the contract, arrangement or understanding in respect of which the application is made.
4. Provide details of the contract, arrangement or understanding (whether proposed or actual) in respect of which the authorisation is sought. Provide details of those provisions of the contract, arrangement or understanding that are, or would or might be, cartel provisions. Provide details of those provisions of the contract, arrangement or understanding that do, or would or might, substantially lessen competition.

In providing these details:

- (a) to the extent that any of the details have been reduced to writing — provide a true copy of the writing; and
  - (b) to the extent that of any of the details have not been reduced to writing — provide a full and correct description of the particulars that have not been reduced to writing.
5. Where authorisation is sought on behalf of other parties provide details of each of those parties including names, addresses, descriptions of the business activities engaged in relating to the subject matter of the authorisation, and evidence of the party's consent to authorisation being sought on their behalf.
  6. Provide details of those public benefits claimed to result or to be likely to result from the proposed contract, arrangement or understanding including quantification of those benefits where possible.
  7. Provide details of the market(s) likely to be effected by the contract, arrangement or understanding, in particular having regard to goods or services that may be substitutes for the good or service that is the subject matter of the authorisation.
  8. Provide details of the detriments to the public which may result from the proposed contract, arrangement or understanding including quantification of those detriments where possible.
  9. Where the application is made also in respect of other contracts, arrangements or understandings, which are or will be in similar terms to the contract, arrangement or understanding referred to in item 2, furnish with the application details of the manner in which those contracts, arrangements or understandings vary in their terms from the contract, arrangements or understanding referred to in item 2.

## **Annexure A**

# **THE NATIONAL PAINT PRODUCT STEWARDSHIP SCHEME**

**Scope, Objectives and Impact Statement**

**29 June 2015**



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## **1 Introduction**

The Australian Paint Manufacturers' Federation Inc. (**APMF**) seeks authorisation on behalf of itself, Paint Stewardship Limited (**PSL**) and certain paint manufacturers/importers (together, the **Applicants**), to apply a levy of up to \$0.15 per litre (plus GST) to the cost of supply of certain architectural and decorative paint and woodcare products (together, **A&D paints**).

The proposed levy will fund a National Paint Product Stewardship Scheme (**Scheme**) to provide a nationally co-ordinated approach to the collection and proper disposal of A&D paints (in this context, 'product stewardship' refers to an approach under which participants in a supply chain (e.g. manufacturers, importers, wholesalers, retailers, consumers and waste managers) take responsibility for managing a product's lifecycle in a way that reduces its environmental and other impacts).

In addition to building upon existing disposal options for retail A&D paint users, the Scheme will, for the first time, provide an easily accessible and cost-effective disposal option for trade A&D paint users (such as builders and professional painters).

The proposed Scheme will have substantial public benefits, including:

- environmental benefits associated with increasing the volume of waste A&D paint and containers that are returned for proper disposal, and thereby diverting waste A&D paint from landfills, sewers and stormwater infrastructure;
- public health benefits associated with reducing the likelihood of waste A&D paint being stored in households or stockpiled in trade premises;
- removing the financial burden of managing waste A&D paint from State and local government;
- generating efficiencies by reducing operating costs; and
- generating further efficiency improvements by addressing an externality that arises in the supply of A&D paints (the costs of improper disposal of waste A&D paint are currently shared across the community (i.e. beyond its direct users) in a non-transparent way and the proposed levy seeks to transparently reflect disposal costs in the wholesale and retail prices of A&D paint).

Public detriments arising from the proposed Scheme are very limited, for reasons including that:

- beyond the proposed levy, there will be no broader agreement about wholesale or retail prices (which will continue to be set absolutely independently);
- at up to \$0.15 per litre (plus GST), the proposed levy represents as little as 0.75% of the typical wholesale price and even less of the average retail price of A&D paint, and accordingly the price impacts for retail and trade users are low; and
- the Applicants believe that the proposed levy is broadly aligned to the value that consumers are likely to place on the Scheme.

It is anticipated that the proposed levy and Scheme will commence around May 2016. Authorisation is sought until 1 June 2021 (allowing for a five-year operational term from around May 2016).

## **2 Confidentiality**

Attachments that have been highlighted in red contain confidential and commercially sensitive information. This information must not be disclosed to any third party without the express written consent of APMF. APMF consents to the disclosure of confidential information to: (i) the Australian Competition and Consumer Commission's (**ACCC**) external advisors and consultants on a confidential basis; (ii) if the ACCC is compelled to do so by law; or (iii) otherwise in accordance with section 155AAA of the *Competition and Consumer Act 2010*.

## 3 Background

### 3.1 Current waste streams and environmental issues

Significant volumes of waste A&D paint are currently stored or disposed of improperly. According to a 2014 study commissioned by the National Environment Protection Council Service Corporation and prepared by Nolan Consulting Pty Ltd (**Nolan Study** – see **Attachment 1**):

- on average, 7.2% (by weight) of A&D paint sold in Australia becomes waste;
- around half of waste A&D paint is disposed to landfill (3.2% by weight for retail and 4.0% by weight for trade); and
- further (relatively limited) volumes of A&D paint are illegally dumped into sewers and stormwater infrastructure (in the order of 100 tonnes per annum across the retail and trade channels).

The improper disposal of A&D paint poses environmental risks, including from contaminants that can seep into soil and water systems.

The Commonwealth Department of the Environment has recognised these risks, and the need to address them, in the context of its consideration of product stewardship arrangements. It has stated that: “[E]ffective management is required to increase the recovery of waste A&D paint in Australia and remove this product from the environment at end-of-life”.<sup>1</sup>

### 3.2 Existing waste management arrangements

Currently, the domestic waste A&D paint stream (e.g. waste originating from do-it-yourself painting within households) has been managed to varying degrees through State and Territory-funded “household hazardous chemical” (**HHC**) or “household hazardous waste” (**HHW**) collection programs. HHC/HHW programs typically involve waste collections at mobile and fixed drop-off points, paint/container separation processes and ultimately disposal through contracted service providers (for example, South Australia’s HHC program is contracted to Transpacific and relevant collection sites in Queensland are operated by various contractors including Transpacific, Toxfree and Remodis).

HHC/HHW programs in every State and Territory (except Tasmania) accept waste A&D paint from domestic sources. However, HHC/HHW programs generally do not accept trade waste A&D paint (i.e. waste originating from trade users). Where trade waste A&D paint is accepted, a fee is charged that creates a disincentive for trade users. For this reason, trade waste A&D paint is frequently stockpiled (sometimes for many years) and intermittently disposed to landfill. A six-month paint stewardship trial conducted in 2013 by APMF, in association with Sustainability Victoria, the Master Painters Association and ToxFree Solutions, confirmed that there are significant volumes of trade waste A&D paint that require a safe and accessible disposal program such as the Scheme (see **Attachment 2**, which contains a report of the results of the trial).

Further information concerning these programs is contained in Attachment 1 (pages 13 to 26) and the APMF’s *Economic Modelling for a Future Waste Paint Product Stewardship Scheme* (see **Confidential Attachment 3**).

### 3.3 Product stewardship legislation and policy

The waste A&D paint stream has been recognised by Commonwealth and State governments, including under the *Product Stewardship Act 2011* (Cth) (**Act**), which provides a legislative

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<sup>1</sup> See <http://www.environment.gov.au/protection/national-waste-policy/product-stewardship/projects/waste-paint>

framework for voluntary, co-regulatory (i.e. joint industry and government) and mandatory product stewardship arrangements.

In April 2013, Commonwealth, State and Territory Environment Ministers agreed to place waste A&D paint on the 2013/14 Council of Australian Governments (**COAG**) workplan for environmental project priorities, and the Commonwealth Minister for the Environment included waste A&D paint on a priority list under the Act for the development of stewardship arrangements.

In June 2013, the APMF and Sustainability Victoria (which has responsibility for waste A&D paint stewardship arrangements under the 2013/14 COAG workplan) recommended that governments support the development of a voluntary, industry-led scheme to be accredited under the Act. Following input from an industry workshop held in early September 2013, a National Paint Stewardship Working Group (**Working Group**) was established with representatives from government and industry (including the APMF).

Further information regarding the Act, and the processes undertaken so far to advance waste A&D paint product stewardship, is available at:

- <http://www.environment.gov.au/protection/national-waste-policy/product-stewardship/projects/waste-paint>; and
- <http://www.sustainability.vic.gov.au/paintstewardship>.

### **3.4 Previous ACCC authorisation**

In April 2011, the ACCC granted an authorisation for the APMF and A&D paint manufacturers to apply a \$0.02 per litre (plus GST) levy on the sale of A&D paint (through both the retail and trade channels) to fund a 12-month waste A&D paint collection and disposal trial in Victoria (authorisation A91251, referred to in this submission as the **2011 Determination**). The primary objective of the trial was to model a scheme in a single State prior to the development of a national scheme. Ultimately, however, the trial (including the \$0.02 per litre (plus GST) levy) did not proceed due to a lack of support from the supply chain (for example, there was a concern that while the levy was to be implemented nationally, trial collections and disposals were limited to a single State).

## **4 Parties and Scheme Elements**

### **4.1 APMF**

The APMF is an industry association that represents A&D paint manufacturers operating in Australia. Together, APMF members account for approximately 95% of paint (by volume) manufactured in Australia.

The APMF's core activities include:

- creating industry guidelines to ensure the safety and well-being of member employees and consumers;
- educating the wider community on its members' products, technologies and environmental issues;
- reviewing legislation and tracking global trends that may impact the industry; and
- collecting and providing market data and information to members and other industry stakeholders.

The APMF has taken a leading role in co-ordinating the industry's engagement with governments and other stakeholders (including A&D paint retailers) regarding product stewardship issues.

Further information about the APMF is available at <http://www.apmf.asn.au/>

## 4.2 Participating A&D paint manufacturers

The following members of the APMF currently propose to participate in the Scheme at launch:

- DuluxGroup (Australia) Pty Ltd (**DuluxGroup**);
- Valspar Paint (Australia) Pty Ltd (**Valspar**);
- PPG Industries Australia Pty Limited (**PPG**);
- Henry Haymes Proprietary Limited (**Haymes**); and
- Resene Paints (Australia) Limited (**Resene**).

These members supply A&D paint under the brands and trademarks listed in **Table 1** below and together account for approximately 90% (by volume) of all A&D paint supplied in Australia. They supply A&D paint on a wholesale basis to retailers (who re-supply to domestic and trade customers) and, through company-owned trade centres, on a retail basis direct to trade customers.

**Table 1 – Scheme participant brands**

COMPANY	BRAND(s)
<b>DuluxGroup</b>	Accent, Berger, British Paints, Cabots, Dulux, Feast Watson, Hadrian, Intergrain, Spring, Walpamur, Porters Paints
<b>Haymes</b>	Contractor, Haymes, Jennifer Bennel, Simply Woodcare
<b>PPG</b>	Bristol, Taubmans, White Knight Paints, Manor Hall, Pure Performance, Flood Australia
<b>Resene</b>	Resene
<b>Valspar</b>	Solagard, Solver, Watty, Estapol, Kill Rust, Pascol

The proposed Scheme will be open access in that other manufacturers/importers of A&D paint will be able to join (subject to their agreeing to the same terms as existing participants). Indeed, given that non-participating A&D paint manufacturers/importers will have a price advantage relative to Scheme participants (since they will not be obliged to apply the levy), it is in Scheme participants' interests for participation to be as broad as possible. For that reason, PSL will approach all relevant manufacturers/importers of A&D paint to seek their participation in the Scheme, and it will be an aim to have A&D manufacturers/importers accounting for 95% of A&D paint (by volume) sold in Australia as participants within the first two years of operation. Membership of the APMF will not be necessary to participate in the proposed Scheme.

Accordingly, authorisation is sought on behalf of current and future participating A&D paint manufacturers/importers (whether or not they are members of APMF).

## 4.3 PSL

The proposed Scheme will be operated by PSL. PSL will be constituted as a company limited by guarantee and governed by a board of directors. A draft of PSL's constitution is **Attachment 4** (please note that this draft is subject to final internal approval by the participating A&D paint manufacturers). PSL's main functions will be to:

- implement the Scheme by receiving the funds raised from the levy and contracting with State and local governments and waste service providers for the collection and safe disposal of waste A&D paint (largely using existing waste collection infrastructure);
- promote education, awareness and information activities for the Scheme;

- monitor, audit and report on the development of the Scheme; and
- administer a substantial program of research into new end-of-life uses for waste A&D paint and collection processes (for these purposes, PSL intends to establish an independent Research Advisory Committee made up of experts (e.g. researchers in the R&D, commercialisation, chemistry and waste management fields) to advise the board on priority areas, undertake robust assessments of any proposals and provide expert advice as required).

The five foundation members of PSL are proposed to be the participating A&D paint manufacturers, i.e. DuluxGroup, Haymes, PPG, Valspar and Resene or their successors. However, it will not be necessary for an A&D paint manufacturer/importer to be a member of PSL to participate in the Scheme.

PSL’s constitution will allow for board representatives as follows: up to two independent directors (one of whom must be appointed to the position of chairperson), one nominee director for each of the largest three remitters of levy funds, a further nominee director for another remitter of levy funds (as determined by the board), and up to two other directors from time to time.

The board of PSL will be responsible for determining arrangements for the administration of the Scheme, including the establishment of a small office led by a Chief Executive Officer.

#### **4.4 A&D paint retailers**

APMF envisages that Scheme participants will recommend to A&D paint retailers that they recover the cost of the levy by passing it through to customers in their retail prices. The Scheme has been developed with significant input from major A&D paint retailers such as Bunnings and Masters, and the Applicants expect that retailers will support the Scheme by following that recommendation. However, authorisation is not sought for any conduct that would amount to resale price maintenance, and there will be no agreement with retailers regarding the pass through of the levy.

The Scheme will also seek A&D paint retailers’ cooperation in promoting the Scheme at the point of sale with materials provided by PSL. Those materials will seek to increase retail and trade users’ awareness of the Scheme and their entitlement to dispose of waste A&D paint free of charge at Scheme collection points.

#### **4.5 Levied products**

The proposed levy will be applied to A&D paint products supplied in containers of between 1 and 20 litres. It is proposed to exempt small A&D paint containers of less than 1 litre from the levy due to the rounding difficulties associated with applying a fixed cents-per-litre levy to containers that are a fraction of a litre (although those containers will still be eligible for collection/disposal under the Scheme).

**Table 2** below shows in- and out-of-Scheme products. Generally, out-of-Scheme products are those that are sold into the industrial sector and have particular characteristics (for example, toxicity or corrosiveness) that preclude collection and disposal through the infrastructure proposed to be used to implement the Scheme.

**Table 2 – In-Scheme A&D paint and out-of-Scheme products**

<b>In-Scheme A&amp;D paint</b>	<b>Out-of-Scheme products</b>
<ul style="list-style-type: none"> <li>• Interior and exterior architectural paint – water and solvent based</li> <li>• Deck coatings and floor paints</li> <li>• Primers, undercoats and sealers</li> <li>• Stains and shellacs</li> </ul>	<ul style="list-style-type: none"> <li>• Industrial maintenance coatings</li> <li>• Original equipment manufacturer (e.g. car manufacturing) and industrial surface coating (shop application) paints and finishes</li> <li>• Aerosol paints</li> </ul>

In-Scheme A&D paint	Out-of-Scheme products
<ul style="list-style-type: none"> <li>Varnishes and urethanes (single component)</li> <li>Wood coatings (containing no pesticides)</li> </ul>	<ul style="list-style-type: none"> <li>Automotive paints</li> <li>Anti-fouling coatings</li> <li>Melamine, metal and rust preventative</li> <li>Caulking compounds, epoxies, glues or adhesives</li> <li>Colorants and tints</li> <li>Resins</li> <li>Paint thinners, mineral spirits or solvents</li> <li>Paint additives</li> <li>Roof patch or repair</li> <li>Tar-based or bitumen-based products</li> <li>2-component coatings</li> <li>Deck cleaners</li> <li>Traffic paints</li> <li>Texture coatings</li> <li>Bagged renders</li> <li>Isocyanates</li> <li>Metal Coatings</li> <li>Paint Washings</li> </ul>

#### 4.6 Waste A&D paint volumes to be collected

**Table 3** below sets out the tonnages of waste A&D paint that are expected to be collected and disposed of under the Scheme.

**Table 3 – Estimated waste A&D paint tonnages under the Scheme**

Period	Estimated Tonnages		
	Retail	Trade	Total
End Year 1 (June 2017)	4,209	2,736	6,945
End Year 2 (June 2018)	6,013	3,608	9,621
End Year 3 (June 2019)	6,405	3,202	9,607
End Year 4 (June 2020)	6,822	2,729	9,550
End Year 5 (June 2021)	7,265	2,180	9,445

These volumes represent a significant increase in collections/disposals relative to the volumes projected under existing HHC/HHW programs, both as a result of raising retail user awareness of waste A&D paint collections/disposals, and properly collecting and disposing of significant volumes of trade waste A&D paint for the first time.

The assumptions underlying the tonnage estimates in **Table 3** (e.g. expected collections and estimated per/KG disposal costs) are set out in **Confidential Attachment 3**. The APMF’s economic modelling suggests that a levy of \$0.15 per litre (plus GST) would be sufficient to cover the collection and proper disposal of the volumes in **Table 3** and would be unlikely to result in significant excess funds.

#### 4.7 Waste Paint Agreement

The participants’ obligations under the Scheme (including to impose the levy and remit the proceeds to PSL) will be contained in a Waste Paint Collection and Treatment Scheme Agreement (**Waste**



**Paint Agreement**), the terms of which will be conditional upon ACCC authorisation. A draft of the Waste Paint Agreement is **Attachment 5** (the Applicants anticipate that the final version will not be materially different from this draft).

The Waste Paint Agreement will provide, among other things, that:

- the levy will be up to \$0.15 per litre (plus GST) (the Applicants note that, under the Waste Paint Agreement, PSL's board can alter this amount, provided that it does not exceed the level approved by the ACCC);
- a confidential audit process will be implemented to ensure that each participant's levy contributions have been accurately calculated and paid to PSL;
- each participant must identify on customer invoices those products that incur the levy and the total amount of levy payable (unless a participant's IT and invoicing systems are not sophisticated enough to do so, in which case PSL may exempt a participant from this requirement) ; and
- new participants are able to join the Scheme provided that they are in the business of manufacturing and/or importing and selling A&D paint and agree to the terms of the Waste Paint Agreement.

#### **4.8 Scheme roll-out**

It is proposed that PSL will establish new, direct contractual arrangements with State and local governments and relevant waste service providers (i.e. parties currently contracted to State and local government for the operation of existing HHC/HHW programs) for the implementation of the Scheme on a region-by-region basis. That is, PSL will begin to fund the collection and disposal of waste A&D paint that is currently funded by State and local government.

Further, it is anticipated that the Scheme will involve the establishment of new fixed drop-off points and/or expanded mobile collection arrangements (e.g. in terms of geographic coverage or frequency) to improve the availability of waste A&D paint collection and disposal services.

It is anticipated that the Scheme will be implemented in three stages:

- Stage 1 is to involve the rollout of the new arrangements, through a combination of existing permanent sites and a mobile collection services program, in the capital cities and possibly some regional centres in the first 12 months.
- Stage 2 (years two and three) is to extend the Scheme to key regional cities and rural locations, with the aim of having 75% of the population within a suitable distance from a collection site (20km from a metro collection site for metro users and 40km from a regional site for regional users).
- Stage 3 (years four and five) is to further extend the Scheme, with the aim of having 85% of the population within a suitable distance from a collection site (as above).

#### **4.9 Communications and marketing**

The Applicants consider that, for the objectives of the Scheme to be met, it is critical that A&D paint user behaviours change such that greater volumes of waste A&D paint are collected and properly disposed of. It will therefore be important for the Scheme to be effectively communicated and marketed to users of A&D paint, particularly in the trade channel. Accordingly, a Communication and Marketing Plan will be developed to support the Scheme.

The key objectives of the Communication and Marketing Plan will be to raise retail and trade users' awareness of the Scheme and the need to dispose of waste A&D paint properly.

The Communication and Marketing Plan will seek to:

- establish a strong new brand to facilitate awareness and recognition of the Scheme and its participants;



- incorporate a Scheme logo on in-Scheme product labels;
- target promotion in trade media and to industry/trade associations;
- use mainstream advertising and digital media to promote Scheme awareness;
- undertake public relations activities to grow an understanding of the Scheme and the environmental and health issues it addresses;
- establish location-specific campaigns to promote collection sites and mobile collections;
- create point-of-sale materials (such as posters and brochures);
- establish online resources for retail and trade users to access and obtain information about the Scheme;
- create launch events for new sites; and
- measure its effectiveness through periodic market research into consumer awareness.

Key measures relating to the Communication and Marketing Plan have been included in the Scheme's performance measures (see section 8 below).

It is anticipated that in excess of 15% of PSL's budget will be devoted to activities under the Communication and Marketing Plan, which the Applicants believe is a large proportion relative to similar stewardship schemes. The Applicants submit that this level of spending is appropriate given the need to establish a new brand and reach a broad and geographically spread target audience.

## **5 Period for which authorisation is sought**

Authorisation is sought until 1 June 2021. This approximate six-year period comprises:

- a period for the completion of the planning and negotiation process (noting that it is currently proposed that the Scheme will be launched by around May 2016); and
- a five-year term during which the proposed levy and Scheme would be operational.

## **6 Relevant areas of competition**

In its 2011 Determination, the ACCC noted that the then-proposed levy and trial scheme would impact on:

- the wholesale and retail supply of A&D paints; and
- the provision of waste A&D paint disposal and recycling services.

The Applicants submit that these are the relevant areas of competition for the ACCC's assessment of the current application for authorisation.

## **7 Counterfactual**

In its 2011 Determination, the ACCC concluded that, in the absence of a levy and scheme coordinated amongst paint manufacturers:

- a single paint manufacturer is unlikely to unilaterally impose a levy to fund a scheme (since that would place them at a price disadvantage) and, even if they did, the resulting scheme would focus narrowly on the collection and disposal of A&D paint produced only by that single paint manufacturer;
- the various HHW/HHC programs would continue in their present form; and
- significant volumes of waste A&D paint would continue to be improperly stored and disposed of.

The Applicants submit that these conclusions apply equally in respect of the current proposals. In short, the various public benefits set out in section 8 below would not eventuate.

## **8 Significant public benefits**

The Applicants submit that the proposed Scheme will result in significant public benefits, including:

- environmental benefits associated with the diversion of waste A&D paint from landfill and sewer/stormwater infrastructure;
- additional public health benefits associated with a reduction in waste A&D paint being stored in households or stockpiled in trade premises in an inappropriate manner;
- benefits associated with removing the financial burden of waste A&D paint from State and local government; and
- efficiency benefits associated with the cost reductions and addressing externalities.

### **8.1 Environmental benefits**

The key environmental benefits of the Scheme will be to increase the volume of waste A&D paint that is returned for proper disposal and reduce the volume sent to landfill or sewer/stormwater infrastructure.

Those benefits will be achieved by:

- accepting trade waste A&D paint in substantial volumes for the first time and extending domestic and trade collection opportunities (for example, to Tasmania, where there is no existing waste A&D paint collection program);
- educating and encouraging retail and trade users to return waste A&D paint for collection and proper disposal; and
- new investments in research to identify more efficient methods for safely disposing of waste A&D paint and containers, and further opportunities for reuse.

### **8.2 Public health benefits**

The key public health benefit of the Scheme will be to minimise exposures to certain materials that exist in some paints (e.g. hexamethylene di-isocyanate). When exposure to these materials occurs in uncontrolled ways, like spillages resulting in contamination of stockpile storage sites, they have the potential to pose health risks (e.g. exacerbate respiratory conditions such as asthma).

### **8.3 Financial benefits for government**

Further public benefits will arise as a result of State and local governments being relieved of the financial burden of collecting and properly disposing of waste A&D paint. The costs avoided by government are likely to free up scarce funds for other public policies and objectives.

### **8.4 Efficiency benefits**

#### *Cost reductions*

Although the Applicants have not conducted any detailed analysis on the point, it is anticipated that there will be some cost savings associated with PSL's takeover of current State and local government responsibilities for procuring relevant waste services. These cost savings are likely to arise from, for example, an overall reduction in overheads and more favourable commercial terms associated with increased volumes and/or national purchasing arrangements.

#### *Externalities*

The ACCC has long recognised that public benefits can arise from addressing an externality. In this case, the externality being addressed is that wholesale and retail prices for A&D paint do not fully reflect the costs associated with managing the lifecycle of those products. In particular, prices do not reflect the significant environmental costs associated with improper storage and disposal.

Accordingly, the proposed levy and Scheme represent an improvement in efficiency in that they better signal to A&D paint manufacturers and users the true costs of their production and consumption.

### **8.5 Transparency and accountability**

To support the achievement of the public benefits described above, the performance of the Scheme will be monitored over time. It is proposed that PSL will track:

- user measures including Scheme awareness (recall of the Scheme's name and logo, user understandings and Scheme website traffic) and Scheme use (growth in patronage of collection points and total volumes collected per annum); and
- industry measures including accessibility (percentage of the population with access to a collection site within 20 km (metro), 40 km (regional)), the level of manufacturer/importer participation and increases in the volumes of properly disposed waste A&D paint.

These performance measures and related data requirements will be refined over time (with years one and two forming baseline data). This will improve participants' understanding of the Scheme's performance and inform decisions about the Scheme's strategic direction.

It is proposed that PSL will conduct and publicly release mid- (i.e. in year two or three) and full-term (i.e. towards the end of year five) Scheme reviews to inform stakeholders about the extent to which the objectives of the Scheme are being met, prior to seeking ACCC re-authorisation for the continuation of the Scheme beyond the initial six-year authorisation.

## **9 Limited public detriments**

The Applicants submit that the proposed levy and Scheme will result in very limited public detriments.

### **9.1 Wholesale and retail supply of A&D paints**

#### *No broader agreement as to wholesale or retail prices*

It is proposed that Scheme participants will agree the amount of the levy only, and will not enter into any arrangement about underlying wholesale or retail prices for A&D paint. Those prices will continue to be set absolutely independently by each Scheme participant (at the wholesale and retail (trade store) levels) and by A&D paint retailers.

Further, it is proposed that a PSL Board Charter will be formulated to guide the PSL board in its decision-making. That Charter will include, among other things:

- guidance as to the scope of the authorisation granted by the ACCC; and
- provisions and protocols relating to competition and consumer law compliance that will address the risks of inappropriate co-ordination (regarding, for example, pricing and information sharing).

#### *Limited levy impact on wholesale or retail prices*

The proposed levy will have a negligible impact on wholesale or retail prices, for the following reasons:

- the APMF estimates that the current typical wholesale price of a standard four litre container of A&D paint is in the range of \$20 to \$80. Applying a levy of \$0.15 per litre on a standard four-litre container would increase the wholesale price by only \$0.60, or as little as 0.75%, and likely no more than 3%;
- while Scheme participants will have no control over, and will not reach any agreement about, the retail price at which A&D paint is sold, it is expected that retailers will pass the levy on to their customers without an increase in margin. In that event, the impact of the levy at the retail

level will be lower still, since it represents a smaller proportion of the retail price than the wholesale price; and

- where A&D paint is supplied by Scheme participants direct to trade users, the levy will be imposed at the same level. Accordingly, the price impact is expected to be negligible in that context.

Further, the Applicants submit that the small increases in wholesale and retail prices proposed reflect an improvement in efficiency (for the reasons set out above) and so in principle should not be viewed as a detriment.

#### *Proposed levy aligned to user value*

Based on research completed in April 2014, the Applicants believe that the proposed levy is likely to be aligned to the value that users place on a national scheme to collect and properly dispose of waste A&D paint. A preliminary survey commissioned by Sustainability Victoria and conducted in Victorian hardware stores (such as Bunnings and Masters) found that respondents were generally supportive of a national paint stewardship scheme. Further, respondents were, on average, willing to pay a levy of \$2.06 on a standard four-litre container of A&D paint, and 67% were willing to pay \$1 or more (as noted above, the proposed levy would be, at most, \$0.60 per four litre container). While the sample size of 102 respondents is small (and for that reason the Applicants do not seek to rely on it on a national basis), the results of the survey nevertheless suggest that users are likely to see value in the Scheme and the proposed levy is broadly in line with user expectations. A copy of the report setting out the results of the survey is **Attachment 6**.

## **9.2 Waste A&D paint and container collection/disposal services**

Other than State and local government (which target the collection and disposal of domestic waste A&D paint), there are very few providers of waste A&D paint collection and disposal services direct to A&D paint users (for example, there is no widely-accessible network of cost-effective collection/disposal locations available to the trade).

The Applicants note, however, that State and local governments generally contract with service providers for the proper disposal of waste A&D paint collected at their facilities. It is anticipated that PSL will, in implementing the Scheme, seek to contract directly with many of these same service providers. To that extent, PSL will simply replace State and local governments as the main purchaser of relevant services.

As a result, the structure and operation of the market(s) for waste A&D paint collection and disposal services will be largely unaffected by the proposed Scheme.

## **10 Conclusion**

For the reasons set out above, the Applications submit that the significant public benefits of the proposed conduct will clearly outweigh the limited public detriments.

# Nolan Consulting Pty Ltd



## Study into stocks and flows, market analysis and processing capacity of waste paint

### Final Report

National Environment Protection Council Service  
Corporation



6 June 2014

A190-01



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## Abbreviations

A&D	Architectural and decorative
ABC	Adelaide Brighton Cement
ABS	Australian Bureau of Statistics
ACBPS	Australian Customs and Border Protection Service
ACCC	Australian Competition and Consumer Commission
ACT	Australian Capital Territory
APMF	Australian Paint Manufacturers Federation
C&I	Commercial and industrial
C&D	Construction and demolition
DECCW	NSW Department of Environment, Climate Change and Water
DFAT	Department of Foreign Affairs and Trade
DYH	Detox Your Home
GfK	Gesellschaft für Konsumforschung (market research company)
GlobalPSC	Global Product Stewardship Council
HDPE	High density polyethylene
HHW	Household hazardous waste
HHC	Household hazardous chemical
ICL	Independent Cement and Lime Group
Kg	Kilogram
L	Litre
MFA	Material flow analysis
MPA	Master Painters Association
MWAC	Municipal Waste Advisory Council of the West Australian Local Government Association
NSW	New South Wales
NIP&D	National Institute of Painting & Decorating
PP	Polypropylene
PPG	Pittsburgh Plate Glass ( a paint manufacturing company)
TCDs	Total collection days
WA DEC	West Australian Department of Environment and Conservation
WALGA	West Australian Local Government Association
WPIWG	Waste Paint Implementation Working Group
ZWSA	Zero Waste South Australia

## Executive Summary

### E.1 Purpose

A list of products proposed for consideration under the *Product Stewardship Act 2011* during the next financial year is published each year to provide certainty to the community and business about what is being considered for coverage under the Product Stewardship Act. The publication of the list also fulfils the requirement that any future mandatory or co-regulatory approach be preceded by twelve months' notice before a particular product can have such a regulatory approach applied. Waste A&D paint was included on the 2013-2014 Product List.

The case for a voluntary paint stewardship scheme was prepared by Global Product Stewardship Council (2013) on behalf of Sustainability Victoria and the Australian Paint Manufacturers' Federation.

The stewardship scheme is intended to include architectural and decorative (A&D) paint as well as woodcare products (stains and decking oils). The scheme will exclude A&D paint and woodcare products that are applied to a surface (i.e. used). The scheme applies to any unused portion of paint that is subsequently disposed of by consumers as waste paint and paint packaging.

The waste paints proposed to be captured by the voluntary stewardship scheme are:

*“all decorative and architectural paints from trade and domestic sources including woodcare products (stains and decking oils) and their respective containers”.*

This definition excludes spray packs (aerosols), bagged render, texture coatings, isocyanates, paint strippers, industrial coatings and anti-fouling paints.

The Waste Paint Implementation Working Group (WPIWG) was formed in 2013 to oversee the scheme's implementation.

### E.2 Scope of this report

For the development of the scheme it is essential that there is a sound understanding of the material flows for waste paint generated by householders and trade painters.

Nolan Consulting in association with Sustainable Resource Use has been engaged by the National Environment Protection Council Service Corporation to prepare a report into stocks and flows, market analysis and processing capacity of the targeted waste paint in Australia.

The report provides information on:

- the annual consumption (sales) and disposal rates of paint at the national and state levels;
  - the amount of residual paint including a breakdown into that which is stockpiled and that requiring disposal;
  - the current processes of how residual waste paint is being disposed, including a breakdown of waste paint; and
- the current systems/processes in place to collect and process residual waste paint, their collection rates and capacities.

## E-3 Findings

### Sales

1. 152.7 million litres of water based and solvent based A&D paints, including imports, was sold into the Australian market in 2012/13. Retail sales accounted for 43% of all sales. The paint to be included in the voluntary product stewardship scheme as per the waste paint definition accounted for 126.7 million litres in 2012/13.
2. 94% of the paint sales proposed to be subject to the voluntary product stewardship scheme is A&D paint. The remaining six percent is woodcare products (wood stains, lacquers, and oils).
3. 90% of paint sales are water based paints with remaining 10% being solvent based. The solvent based paints are less widely used than a decade ago.
4. On a volumetric basis, 68% of paint is sold in steel packaging with 32 percent sold in plastic packaging. The plastic packaging is currently limited to 10 L and 15 L units and is typically about 65% of the weight of steel packaging for the equivalent packaging unit size.
5. The specific gravity of paint is about 1.3 kg/L for water based paint and about 1.2 kg/L for solvent based paint.
6. The proportion of total paint sales, by volume, that are retail sales has fluctuated around an average of about 40% over the past decade. It has increased from 38% in 2008/09 to 43.5% in 2012/13.
7. Based upon historical trends zero growth in paint sales is assumed over the next decade.

### Current systems and processes

8. All Household Hazardous Chemical (HHC) collection programs include waste paint.
9. Victoria, NSW, South Australia and Western Australia have State sponsored HHC collection programs. HHC collection programs in Queensland, the ACT and the Northern Territory are provided by individual Councils. No formal HHC collection program with waste paint treatment is currently provided in Tasmania.
10. HHC collections occur from temporary (mobile) and permanent drop off sites.
11. In 2012/13 a total of 2,760 tonne of waste paint, including packaging, is estimated to have been collected through the HHC programs across the nation. This is an increase of over 2,200 tonne since 2003/04. The States of NSW, Victoria and Queensland collected close to 80% of the 2012/13 total.
12. Apart from the PaintCare trial undertaken in Victoria in 2013 there have been no dedicated collection programs for waste paint generated by trade painters.
13. Most solvent based waste paint is either used as a high calorific value fuel source for cement kilns or is distilled to recover solvents for reuse with the residual sludge generally used as a fuel source.
14. Most water based waste paint is immobilised and disposed of to landfill with the bulk of the remainder being used as a low calorific value fuel source.
15. Research is underway to develop new treatment and recycling pathways for waste paint with a particular focus on water based paint.

### **Trade painter practices**

16. About 32% of the waste paint in trade painter stockpiles is destined for disposal. The three most popular disposal pathways from the stockpile are (i) solidify and landfill disposal, (ii) donation and (iii) Council drop off site. The primary direct disposal pathway is to leave the waste paint with the customers.
17. The average trade painter business stockpile is 568 L. This is slightly less than the 604 L found as part of the Victorian trade painter survey conducted in 2010.

### **Waste paint in disposal and recycling pathways**

18. The quantity of waste paint in garbage and recyclables put out for collection by residents and businesses has been estimated from available waste audit data.
19. Waste paint, including packaging, is estimated to range between 0.05% and 0.14% by weight of household kerbside garbage. Waste paint, including packaging, is estimated to be about 0.008% of household kerbside recyclables.
20. Waste paint in the C&I and C&D waste stream is estimated to be 0.05%, and in the C&I and C&D recycling stream is estimated to be 0.01%.
21. About 320 tonne/year of trade waste paint is estimated to be disposed of to industrial liquid treatment plants.
22. The illegal disposal of waste paint to sewer and stormwater is estimated to be around 100 tonne/year. It has fallen over the past decade as a result of education and the access to HHC collection programs.

### **Material flows**

23. 152.7 million litres of water-based and solvent-based A&D paints, including imports, was sold into the Australian market in 2012/13.
24. On average 92.8% by weight of the A&D and woodcare paint that is sold into the Australian market is used.
25. On average 7.2% by weight of the A&D and woodcare paint that is sold into the Australian market is waste arising (both stockpiled and paint requiring disposal).
26. Of this 7.2%, approximately 1.1% of the overall annual paint sales, by weight, contributes to an increase in the waste paint stockpile.
27. Therefore, the remaining 6.1% of paint consumed/sold annually in Australia becomes waste arising, or waste paint requiring disposal.
28. The total waste paint being stockpiled annually in Australia is estimated to be approximately 2,600 tonnes.
29. The total waste paint and packaging requiring disposal in Australia each year is estimated to be approximately 24,200 tonnes.
30. This can be broken down into the following:
  - a) Total waste paint requiring disposal annually in Australia estimated to be approximately 12,060 tonnes; and
  - b) Total paint packaging requiring disposal annually in Australia estimated to be approximately 12,130 tonnes.

31. Of the estimated 12,060 tonnes of waste paint requiring disposal in 2012/13, approximately 87% was water based and 13% was solvent based.
32. The usage 'efficiency' of paint sold to the retail market is estimated to have increased by 2.8% since 2002/03.
33. The primary disposal pathway of waste paint is via collection with general waste and disposal to landfill (3.2% of sales for retail and 4.0% for trade).
34. For retail paint, the next largest disposal pathway, at 2.4%, is via the HHC collection system.
35. The significant increase in the HHC collection programs over the past decade, from 0.6% to 2.4% of retail sales, has resulted in a reduction in the rate of stockpile increase from 6.1% to 0.8%.
36. The increase in retail disposal/recycling from 4.6% in 2002/03 to 7.0% in 2012/13 is due to the increase in collection through the HHC collection programs. This has also resulted in a significant reduction in the rate of stockpile increase.
37. The rate of increase in the trade waste paint stockpile is estimated to be 60% greater than for the retail sector. This is in part due to limited access to designated drop off points. Trade painters have confirmed that the trade paint stockpile is increasing.

## Recommendations

The highest priorities for future data collection to enhance the accuracy of the material flow analysis is considered to be through:

- auditing for waste paint in C&I and C&D waste and recycling streams;
- survey to estimate waste paint to packaging ratios for the key disposal routes; and
- physical survey to assist in quantifying current household stockpiles.

## 1. Introduction

A list of products proposed for consideration under the *Product Stewardship Act 2011* during the next financial year is published each year to provide certainty to the community and business about what is being considered for coverage under the Product Stewardship Act. The publication of the list also fulfils the requirement that any future mandatory or co-regulatory approach be preceded by twelve months' notice before a particular product can have such a regulatory approach applied. Waste A&D paint was included on the 2013-2014 Product List.

### 1.1 Process to establish a voluntary paint stewardship scheme

The Waste Paint Implementation Working Group (WPIWG) was formed in 2013 to oversee the scheme's implementation. Sustainability Victoria in partnership with the paint industry is taking the lead on the development of a national waste paint stewardship scheme. The paint industry is represented by the Australian Paint Manufacturers' Federation as well as manufacturers, retailers and trade painter associations.

The case for a voluntary paint stewardship scheme was prepared by Global Product Stewardship Council (2013) on behalf of Sustainability Victoria and the Australian Paint Manufacturers' Federation.

### 1.2 Definition of waste paint

The stewardship scheme is intended to include architectural and decorative (A&D) paint as well as woodcare products (stains and decking oils).

The waste paint proposed to be captured by the voluntary stewardship scheme is:

*"all decorative and architectural paints from trade and domestic sources including woodcare products (stains and decking oils) and their respective containers".*

This definition excludes spray packs (aerosols), bagged render, texture coatings, isocyanates, paint strippers, industrial coatings and anti-fouling paints.

The term 'waste paint' is used in this report to represent all of the above categories that are intended to be captured by the scheme.

### 1.3 Scope of study

For the development of the scheme it is essential that there is a sound understanding of the material flows for waste paint generated by householders and trade painters.

Nolan Consulting in association with Sustainable Resource Use has been engaged by the National Environment Protection Council Service Corporation to research waste paint material flows through a study into stocks and flows, market analysis and processing capacity of the targeted waste paint in Australia.

The following is addressed through the study:

- the annual consumption (sales) and disposal rates of A&D paint, analysis at both national and state levels;
- the amount of residual paint including a breakdown into that which is stockpiled and that requiring disposal;
- the current processes of how residual waste paint is being disposed, including a breakdown of waste paint; and

- the current systems/processes in place in Australia to collect and process residual waste paint, including a stocktake of current programs running in different states (administered by both state and local government), their collection rates and capacities, and contamination rates of the program.

The study builds upon the outcomes of the Nolan-ITU (2004) *"Paint and Paint Can Recovery – National Audit and Strategic Plan"* which found that 10.5% of A&D paint that was sold into the Australian retail market is stockpiled for reuse.

## 1.4 Report

This report presents the outcomes of the study.

For ease of reading each report section presenting findings is commenced with a summary of the section outcomes.



## 2. Study methodology

The study methodology was presented in the detailed research input and methodology document which was approved by the NEPC Service Corporation.

The methodology has comprised the following key elements:

1. Collection and collation of paint consumption data.
2. Collection and collation of waste paint data.
3. Material flow analysis.
4. Preparation of draft report.
5. Refinement of MFA and reporting.
6. Preparation and submission of final report.

The method applied to each of these elements is described below.

### 2.1 Collection and collation of paint consumption data

The paint stewardship scheme is intended to include architectural and decorative (A&D) paint as well as woodcare products.

Volumetric consumption (sales) data from 2003 to 2012 has been obtained from GfK (Informark) quarterly surveys of the four largest manufacturers in Australia, undertaken on behalf of the Australian Paint Manufacturers' Federation (APMF). This survey reports data as follows:

- for A&D and woodcare products;
- for state and territory jurisdictions; and
- retail and trade.

The APMF represents paint and ink manufacturing companies operating across Australia. In addition, associate members are the suppliers of materials and services to the coatings industry. APMF members account for about 95% of all paint manufactured in Australia.

The state and territory consumption data, as provided by the APMF, is aggregated for Victoria/Tasmania, Queensland/Northern Territory, and NSW/ACT. For these combined jurisdictions, estimates of the individual jurisdictions are made on a per capita basis.

This data is then adjusted to account for sales by other APMF members, other Australian manufacturers and imports.

The split between water based paint and solvent based paint is then made based upon industry advice. The volumetric data is then converted to weight estimates based on industry advice on typical water-based and solvent-based paint densities.

A meeting was held with the APMF in Sydney on 10<sup>th</sup> December 2013 to assist in the data collation.

## 2.2 Collection and collation of waste paint data

Data and information has been sought on the following waste paint pathways:

- household kerbside collections:
  - garbage;
  - recycling;
  - hardwaste;
- householder haulage of waste to landfills & transfer stations from residential sites;
- skips delivered to landfills/ transfer stations from residential sites;
- household hazardous chemical ( HHC) collection services;
- commercial and industrial waste to:
  - landfill;
  - recycling;
- construction and demolition waste to:
  - landfill;
  - recycling; and
- illegal dumping (to sewer and stormwater).

Information has also been sought on waste paint treatment and recovery processes.

Nolan Consulting has been assisted by Department of the Environment, state and territory jurisdictions, water authorities, and waste treatment and recovery companies in the collection of this information. A full list of stakeholders that have been consulted is presented in Appendix A.

For the majority of stakeholders, the data collection process involved:

- an initial telephone call;
- emailing a letter of introduction from the WPIWG Secretariat, with an accompanying data request;
- receipt of the data; and
- follow up via email or phone for clarification or to finalise data sets.

### 2.2.1 State and territories

State and territories were approached for information on collection programs, waste and recycling quantities and compositional surveys.

NSW, South Australia, Victoria, Western Australia, and the ACT provided relevant data from their respective state/territory based or regional HHC collection programs.

As HHC programs in Queensland are managed by local government councils, the twelve Councils comprising over 80% of the population were contacted to seek relevant information. The information received from these Councils was supplemented by preliminary survey information provided by the APMF.

The Tasmanian HHC program was discontinued in December 2012. Information on the program up to that time is sourced from the review of the program undertaken by the Local Government Association of Tasmania (2013).

Literature searches found that HHC collection programs are conducted by two of the four largest Northern Territory Councils. Collection volumes were estimated using per capita estimates applied to the populations of the two municipalities.

### **2.2.2 Trade painters**

A national survey of trade painter waste, paint stockpiling and disposal behaviour was conducted in December 2013 and January 2014 to assist in determining the trade waste paint stockpile and the disposal pathways.

The survey was emailed by the State based Master Painters Associations and the National Institute of Painting & Decorating. In addition Dulux sought the participation of their trade painters in the Northern Territory. This followed a similar survey undertaken by the Master Painters Association of Victoria in 2009.

### **2.2.3 Water authorities**

Melbourne Water, Sydney Water, the Western Australian Water Authority, and South-East Water were approached for information on illegal waste paint disposal to stormwater and sewer.

### **2.2.4 Waste collection, treatment, processing and recovery companies**

Information on current and potential waste paint collection, treatment, recovery, and disposal systems were obtained from major liquid waste treatment companies including Toxfree, Veolia, Transpacific and Geocycle. These companies are estimated to manage over 90% of the waste paint collected through HHC collection programs across the nation.

## **2.3 Material flow analysis**

The waste paint material flow analysis (MFA) has been prepared as an MS Excel based model.

It tracks material consumption, stockpiling and disposal/recovery for all state and territory jurisdictions. While the focus of the analysis is the 2012/13 financial year it provides stockpile projections up to 2022/23 based upon no change to the current collection, treatment and recovery system.

The outputs for the analysis are shown graphically including state/jurisdictional breakdowns and household/trade splits.

Qualitative statements on source data reliability are provided.

## **2.4 Preparation of draft report**

The draft report was presented to the WPIWG at its 13<sup>th</sup> February 2014 meeting.

## **2.5 Refinement of MFA and submission of the final report**

This final report, including the MFA, has been prepared following consideration of WPIWG comments on the draft report.

### 3. Paint sales

#### *Key outcomes – Paint sales*

152.7 million litres of water based and solvent based A&D paints, including imports, was sold into the Australian market in 2012/13. Retail sales accounted for 43% of all sales. The paint to be included in the voluntary product stewardship scheme as per the waste paint definition accounted for 126.7 million litres in 2012/13.

**Table 3-1: Paint consumption (2012/13) by million litres**

<i>Sector</i>	<i>NSW</i>	<i>ACT</i>	<i>VIC</i>	<i>TAS</i>	<i>QLD</i>	<i>NT</i>	<i>SA</i>	<i>WA</i>	<i>Total</i>
<i>Retail</i>	18.7	1.0	17.6	1.6	15.5	0.8	3.4	7.4	66.0
<i>Trade</i>	24.3	1.3	22.8	2.1	20.7	1.0	4.5	10.1	86.7
<i>Total</i>	43.0	2.2	40.4	3.7	36.2	1.8	7.9	17.5	152.7

Source: GfK

Ninety four percent of the paint sales proposed to be subject to the voluntary product stewardship scheme is A&D paint. The remaining six percent is woodcare products (wood stains, lacquers, and oils).

Ninety percent of paint sales are water based paints with remaining 10% being solvent based. The solvent based paints are less widely used than a decade ago.

On a volumetric basis, 68 percent of paint is sold in steel packaging with the remaining 32% being sold in plastic packaging. The plastic packaging is currently limited to 10 L and 15 L units and is typically about 65% of the weight of steel packaging for the equivalent packaging unit size.

The density of paint is about 1.3 kg/L for water based paint and about 1.2 kg/L for solvent based paint.

The proportion of total paint sales, by volume, that are retail sales has fluctuated around an average of about 40% over the past decade. It has increased from 38% in 2008/09 to 43.5% in 2012/13.

Based upon historical trends zero growth in paint sales is assumed over the next decade.

#### 3.1 Purpose

This section of the report presents the Architectural and Decorative (A&D) paint and woodcare products consumption (sales) data from 2002/03 through to 2012/13 together with other relevant consumption data including the estimated water to solvent based paint ratios, and packaging types and characteristics.

#### 3.2 Primary data sources

The primary data is the calendar year volumetric consumption (sales) data from 2003 to 2012, as well as the 2012/13 financial year, obtained from the four largest Australian manufacturers. The data, provided by APMF (2013), was sourced from GfK who provides market research services to the APMF. The data is broken down as follows:

- for A&D and woodcare products;
- for state and territory jurisdictions; and
- retail and trade.

This paint is sold primarily through retail stores that may be dedicated paint, hardware, home or improvement stores or any other retail sites which sell paint.

### 3.3 Secondary data sources

The consumption data is presented as follows:

- total national consumption;
- on a financial year basis;
- for individual states and territories;
- for retail and trade;
- for water and solvent based products; and
- by weight as well as volume.

The assumptions used to estimate this information are described below.

#### 3.3.1 Total national consumption

The four major paint manufacturers in Australia are the Dulux Group, PPG, Valspar (incorporating Watty) and Haymes Paints. These APMF members have been providing A&D paint and Woodcare Products volumetric sales data to GfK since 2002/03. GfK collates this data under contract to the APMF. The aggregated data has been provided to Nolan Consulting for the sole purpose of preparing this report.

APMF has supplied commercial in confidence information to Nolan Consulting to assist in determining the market share by volume that is unaccounted for in the GfK volumetric sales data. The unaccounted sales include sales from all other APMF members, all other Australian manufacturers, and from imports.

After considering the commercial in confidence information Nolan Consulting is satisfied that with the following estimates of market share (by volume) of the four companies participating in the survey:

- A&D 90%
- Woodcare products 80%

ABS data supported by Department of Foreign Affairs and Trade (DFAT) provided Australian Customs and Border Protection Service (ACBPS) information on paint imports and exports between 2003/04 and 2012/13 has been obtained. The ACBPS monitors paints, varnishes, enamels and lacquers within the following categories:

- polyesters, acrylic and vinyl polymers dispersed in a solvent;
- synthetic polymers or chemically modified natural polymers, dispersed in a solvent;
- acrylic or vinyl polymers, dispersed or a water based medium; and
- synthetic polymers or chemically modified natural polymers dispersed in a water medium.

In 2011/12 some 6.2 million litres of water based paint and 16.2 million litres of solvent based paint was imported. This may have included some A&D imports from Singapore which have since ceased. The APMF has advised that most of this paint is not the A&D and woodcare product paints which are intended to be captured by the product stewardship scheme. Furthermore it has advised that imports do not have a measurable impact on the Australian A&D sales.

The ACBPS data reveals that a total of 10.2 million litres was exported over the 2011/12 financial year. Paint destined for the export market is not intended to be captured by the product stewardship scheme.

### 3.3.2 Financial year presentation

The calendar year volumetric consumption (sales) data from 2003 to 2012 has been converted to financial year data by averaging the data from the two relevant calendar years.

### 3.3.3 Individual states and territories disaggregation

The state and territory consumption data presented in the GfK surveys is aggregated for Victoria/Tasmania, Queensland/Northern Territory, and NSW/ACT. This data has been disaggregated to the individual jurisdictions by using ABS 2012 population estimates. The jurisdiction splits that have been applied based upon this population data are presented in Table 3-2.

**Table 3-2: 2012 Jurisdictional splits (ABS, 2013)**

Combined Jurisdictions	Individual jurisdictions	Splits applied (%)
NSW/ACT	NSW	95.1%
	ACT	4.9%
VIC/Tas	Victoria	91.5%
	Tasmania	8.5%
Queensland/NT	Queensland	95.3%
	Northern Territory	4.7%

### 3.3.4 Retail and trade split

Based upon the 2012/13 consumption data the retail market was 43% (Table 3-4) of the combined retail and trade sales. The APMF reported a slight gain in retail in 2012/13 whereas trade sales have declined by 4% in 2012/13 and around 10% since 2010.

### 3.3.5 Water and solvent based paint split

All paint captured under the proposed voluntary product stewardship scheme can be classified as either latex (water-based) or solvent (oil-based) coatings.

The APMF has advised that about 90% of the combined retail and trade paint by volume that is currently sold into the Australian market is water based with the remaining 10% being solvent based.

The breakdown assumes that almost all of the A&D paint is water based, except for preparatory coats and metal finishes, and that about 50% of woodcare products are water based.

Nolan-ITU (2004) estimated that 88% of retail paint by volume that was sold into the Australian market in 2003 was water based with the remaining 12% being solvent based. This suggests a slight increase in the water based proportion since 2003.

### 3.3.6 Presentation by weight

The paint sales data is provided on a volumetric basis. As waste paint data is provided on a weight basis it has been necessary to convert volumetric data to weight data.

Paint manufacturers have been consulted to provide advice on the paint density values to apply. The data is referenced as APMF (2014) *"Paint packaging weights in 2013"*.

There is general industry agreement that the average density of water based paint is in the order of 1.3 kg/L, and that the average density of solvent based paint is in the order of 1.2 kg/L.

### 3.3.7 Packaging units and types

A range of aggregated data on packaging units and packaging types has been provided by several Australian manufacturers. The collection of this data has been provided by the Interfirm Comparison Centre on behalf of the APMF to maintain confidentiality.

Table 3-3 presents aggregated industry retail and trade paint sales estimates for packaging unit size, and material types for 2013. The data is presented to the nearest 0.5%. The table also presents approximate estimates of packaging weight (including handles for containers of 2 L and greater).

**Table 3-3: Paint packaging sizes and types by sales volumes, 2013 data (APMF, 2014)**

Unit (Litre)	Type	Weight (g)	Retail		Trade		
			Water	Solvent	Water	Solvent	
0.25	Metal	70	0.0%	0.0%	0.0%	0.0%	
0.5		95	1.5%	1.5%	0.0%	0.5%	
1		160	3.5%	6.5%	0.5%	1.5%	
2		230	2.5%	0.5%	0.5%	0.5%	
4		415	27.0%	9.5%	8.0%	28.0%	
5				0.5%	0.0%	0.0%	0.0%
6				6.0%	0.0%	0.0%	0.0%
10		850	33.0%	16.5%	11.0%	48.0%	
15		1,310	19.0%	65.5%	19.0%	19.5%	
20		1,430	1.0%	0.0%	3.0%	2.0%	
10	Plastic	580	4.0%	0.0%	21.5%	0.0%	
15		785	2.0%	0.0%	36.5%	0.0%	
Total			100.0%	100.0%	100.0%	100.0%	

Key information that can be gleaned from the 2013 data is shown in Table 3-3 is as follows:

- all solvent paint is sold in steel containers;
- plastic containers are only used for the 10 L and 15 L packaging units;
- very little paint is sold in 0.25 L, 2.0 L and 5 L units;
- over 50% of all retail and trade paint is sold in 10 L and 15 L packaging units; and
- trade painters generally use a greater proportion of 10 L to 20 L packaging units, and a significantly greater portion of plastic units than the retail sector.

The following trends in packaging have occurred over the past decade:

- the plastic packaging portion of the trade sector's water based paint has increased from less than 1% by units sold in 2009/10 to 42% by 2012/13;
- the ratio of plastic to steel packaging for the retail sector's water based paint has remained relatively static over the past decade; and
- there has been a significant increase in the proportion of 15 L packaging units sold and an equivalent reduction in 20 L packaging units (by volume).

On a volumetric basis, 68 percent of paint is sold in steel packaging with the remaining 32% sold in plastic packaging.

As shown in Table 3-3 plastic packaging is only sold in the 10 L and 15 L containers. For the purpose of this project the weight of plastic packaging is estimated to be 65% of the weight of steel packaging for the same size container, this estimate has been confirmed by paint manufacturers.

### 3.3.8 Future projections

The average annual growth in overall paint consumption by volume from 1996 to 2003 estimated to be 2.8%. From 2002/03 to 2012/13 the average growth rate has been 0.06% per year.

It is assumed that zero growth in consumption will occur over the next ten years.

## 3.4 2012/13 Paint consumption

The estimated paint consumption across jurisdictions in 2012/13 is presented in Table 3-4 and shown graphically in Figure 3-1.

**Table 3-4: Paint consumption (2012/13) by million litres**

Sector	NSW	ACT	VIC	TAS	QLD	NT	SA	WA	Total
Retail	18.7	1.0	17.6	1.6	15.5	0.8	3.4	7.4	66.0
Trade	24.3	1.3	22.8	2.1	20.7	1.0	4.5	10.1	86.7
Total	43.0	2.2	40.4	3.7	36.2	1.8	7.9	17.5	152.7

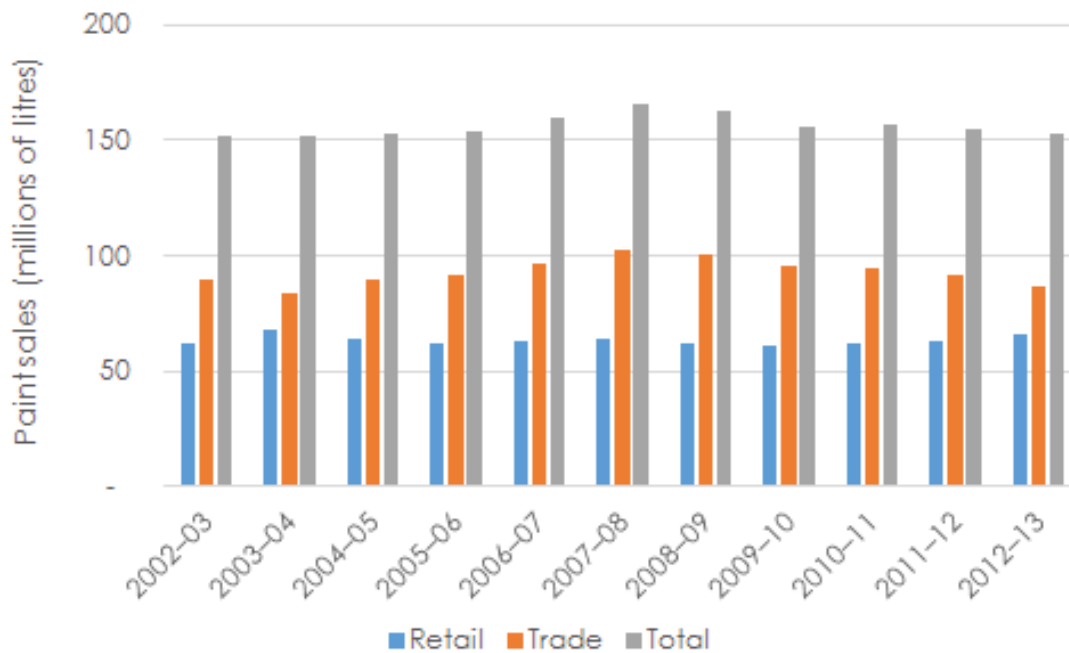




**Figure 3-1: Estimated 2012/13 paint consumption within jurisdictions**

The total sales increased from 151.7 million litres in 2002/03 to 152.7 million litres in 2012/13.

This is an increase of 0.06% per year. The annual consumption data over this period for both retail and trade is shown in Figure 3-2.



**Figure 3-2: Annual paint consumption (2002/03 to 2012/13)**

The proportion of the total sales that is retail is graphed in Appendix B. It averages about 40% and has increased from 38% in 2008/09 to 43.5% in 2012/13.

Of the total volume 94% was A&D paint with 6% being woodcare product sales. Changes to this split over the past decade are shown graphically in Appendix B.

## 4. Current systems and processes

### *Key outcomes – current systems and processes*

*All Household Hazardous Chemical (HHC) collection programs include waste paint.*

*Victoria, NSW, South Australia and Western Australia have State sponsored HHC collection programs. HHC collection programs in Queensland, the ACT and the Northern Territory are provided by individual Councils. No formal HHC collection program with waste paint treatment is currently provided in Tasmania.*

*HHC collections occur from temporary (mobile) and permanent drop off sites.*

*In 2012/13 a total of 2,760 tonne of waste paint, including packaging, is estimated to have been collected by the HHC programs across the nation.*

**Table 4-1: Estimated waste paint, including packaging, collected through HHC collection programs (tonne)**

<i>Year</i>	<i>Victoria</i>	<i>NSW</i>	<i>SA</i>	<i>WA</i>	<i>Qld</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Total</i>
<i>2012/13 population (million)</i>	<i>5.63</i>	<i>7.30</i>	<i>1.66</i>	<i>2.43</i>	<i>4.57</i>	<i>0.51</i>	<i>0.37</i>	<i>0.24</i>	<i>22.71</i>
<i>2003/04</i>	<i>228</i>	<i>199</i>	<i>47</i>	<i>-</i>	<i>118</i>	<i>-</i>	<i>28</i>		
<i>2004/05</i>	<i>338</i>	<i>227</i>	<i>47</i>	<i>-</i>	<i>167</i>	<i>-</i>	<i>32</i>		
<i>2005/06</i>	<i>411</i>	<i>287</i>	<i>84</i>	<i>-</i>	<i>215</i>	<i>-</i>	<i>36</i>		
<i>2006/07</i>	<i>394</i>	<i>331</i>	<i>13</i>	<i>-</i>	<i>264</i>	<i>-</i>	<i>40</i>		
<i>2007/08</i>	<i>705</i>	<i>437</i>	<i>74</i>	<i>-</i>	<i>313</i>	<i>-</i>	<i>44</i>		
<i>2008/09</i>	<i>611</i>	<i>472</i>	<i>79</i>	<i>-</i>	<i>362</i>	<i>-</i>	<i>48</i>		
<i>2009/10</i>	<i>694</i>	<i>532</i>	<i>113</i>	<i>-</i>	<i>411</i>	<i>8</i>	<i>52</i>		
<i>2010/11</i>	<i>780</i>	<i>716</i>	<i>94</i>	<i>-</i>	<i>459</i>	<i>16</i>	<i>55</i>		
<i>2011/12</i>	<i>903</i>	<i>824</i>	<i>106</i>	<i>166</i>	<i>508</i>	<i>16</i>	<i>55</i>		
<i>2012/13</i>	<i>849</i>	<i>901</i>	<i>106</i>	<i>270</i>	<i>557</i>	<i>8</i>	<i>55</i>	<i>19</i>	<i>2,760</i>

*Apart from the PaintCare trial undertaken in Victoria in 2013 there have been no dedicated collection programs for waste paint generated by trade painters.*

*Most solvent based waste paint is either used as a high calorific value fuel source for cement kilns or is distilled to recover solvents for reuse with the residual sludge generally used as a fuel source.*

*Most water based waste paint is immobilised and disposed of to landfill with the bulk of the remainder being used as a low calorific value fuel source.*

*Research is underway to develop new treatment and recycling pathways for waste paint with a particular focus on water based paint.*

## 4.1 Purpose

The section of the report describes:

- current household hazardous chemical (HHC) collection programs;
- the trade *PaintCare* trial;
- current paint collection systems;
- current waste paint disposal/ recycling pathways; and
- potential waste paint disposal/ recycling pathways.

## 4.2 Household hazardous chemical collection programs

Typically Household Hazardous Chemical (HHC) programs involve:

- collection at mobile events and from permanent collection facilities.
- transport to facilities for separation of paint from packaging; and
- transfer of separated products to end user/disposal.

Formal collection arrangements for waste paint commenced in Victoria in 1994 through the HHC collection program.

These programs now operate in most state and territory jurisdictions. The collections are generally separate from rural based agricultural and veterinary chemical collections which are managed through existing product stewardship schemes, including drumMUSTER and ChemClear.

The need for similar waste paint collection arrangements for trade painters was investigated through the 2013 *PaintCare* trial.

Nolan Consulting was able to obtain a high level of co-operation with state and local government and their collection contractors in obtaining each state's HHC collection program waste paint data.

The programs operating in each jurisdiction are described below.

### 4.2.1 Victoria

The Detox Your Household (DYH) household hazardous collection program commenced in 1994.

Information on the program has been sourced from the Sustainability Victoria (2011) *DYH Strategic Review Public Report* as well as mobile and permanent collection site databases. The Sustainability Victoria (2011) report analysed five years of performance data and looked at ways to improve the service delivery to the Victorian community.

The DYH program commenced with a few half and full day mobile collection days in metropolitan Melbourne increasing to a peak of 38 in 2005/06 and falling to 31 in 2009/10. These collections are now provided to most metropolitan municipalities and medium/large provincial centres on a rotational basis. Waste paint is one of 31 materials that are collected at the mobile collection days. Packaging is limited to 20 L or 20 kg in size.

Two permanent HHC sites were established in 2005/06 increasing to 13 in 2009/10. These sites are located at council depots with six in metropolitan Melbourne and seven in regional Victoria.

Waste paint accounted for 53.5% of the HHC collected at the mobile sites over the 2005/06 to period 2009/10.

The annual quantity of waste paint collected through Victoria's HHC collection program at both temporary (mobile) and permanent sites are shown in Table 4-2. Table 4-2 also provides estimates for all other states.

The annual quantity of paint collected at mobile sites decreased from 320.3 tonne in 2005/06 to 153.1 tonne in 2009/10 due to the introduction of the permanent sites. It has since increased to 186.7 tonne in 2012/13.

Table 4-2 also demonstrates a gradual increase in the combined mobile and permanent sites from 10 tonne in 1994/95 to 193 tonne in 2002/03 and to a peak of 903 tonne in 2011/12. The data shows the significant increase in 2007/08 when the number of permanent sites had increased to seven. This increase is despite the reduction in the number of annual mobile collection events from 35 to 31.

The locations of the Victorian permanent and 2012/13 temporary (mobile) drop off sites are shown in Figure 4-1 (Appendix C).

#### 4.2.2 New South Wales

The NSW Household Chemical Clean Out program is a joint State and Local Government initiative that has been in place since March 2003.

Information on the program has been sourced from the NSW EPA (2012) "*Household Chemical CleanOut Program - Annual Report 2010–2011*" as well as direct advice from the NSW EPA.

The program provides periodic mobile collections in the Hunter, Central Coast, Illawarra and Greater Sydney regions. No permanent collection sites are provided. While the program is targeted at householders, an unknown quantity of trade paint is also collected through the program.

The program collected HHCs in the above regions from 41 mobile collections in 2009/10 and 43 collections in 2010/11. The locations of the NSW 2012/13 temporary (mobile) drop off sites within the above regions are shown in Figure 4-2 (Appendix C).

Waste paint has accounted for 55% by weight of the total material collected over the life of the program, 57% in 2009/10, and 61% in 2010/11.

Annual waste paint collected under the program for the metropolitan region is presented in Table 4-1. The quantities of waste paint have increased from 199 tonne in 2003/04 to 757 tonne in 2012/13. The NSW EPA projects that this will approach 900 tonne for 2013/14.

110 tonne was also collected outside of the metropolitan region in 2010/11. This has been projected for 2011/12 and 2012/13 based upon the 2010/11 metropolitan to 'outside of metro' ratio.

The NSW Government's Waste Less Recycle More initiative commits \$465.7 million over five years to deliver innovative waste avoidance and recycling programs, to combat illegal dumping, and to reduce littering BSW EPA (2013a). This initiative includes funding for Community Recycling Centres which aims to make it easier for households to recycle and remove problem wastes from kerbside bin systems by establishing a network of Community Recycling Centres and Services across NSW. The drop off centres that are to be supported will collect a core list of materials, including waste paint, free of charge to householders.

Table 4-2: Estimated waste paint, including packaging, collected through HHC collection programs (tonne/yr)

Year	Victoria		NSW			SA	WA	Qld	Tas	ACT	NT	Total
	Mobile	Fixed	Total	Metro	State							
2012/13 population (million)		5.63		7.30		1.66	2.43	4.57	0.51	0.37	0.24	22.71
1994/95	10	-	10	-	-	-	-	-	-	-	-	-
1995/96	21	-	21	-	-	-	-	-	-	-	-	-
1996/97	80	-	80	-	-	-	-	-	-	-	-	-
1997/98	56	-	56	-	-	-	-	-	-	-	-	-
1998/99	111	-	111	-	-	-	-	-	-	-	-	-
1999/00	157	-	157	-	-	-	-	-	-	-	-	-
2000/01	175	-	175	-	-	-	-	-	-	-	-	-
2001/02	192	-	192	-	-	-	-	-	-	-	-	-
2002/03	193	-	193	-	-	-	69	-	-	24	-	-
2003/04	228	-	228	199	199	47	-	118	-	28	-	-
2004/05	338	-	338	227	227	47	-	167	-	32	-	-
2005/06	359	51	411	287	287	84	-	215	-	36	-	-
2006/07	183	211	394	331	331	13	-	264	-	40	-	-
2007/08	242	464	705	437	437	74	-	313	-	44	-	-
2008/09	186	425	611	472	472	79	-	362	-	48	-	-
2009/10	157	537	694	532	532	113	No data	411	8	52	-	-
2010/11	159	621	780	602	716	94	No data	459	16	55	-	-
2011/12	257	646	903	692	824	106	166	508	16	55	-	-
2012/13	201	649	849	757	901	106	270	557	8	55	19	2,760

### 4.2.3 South Australia

Information on the South Australian HHC program has been sourced directly from Zero Waste SA and from Transpacific.

ZWSA funds a free State based HHC and farm chemical collection program. This provides households and farmers with the opportunity to drop off waste paint at one permanent metropolitan site and several metropolitan and rural sites through a mobile collection program.

Transpacific holds the contract for the management and operation of the collection program.

The free mobile collection program has been operating since 2004.

In 2012/13 mobile collections occurred in Onkaparinga, Peterborough, Port Wakefield, Mitcham, Naracoorte, and Gambier, and Charles Sturt. These sites are open to all South Australian residents, and are generally held in the Autumn to early Winter period. The sites are typically Council depots, transfer stations, or landfills. The site locations change from year to year.

The permanent drop off point is at Transpacific's Dry Creek Depot in northern Adelaide. This facility accepts hazardous chemicals, including waste paint, from farmers and households from 9.00 am to 12.00 pm on the first Tuesday of every month. This is a free of charge service.

The locations of the South Australian Dry Creek permanent drop off site and the proposed 2014 temporary (drop off sites) are shown in Figure 4-3 (Appendix C).

The annual quantity of waste paint collected through the mobile collection program is presented in Table 4-2. The quantities of waste paint collected increased from 47 tonne in 2004/05 to 106 tonne in 2011/12.

The disposal and recycling pathways for the mobile and permanent drop off sites are identical. Dry paint is fixed with other waste products and landfilled in a dedicated cell at the Inkerman landfill. Liquid water based paint is treated at the Transpacific liquid waste treatment facility. The residual waste paint is mostly immobilised and taken to the Inkerman landfill for disposal. A small component of the usable waste paint is recovered for reuse.

The solvent based waste paint is processed at Transpacific's solvent recovery facility. The solvent recovered from the distillation process is reused by industry and the sludge is transported interstate for further processing. It is understood, although not confirmed by Transpacific, that a significant component of the sludge is transported to Victoria for fuel production. Transpacific transports pressure paint cans to its Newcastle facility where the liquid is recovered and the cans are recycled.

### 4.2.4 Tasmania

Tasmania does not currently have a formal HHC collection program.

This has not always been the case. From March 2009 to December 2012 the Tasmanian *ChemSafe Homes Tasmania* program offered 34 mobile drop-off days across 24 local council jurisdictions, with 2,658 residents using the service. This HHC collection program was run by the Local Government Association of Tasmania and jointly funded by the State and Local Government. Waste paint was included as an acceptable material. The locations of the temporary (mobile) drop off sites over the three year period are shown in Figure 4.4 (Appendix C). The number of drop off days at each site ranged from one day to four days over the three year period.

The annual quantity of waste paint collected through the mobile collection program is presented in Table 4-1. Over the three year period 56 tonne of waste paint was collected. This equates to about 16 tonne of waste paint/year. All of the collected material was bulked up and transported to Victoria for treatment.

The Local Government Association of Tasmania (2013) "*Strategic Review of the Collection of Household Hazardous Waste*" assessed the outcomes and effectiveness of the program and proposed that it should continue through permanent facilities for the collection, reuse, consolidation and transport of household chemicals including paint.

Unfortunately funding was not forthcoming. As a consequence, while most Council's still accept small quantities of waste paint at their transfer stations. The Southern Waste Strategy Authority, the Northern Tasmanian Waste Management Group and Launceston City Council have confirmed that water based and solvent based paints are generally dried before landfill disposal. In addition there a limited quantity of water based waste paint is reused by community groups.

It is understood that the Cradle Coast Waste Management Group is considering establishing a new HHC collection program along Tasmania's north-west coast.

Furthermore Toxfree is seeking approval to establish a bulking facility in Rokeby which is located in the City of Clarence which is within the Greater Hobart area.

#### 4.2.5 Western Australia

The Western Australian *Household Hazardous Waste (HHW)* Program involves mobile collections and collections from permanent facilities.

In February 2011 the Minister for Environment announced funding for the next phase of the 2011 to 2015 HHW program. The program is funded by the Waste Authority through the Waste Avoidance and Resource Recovery Levy.

Information on the program has been sourced from the Municipal Waste Advisory Council of Western Australia's "*Household Hazardous Waste Program Annual Report July 2011 – 30 June 2012*" and "*Household Hazardous Waste Program Annual Report 2012/2013*" as well as specific advice from the Department of Environment Regulation.

The program is limited to quantities of less than 20L or 20kg. Information on the collections provided is presented in Table 4-3.

**Table 4-3: Western Australian Household Hazardous Waste Program details**

Year	Mobile sites (temporary collection days)	Permanent facilities
2009	Twenty one.	18 collections from six sites (one in Geraldton with the remainder in Perth).
2011/12	Nil (Funding constraints).	13 sites.
2012/13	Seven fully funded and one co funded The two largest collections were in Joondalup and Gosnells. Regional collections were held at Busselton, Kalgoorlie and Broome.	13 sites.
2013/14 and 2014/15	Uncertain.	Eight sites in Perth and six in regional centres.

The locations of the Western Australian permanent sites and 2012/13 temporary (mobile) drop off sites are shown in Figure 4-5 (Appendix C). Typical attendance at the 2012/13 mobile collection sites was between 100 to 200 cars per event.

Waste paint accounted for 64% of the materials collected in 2011/12 and 55% in 2012/13. The annual quantity of waste paint collected through the mobile collection program for 2011/12 and 2012/13 is presented in Table 4-2. The 2012/13 quantity of 270 tonne exceeded the 2011/12 quantity of 166 tonne due to the increase in the number of mobile collections.

HHC collected from permanent or TCDs are taken to the Toxfree facility in Kwinana.

#### 4.2.6 Queensland

In Queensland HHC collection programs are delivered by local government. Many local governments accept paint cans at transfer stations. Some Councils also hold free drop off days at transfer stations for residents and local trade painters.

Several of the larger Councils offer HHC collection services at permanent and temporary collection sites. These services are generally available to householders and resident trade painter. For these HHC collection services, specialist liquid waste treatment contractors collect the waste paint for treatment and recycling or disposal of the immobilised paint. These contractors are required to comply with all relevant disposal requirements as paint is a regulated waste.

For the larger Councils that offer HHC collection services conditions usually apply to the permanent collection sites and the temporary collection days. These conditions may include items must be in their original container, items must not be mixed, and a limit of one litre for each chemical or product.

Each Council may choose whether to impose a disposal fee, and how much that fee will be. Disposal at transfer stations and landfills is often free to residents, with a charge usually applied to commercial waste.

A survey of the 12 largest councils, by population was undertaken as part of the study. The population of these Council's is about 81% of the State's population. Of these 12 Councils, Rockhampton, Mackay, and Townsville do not have a HHC collection program.

The nine Queensland Council's with a HHC program in 2012/13 are shown in Table 4-4 together with summary details of the services. This indicates that 72% of the Queensland population are within a municipality for which a HHC collection service is available.

**Table 4-4: Queensland Council run HHC Collection programs**

LGA name	Proportion of Queensland population	No of sites		Contractor	2102/13 Quantity (tonne)
		Permanent	Temporary		
Brisbane	0.24	4	1	Remondis	289.0
Gold Coast	0.12	2	-	Toxfree	144.4
Moreton Bay <sup>(1)</sup>	0.09	5	-	Transpacific	70.4
Sunshine Coast	0.07	8	-	Toxfree	5.0
Logan	0.06	-	5	Toxfree	7.2
Ipswich	0.04	1	-	Transpacific	2.3
Cairns <sup>(1)</sup>	0.04	4	-	Unknown	29.1



LGA name	Proportion of Queensland population	No of sites		Contractor	2102/13 Quantity (tonne)
		Permanent	Temporary		
Toowoomba	0.03	5	-	Transpacific	8.0
Redland <sup>(1)</sup>	0.03	-	1	Toxfree	1.4
Total	0.72				556.8

<sup>(1)</sup> 2012/13 quantities estimated by applying the average per household HHC collection quantities from the other Queensland Councils to the households of these municipalities.

The Toowoomba service is provided by Allied Liquid Waste; a subsidiary of Transpacific.

The amount of waste paint collected from Morton Bay, Cairns and Redland has been estimated by applying the average per household HHC collection quantities from the other Queensland Councils to the households of these municipalities. The average annual per household HHC collection quantities/person for the municipalities of Brisbane, Gold Coast, Sunshine Coast, Logan, Ipswich, and Toowoomba of 0.42 kg/household.

Based upon the Nolan-ITU (2004) 69 tonne of waste paint being collected through Council programs in 2002/03. As shown in Table 4-4 this is estimated to have increased to 557 tonne in 2012/13. The permanent and temporary sites are generally located at transfer stations.

The APMF has commenced a telephone survey of Queensland Councils to determine whether residences have access to drop off facilities for waste paint. The response to the survey of the 12 largest Councils, listed in Table 4-4 above, is consistent with the information obtained by Nolan Consulting.

Figure 4.6 (Appendix C) is a map of suggested Councils and the extent of their HHC collection services, including paint. This indicates that nine of the 12 largest Councils have contracted drop off arrangements at Council depots whereby the waste paint is appropriately treated and disposed or reused. Other Councils that have a drop off service for which the waste paint is treated and then disposed of or recycled include the Noosa Shire, South Burnett Shire, and the Douglas Shire. Figure 4.6 (Appendix C) also shows the Councils for which the only disposal pathway for waste paint, if accepted, is to landfill.

All Brisbane City Council transfers stations are operated by Remondis. Remondis contracts the collection of the waste paint stillages from the permanent sites to Toxfree at two sites and to Planet Paint at the other two sites. Toxfree bulks up the waste paint and transports the solvent based paint to the Dandenong Geocycle facility. Most of the water based paint is immobilised and disposed to landfill. Planet Paint recycles the solvent based waste paint to garage floor paint. Remondis contracts Transpacific to collect the waste paint from the temporary collections.

For all Transpacific Queensland HHC local government collections water based paint is immobilised at its Narangba liquid treatment plant and then disposed to landfill. The solvent based paint is bulked up and used as a fuel source in the thermal plant. This includes the Toowoomba service for which the collected waste paint is also transported to the Narangba liquid treatment plant.

For all Toxfree Queensland HHC local government collections the solvent based waste paint is transported to the Dandenong Geocycle facility and the water based paint is immobilised and disposed to landfill.

For the Councils, without collections by contractors, small amounts of dried waste paint are allowed in the garbage and waste paint and empty paint tins with minimal paint residue can be placed in the recycling bin.

#### 4.2.7 Australian Capital Territory

Within the ACT waste paint is currently accepted at Mugga Lane Resource Management Centre and the Mitchell Resource Management Centre. Both act as permanent drop-off points. The locations of these centres are shown in Figure 4-7 (Appendix C).

The Nolan-ITU (2004) estimate of the waste paint collected HHC program within the ACT in 2002/03 was 24 tonne. This increased to 55 tonne in 2012/13.

#### 4.2.8 Northern Territory

In the Northern Territory HHC collection programs are delivered through local government services. A literature search has identified that Alice Springs and Darwin both provide drop off services for household chemicals including paint. The locations of these municipalities are shown in Figure 4-8 (Appendix C).

The amount of waste paint collected from these two municipalities has been estimated by applying an average per household HHC collection quantity of 0.42 kg/household to recovery in these municipalities. The 2012/13 quantity collected is estimated to be 19 tonne.

#### 4.2.9 HHC collection program summary

The annual quantities of waste paint collected from the ACT, NSW, Queensland, South Australia, Tasmania, Victoria and Western Australian HHC collection programs, including packaging, are presented in Table 4-2.

In 2012/13 the total quantity of waste paint, including packaging, captured nationally by the HHC collection programs is estimated to be 2,760 tonne. The historical growth in the HHC collection programs is shown in Figure 4-9.

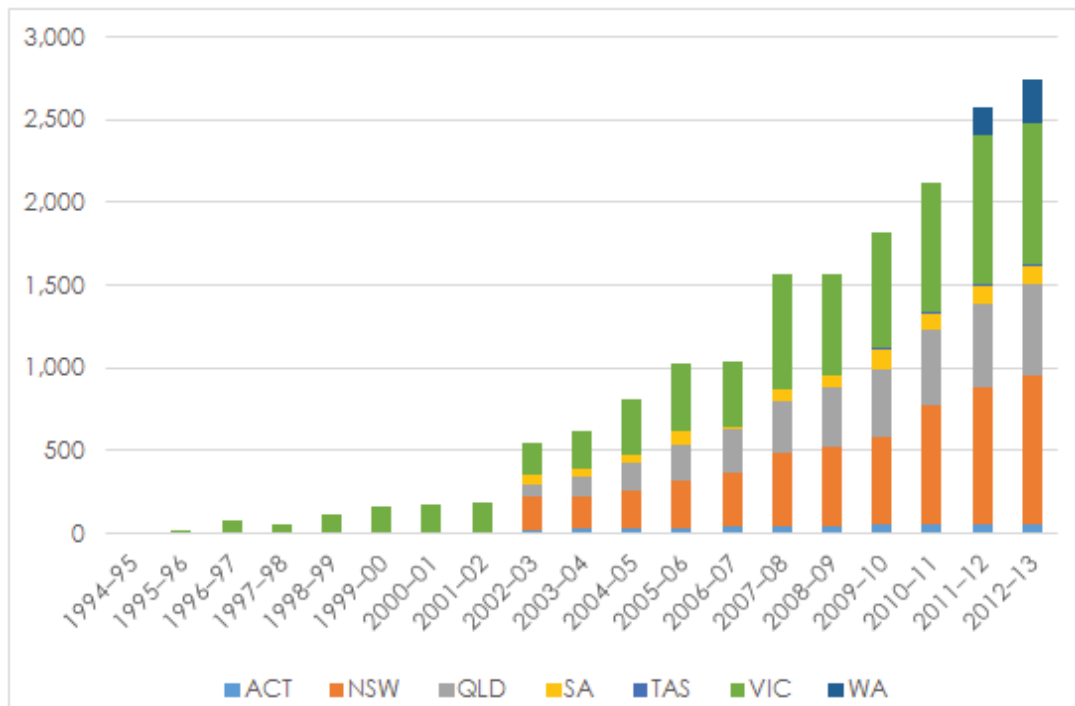
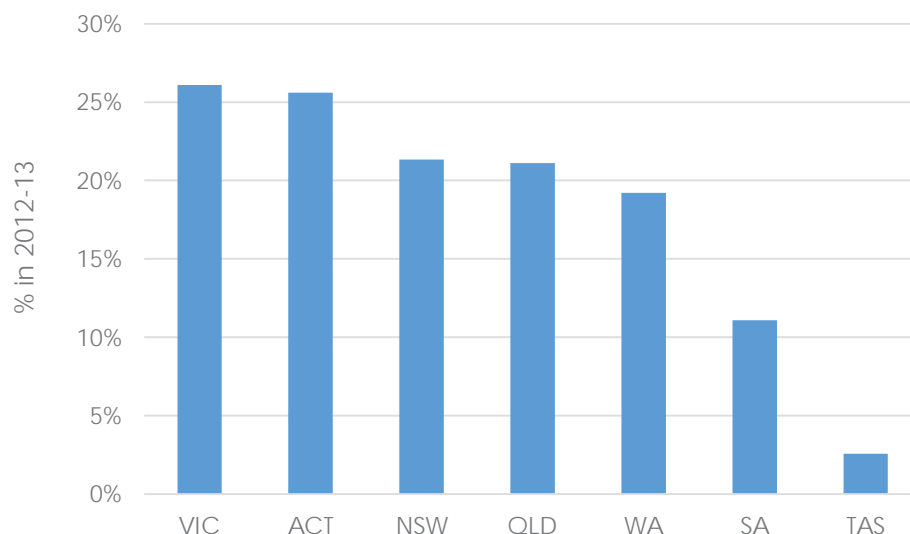


Figure 4-9: HHC collection program -1994/95 to 2012/13 waste paint quantities (tonne/yr)

Of the 7.2% unused paint from retail paint sales, current HHC state/territory collections collect the following estimated percentage, by weight, for the 2012/13 year (Figure 4-10).



**Figure 4-10: HHC collection programs collections of unused paint as a percentage of retail sales, by weight (2012/13)**

Estimates of water to solvent based waste paint fractions received through the jurisdictional HHC collection programs are presented in Table 4-5.

**Table 4-5: HHC collection program water based waste paint portion of total (by weight)**

State	Water based portion	Year	Source
Victoria	75%	2012	GlobalPSC (2013) <i>"The Case for Voluntary Paint Stewardship"</i> .
NSW	64%	2009/10	NSW EPA (2012), <i>"Household Chemical CleanOut Program-Annual Report 2009-2010"</i> .
	61%	2010/11	NSW EPA (2012), <i>"Household Chemical CleanOut Program-Annual Report 2010-2011"</i> .
SA	70%	Full program	
	81%	2010/11	2013 advice from Zero Waste SA.
	82%	2011/12	
WA	73%	2011/12	MWAC (2012), <i>"Household Hazardous Waste Program Annual Report 01 July 2011 - 30 June 2012"</i> .
	78%	2012/13	MWAC (2013) <i>"Household Hazardous Waste Program Annual Report 2012/2013"</i> .

As noted in Section 3.3.5 the water and solvent based paint consumption split has shifted in favour of water based paint over past decade to a 90% to 10% ratio. The lower waste paint water based paint fraction as shown in Table 4-5 indicates a time lag between purchase and disposal.

ToxFree et al. (2013) advised that waste paint collections operating in countries with a more mature waste paint collection system report water to solvent based paint ratios of about 85% to 15%.

### 4.3 Industry led *PaintCare* trial

The industry-led pilot trade waste paint collection program, *PaintCare*, ran for six months from 1 March 2013 to 31 August 2013. The trial was funded by the APMF in partnership with Sustainability Victoria, DuluxGroup, Valspar, PPG and Haymes Paints.

The purpose of the trial was to provide data on the potential volume of unwanted trade paint in the trade community as well as behaviour patterns of participating trade painters. This is reported in ToxFree et al. (2013) "*PaintCare Trade Trial*".

The program was managed by Toxfree. Trade paint drop off sites were established at the Geelong, Bendigo, Melton, Monash, Shepparton and Mornington Detox Your Home (DYH) sites.

Key results from the *PaintCare* trial were:

- |   |              |
|---|--------------|
| ▪ Total quantity collected (including packaging): | 127.6 tonnes |
| ▪ Water to solvent based waste paint split:       | 69%/31%      |
| ▪ paint to packaging split:                       | 77%/23%      |
| ▪ Steel to plastic packaging split                | 86%/14%      |

The water to solvent based waste paint split is slightly lower than that found through the HHC collection programs.

### 4.4 Current waste paint collection systems

#### HHC collection systems

Toxfree manages several State based HHC collection programs in partnership with state agencies including Sustainability Victoria, West Australian Local Government Association (WALGA) and the NSW EPA. It also managed the Victorian *PaintCare* trial.

In the Victorian, NSW, and WA jurisdictions the waste paint, including packaging, is taken to a Toxfree facility where the waste paint is separated from the packaging. These facilities also include Chemsal facilities which were acquired by Toxfree in 2013. The facilities are located at:

- Laverton North, Victoria;
- Gillman, SA;
- St Marys, NSW; and
- Kwinana, Western Australia.

Upon receipt at facilities the paint cans are crushed in a HazPak 3000 densification machine, following a manual front end sort to separate into water based paint, solvent based paint, steel packaging, and plastic packaging. The HazPak machine removes waste paint residues from the packaging. Steel bales are sent to Norstar for recycling, and the plastic packaging is landfilled.

In South Australia the HHC program is managed by Transpacific and the collected waste paint is initially treated at Transpacific's Dry Creek Facility.

In Queensland most local government HHC collection programs are managed by either ToxFree or Transpacific. Transpacific transports the waste paint to its Narangba liquid treatment plant.

The current waste paint disposal/ recycling pathways from the household hazardous collection programs are listed in Table 4-6.

**Table 4-6: Household hazardous collection program disposal/ recycling pathways**

State	Water based	Solvent based
Queensland	Immobilised and disposed of to landfill.	Recovery of solvent for reuse and thermal processing.
NSW	Thermal processing in Victoria: Treated at the Geocycle Dandenong plant and used as a cement kiln fuel.	
South Australia	Immobilised and disposed of to landfill.	Recovery of solvent for reuse and thermal processing.
Victoria	Thermal processing in Victoria: Treated at the Geocycle Dandenong plant and used as a cement kiln fuel.	
Western Australia	Water replacement in cement manufacture. (Prior to 2012 it was transported to Victoria).	Thermal processing in Victoria.
Tasmania	Typically dried and disposed of to landfill.	Typically dried and disposed of to landfill.

It has not been possible to obtain the ACT and Northern Territory disposal/recycling pathway information.

A further description of the current waste paint disposal/ recycling pathway is provided in Section 4.5.

### Other waste paint drop off and treatment systems

Several liquid waste treaters are equipped to accept waste paint from both households and trade painters.

The waste paint received at these treatment facilities is typically sourced from:

- householder and trade painter drop offs;
- dedicated waste company collections; and
- transfer stations with paint drop off areas that are operated by Councils and the private sector.

The Toxfree liquid waste treatment sites are listed in the above section as are the Transpacific Dry Creek, SA and Narangba Queensland sites. Transpacific also operates liquid waste treatment sites in Melbourne, Sydney and Newcastle.

Veolia also operates several liquid waste treatment sites within Australia.

Veolia has advised that although they do not receive waste paint collected through the HHC programs they do accept waste paint from waste collection contractors at their Brooklyn (Melbourne Victoria) and Kilburn (Adelaide SA) liquid waste treatment facilities. Waste paint received in Tasmania is sent to Melbourne for treatment. Veolia also has a WA joint venture with Transpacific servicing Perth and Kalgoorlie.

Water-based paint from Veolia's treatment plants is filtered through a press and the filtercake/sludge is stabilised with cement and sent to landfill. The solvent-based paint is sent to Geocycle in Dandenong for treatment into a cement kiln fuel or in the case of the Kilburn facility is mixed with other solvents to produce a fuel for a medical waste incinerator.

Veolia also operates an indirect thermal facility where contaminated soil desorption occurs at 400°C to strip mercury. Solvent based paint is partially used as a fuel for this facility.

Veolia sends steel packaging to Sims for recycling and the plastic packaging is landfilled.

Veolia has indicated that it is not constrained in accepting more waste paint and there are no technical barrier to the ongoing recovery of paint and paint cans.

#### **4.5 Current waste paint disposal/ recycling pathways**

The primary current waste paint disposal/ recycling pathway for the HHC collection programs are:

- thermal processing;
- distillation and solvent recovery; and
- water replacement in cement manufacture.

In addition small quantities of water based paint is used in the manufacture of compost.

##### **4.5.1 Thermal processing**

The primary disposal pathway for waste paint collected through chemical collection programs is use in cement kilns as an alternative fuel.

#### **Geocycle**

All of the Victorian, NSW, and Western Australian solvent based paint collected by Toxfree through the respective state HHC collection programs is sent to Geocycle's Dandenong plant in Victoria. Victoria's HHC water based waste paint is also sent to Geocycle. Geocycle is a wholly owned subsidiary of the Cement Australia group.

Geocycle treats industrial by-products and wastes, including waste paint, for use in Cement Australia's cement kilns.

For waste paint that is accepted directly at the plant, the waste paint and packaging is put through an auger which breaks the cans. The cans are then shredded. The shredded mass is then washed with waste solvents from other sources. The steel packaging is then magnetically separated and sent via conveyor into a skip which is picked up by a steel recycler.

As water based paint has a low calorific value it is blended with several high calorific value solvents, including solvent based waste paint. This increases the cost of the DYH program. The washed liquid is blended with other waste liquids to produce a single specification fuel.

The fuel is then transported to the SA cement kilns for burning. The fuel results in cost savings in the generation of heat for the cement kiln process that consumes a large amount of energy. The residual products from this process are clinker, bottom ash, and fly ash.

Most of the waste paint received by Geocycle in 2012/13 was sourced from the state based chemical collection programs managed by Toxfree).

Other sources of waste paint to the Dandenong plant include consolidated customers including Transpacific and Geocycle's waste paint community can drop at Dandenong. The waste paint community can drop facility is also available to trade painters.

#### 4.5.2 Distillation and solvent recovery

Transpacific operates a solvent recovery facility at its Dry Creek Facility in South Australia. The solvent recovered from the distillation process is reused by industry and the sludge is transported interstate for further processing. It is understood, although not confirmed by Transpacific, that a significant component of the sludge is transported to Victoria for fuel production. A similar process is understood to be undertaken by Transpacific in Queensland.

#### 4.5.3 Water replacement in cement manufacture

The water based waste paint collected through the Western Australian household chemical collection program is used as a water replacement in cement manufacture.

#### 4.5.4 Summary

There are a range of disposal/recycling pathways for waste paint and packaging. For waste paint, the options are thermal processing, water replacement in cement, and stabilisation followed by landfill. The options for steel packaging are landfill and recycling. Plastic packaging is landfilled.

Estimates of ultimate disposal destinations based upon industry advice and knowledge is presented in Table 4-7.

**Table 4-7: Ultimate disposal destination (as percentages)**

Disposal and Recovery Route	Waste paint				Steel packaging	
	Landfill	processing, solvent recovery, water	With Recycled Cans and to sewer	Stormwater and Sewer	Landfill	Recycled
HHC collection programs	-	89.3%	10.7%	-	-	100%
Kerbside collection	Garbage	100%	-	-	100%	-
	Recyclables	-	-	100%	-	100%
	Hard waste	90%	-	10%	-	90%
C&I and C&D collections	Garbage	100%	-	-	100%	-
	Recyclables	-	-	100%	-	100%
Self haul	90%	-	10%	-	90%	10%
Household skips	100%	-	-	-	100%	-
Liquid treatment plants	-	89.3%	10.7%	-	-	100%
Stormwater and sewer	-	-	-	100	-	-

The ultimate disposal destinations for trade painter's waste paint dropped off at liquid waste treatment plants are considered to be equivalent to the HHC collection program.

## **4.6 Potential waste paint disposal/ recycling pathway**

### **4.6.1 Polymer substitute for cement**

Although not a current end use, water based waste paint, through its mineral constituents, is a potential polymer substitute in cement. Toxfree has advised that although it has undertaken trials, it cannot find a commercial partner for using water based paint as a concrete additive.

Sustainability Victoria has engaged Swinburne University to undertake research to investigate this potential application.

The Independent Cement and Lime Group (ICL) is supporting Swinburne University in this research. ICL is a Port Melbourne based supplier of cement and cement-based products. It is a subsidiary of Adelaide Brighton in a joint venture with Barro Group and is Victoria's leading supplier of cement and cement-blended products.

### **4.6.2 Dewatering**

Industry has suggested dewatering of water based paint through dehydration processes. At this stage the costs are understood to be higher than other options.

### **4.6.3 Other cement kilns**

Adelaide Brighton Cement (ABC) is a major cement manufacturer in Australia. It has a cement kiln in Port Adelaide and another at Angaston the north-east of Adelaide. It is understood that the front end of these kilns could be reconfigured to accept waste paint as a fuel.

### **4.6.4 Recovery of plastic packaging**

Plastic HPDE packaging is approximately 14% of the trade waste paint packaging and its use is increasing particularly for water based paint (Toxfree et al.; 2013)

This packaging is currently being disposed to landfill as it is difficult to remove sufficient paint from the polypropylene (PP) and high density polyethylene (HDPE) packaging for recycling.

Toxfree is investigating the recovery of waste paint plastic packaging and improving beneficial reuse outcomes through HazWaste Fund funding support. It is understood that the recycling of waste paint plastic packaging into new paint containers in New Zealand has been successfully implemented.

### **4.6.5 Paint reuse opportunities**

Swinburne University of Technology (2013) undertook a study into the end of life options, for waste paint in Australia. They found that paint reuse results in a reduction of illegal waste paint disposal and also reduces the need for new paint manufacturing.

The survey of trade painters undertaken as part of this project (Section 5) has identified that some waste paint is either left with householders or is given away. Although a portion of this waste paint is likely to be reused the it is considered to be a minor contributor to paint consumption. For this reason it has not been included in the MFA.



## 5. Trade painter survey

### *Key outcomes – trade painter survey*

*275 trade painter organisations and 40 members of the National Institute of Painting & Decorating were surveyed in 2013/14 across all jurisdictions.*

*It was found that about 32% of the waste paint in trade painter stockpiles is destined for disposal.*

*Before disposal waste paint is stored in trade painter stockpiles for an average of 2.4 years.*

**Table 5-1: Estimated trade waste paint annual disposal quantities**

<i>Trade waste disposal pathway</i>	<i>%</i>
<b><i>Via stockpile</i></b>	
<i>Solidify paint and dispose with rubbish</i>	<i>20.4%</i>
<i>Donate to friends &amp; community groups</i>	<i>22.6%</i>
<i>Take to liquid waste treatment companies</i>	<i>8.1%</i>
<i>Council depots that accept waste paint</i>	<i>16.4%</i>
<i>Sub-total</i>	<i>67.5%</i>
<b><i>Direct disposal</i></b>	
<i>Leave with customers</i>	<i>31.0%</i>
<i>Pour on ground</i>	<i>1.1%</i>
<i>To sewer</i>	<i>0.4%</i>
<i>Sub-total</i>	<i>32.5%</i>
<b><i>Total</i></b>	<b><i>100.0%</i></b>

*The average trade painter business stockpile is 568 L. This is slightly less than the 604 L found as part of the Victorian trade painter survey conducted in 2010.*

### 5.1 Purpose

A short survey of trade painters was undertaken as part of the study to gain a qualitative understanding of waste paint stockpiling and disposal behaviour by trade painters.

### 5.2 Overview of the trade painter industry

#### 5.2.1 Master Painters Associations

State based Master Painter Associations are the primary representative bodies for trade painters in Australia.

All of the state and territories, with the exception of Western Australia and the Northern Territory, have Master Painters Associations. These organisations are affiliated through the national Master Painters Association (MPA) federation.

The Master Painters & Decorators Australia represents master painters in Western Australia.

All MPAs and the Master Painters & Decorators Australia are membership based. The MPA has advised that its members include most of the major painting contractors, one of which has over 1,500 employees nationally. All painters that are members are certified.

The membership of these associations, as shown in Table 5-2, has been estimated by one of the associations.

**Table 5-2: MPA membership by jurisdiction (estimated)**

Jurisdiction	Members
Victoria (Victoria)	420
Victoria (Tasmania)	30
NSW	800
ACT	80
South Australia	140
Queensland	330
Total	1800

The Master Painters & Decorators Australia (WA) is estimate to have 375 members. Dulux has advised that there are about 20 large trade painter organisations in the Northern Territory.

### 5.2.2 National Institute of Painting & Decorating

The National Institute of Painting & Decorating (NIP&D) is an incorporated non-profit organisation for the Australian and Pacific painting industry.

The NIP&D has a national database of readers who receive its weekly e-news. The painters who receive the weekly NIP&D e-news are as follows:

▪ ACT	88
▪ NSW	613
▪ QLD	560
▪ SA	139
▪ NT	63
▪ TAS	88
▪ WA	300
▪ VIC	425
▪ Total	2,276

The NIP&D has advised that almost all of the e-news readers are trade painters. The NIP&D also advised that they also produce an on-line magazine for the painting industry with a readership of 40,000.

### 5.2.3 Total number of trade painters

Advice was also sought from the Master Painters Association of Victoria on trade painter industry trends. They advised:

- There are approximately 8,000 painters in Victoria;

- 63 of the Victorian members are considered to be major (>\$800,000 annual turnover); and
- industry employment has been stable over the past decade.

### 5.3 Survey questions and participants

The short survey of trade painters was undertaken from December 2013 through to January 2014. The survey was undertaken electronically using SurveyMonkey. The results were aggregated by Nolan Consulting.

The survey questions are summarised as follows:

1. Advise on number of employees.
2. State state/territory location.
3. Estimate volume of paint that you have.
4. What is the percentage of stored paint will be disposed (i.e. not reused by your business)".
5. If waste paint drop-off locations were made available to trade painters, what would suit you best?
6. Advise on disposal method.

The invitation to participate in the survey was sent out to:

- all MPA jurisdictional members on 18<sup>th</sup> December 2013 (except for Victoria);
- MPA Victorian members on January 17<sup>th</sup> January 2014;
- Master Painters & Decorators Australia (WA) on 18<sup>th</sup> December 2013;
- Over 20 of Dulux's major Northern Territory trader painter clients in late December 2013; and
- NIP&D national database of readers on 20<sup>th</sup> December 2013.

The survey closed on 29<sup>th</sup> January 2014. The survey respondents are presented in Table 5-3.

**Table 5-3: Master painter survey respondents**

Trade Painter organisation	Respondents	Estimated Members	% of members	% of total respondents
ACT	10	80	12.5%	3.6%
New South Wales	67	800	8.4%	24.4%
Northern Territory	7	20	35.0%	2.5%
Queensland	48	330	14.5%	17.5%
South Australia	37	140	26.4%	13.5%
Tasmania	5	30	16.7%	1.8%
Victoria	54	420	12.9%	19.6%
Western Australia	47	375	12.5%	17.1%
Total	275	2,195	12.5%	100.0%

Forty responses were obtained from the National Institute of Painting & Decorating. The split on a jurisdictional basis was as follows: NSW (11), Qld (7), SA (5), Vic (11), and WA (6).

#### 5.4 Findings from master painters survey

The survey found that over 80% of the trade painter businesses represent SMEs of less than 10 employees, and that less than 2% have more than 50 employees (Table 5-4).

**Table 5-4: Employee ranges for respondents**

Employees	Respondents	
	No	%
0 to 10	230	83.6%
11 to 19	24	8.7%
20 to 49	17	6.2%
50 to 199	1	0.4%
199+	3	1.1%
Total	275	100.0%

The MPA (Victoria) also advised that its members include most of the major painting contractors including one employer that has over 1,000 employees nationally.

Of the survey respondents 78% were located in metropolitan centres with the remainder being located within regional communities.

##### 5.4.1 Trade paint stockpile

In total the volume of paint stockpiled by the respondents was 156,453 L. The breakdown across the jurisdictions is presented in Table 5-5.

**Table 5-5: Trade paint stockpiles**

Trade Painter organisation	Respondents	Stockpile (L) (respondents)	Jurisdiction stockpile estimates		
			(Litres)	(Tonnes)	%
ACT	10	7,844	188,256	226	4.9%
New South Wales	67	41,545	1,488,179	1,786	38.4%
Northern Territory	7	2,480	21,257	26	0.5%
Queensland	48	26,489	546,336	656	14.1%
South Australia	37	14,940	169,589	204	4.4%
Tasmania	5	4,400	79,200	95	2.0%
Victoria	54	40,190	937,767	1,125	24.2%
Western Australia	47	18,565	444,375	533	11.5%
Total	275	156,453	3,874,959	4,650	100.0%

In the analysis of the 2010 Victorian trade painter survey Sustainability Victoria (2010) *“Paint Product Stewardship Trial Proposal - Victorian Model”* estimated the MPA Victorian members account for one sixth of the Victorian trade paint consumption.

The number of trade painters employed in Victoria by MPA of Victoria members has been estimated through the survey to be about 3,000. As there are about 8,000 painters in Victoria, this study has assumed that MPA members across the nation account for one third of total trade paint consumption.

This assumption has been applied across all jurisdictions, after extrapolating from jurisdictional respondents to total membership, to obtain total jurisdictional estimates of the stockpiles.

The 2012/13 national trade waste stockpile is estimated to be 4,650 tonne (excluding packaging).

The survey identified that approximately 81.3% of the estimated stockpile is water based paint. This is generally higher than the portion water based waste paint that is collected in the HHC programs (Table 4-5) and considerably greater than the 69% that was collected in the *PaintCare* trial (Section 4.3). This suggests that trade painters intend to use a greater portion of the water based paint than the solvent based paint.

#### 5.4.2 Waste paint disposal

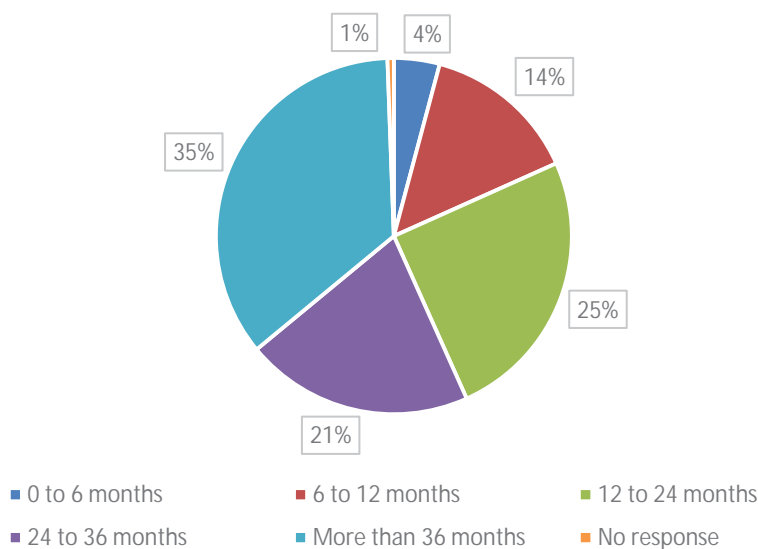
Survey participants were asked to estimate the waste paint in stockpile that they will dispose of rather than reuse. Respondents estimated that 31.9% of the waste paint would require eventual disposal. Participants were asked to estimate the length of time in which paint was stockpiled before disposal.

The range of time prior to disposal is shown in Table 5-6.

**Table 5-6: Period before paint in stockpile is disposed**

Range	No.	%	Volume in storage (L)	% by volume
0 to 6 months	20	7.3%	6,498	4.2%
6 to 12 months	66	24.0%	22,130	14.1%
12 to 24 months	67	24.4%	39,105	25.0%
24 to 36 months	57	20.7%	32,420	20.7%
More than 36 months	63	22.9%	55,400	35.4%
No response	2	0.7%	900	0.6%
Total	275	100.0%	156,453	100.0%

The mean period of storage before disposal was 29 months (2.43 years). The duration in time within the stockpile prior to disposal is shown graphically in Figure 5-1.



**Figure 5-1: Trade waste survey - Duration of paint in stockpile before disposal**

Participants were asked "If you need to dispose of some of your stored paint, how often would you use the nominated disposal methods". The responses are presented in Table 5-7.

**Table 5-7: Disposal pathways from the stockpile**

Disposal pathway	Responses					Portion of disposal via this pathway
	Always	Frequently	Sometimes	Rarely	Never	
<b>Via stockpile</b>						
Solidify paint and dispose with rubbish	10%	24%	32%	18%	16%	20.4%
Donate to friends & community groups	10%	21%	44%	17%	8%	22.6%
Take to liquid waste treatment companies	5%	7%	14%	20%	55%	8.1%
Council depots that accept waste paint	12%	13%	28%	22%	24%	16.4%
<i>Sub-total</i>						67.5%
<b>Direct disposal</b>						
Leave with customers	17%	50%	27%	3%	3%	31.0%
Pour on ground	0%	0%	5%	8%	87%	1.1%
To sewer	0%	0%	1%	5%	93%	0.4%
<i>Sub-total</i>						32.5%
<b>Total</b>						100.0%

The portion of disposal via the pathways has been estimated by quantifying the frequencies.

It should be noted that the '*leave with customer*', '*pour on ground*' and '*to sewer*' disposal options are direct disposal pathways and not via the stockpile. It is therefore assumed that trade painters considered the question related to all disposal.

### 5.4.3 Estimate of annual trade paint disposal

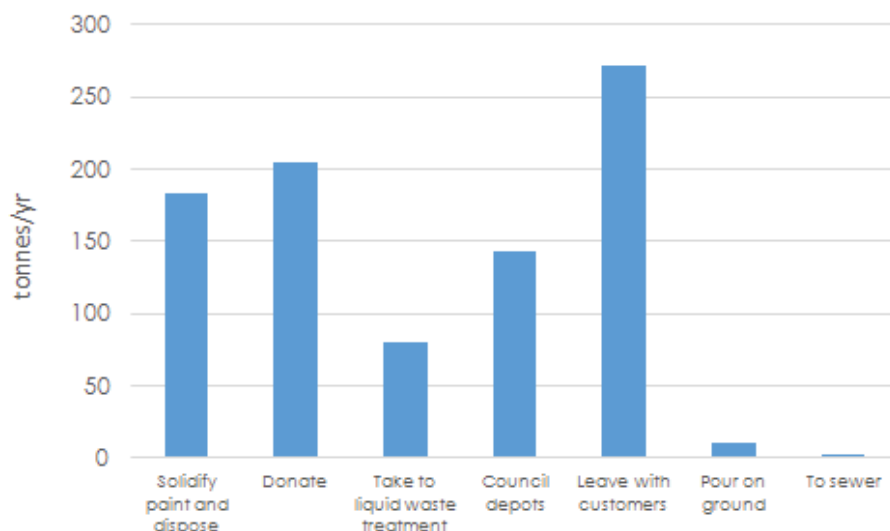
The annual quantity of trade waste disposed of from the stockpile is assumed to be the estimated total stockpile of 4,650 tonne by the portion that is to be disposed via the stockpile (31.9%) divided by the time from entering the stockpile (2.43 years). On this basis the annual disposal from the stockpile is estimated to be 613 tonne. Based upon Table 5-6 this accounts for 67.5% of the total disposal. Accounting for the '*leave with customer*', '*pour on ground*', and '*to sewer*' disposal pathways the total annual disposal of trade waste is estimated from the survey to be 898 tonne.

The estimated national trade waste annual disposal quantities (excluding packaging) are presented in Table 5-8 and shown graphically in Figure 5-2.

**Table 5-8: Estimated trade waste paint annual disposal quantities**

Trade waste disposal pathway	%	Quantity (tonne)
<b>Via stockpile</b>		
Solidify paint and dispose with rubbish	20.4%	184
Donate to friends & community groups	22.6%	205
Take to liquid waste treatment companies	8.1%	81
Council depots that accept waste paint	16.4%	143
<i>Sub-total</i>	<i>67.5%</i>	<i>613</i>
<b>Direct disposal</b>		
Leave with customers	31.0%	272
Pour on ground	1.1%	10
To sewer	0.4%	3
<i>Sub-total</i>	<i>32.5%</i>	<i>285</i>
<b>Total</b>	<b>100.0%</b>	<b>898</b>

The above trade waste disposal estimate of 898 tonne/year obtained from the trade survey is considerable lower than estimated from waste compositional data (See Table 7-2). For this reason auditing for waste paint in C&I and C&D waste and recycling streams is recommended as one of the highest priorities for future data collection (see Section 9.6).



**Figure 5-2: Trade waste survey – estimated annual waste paint disposal via pathways (tonne/yr)**

The unused paint that is left with customers can be used for touch-ups and other general use. However, this paint may require clearing out by the households, in which case it is eligible for local HHC collections.

#### 5.4.4 Trade painter interest in a co-ordinated drop of system

63% of respondents advised that either weekday or weekend waste paint drop-off days would be acceptable. Weekdays were preferred by 23% and weekends were preferred by 14%.

#### 5.5 Survey of NIP&D Participants

The results from the survey of National Institute of Painting & Decorating (NIP&D) participants were generally similar to the survey of MPA members. The majority of participants were SMEs. The proportion of solvent based paint was slightly lower than MPA members, and the proportion of waste paint in the stockpile to be disposed of was 33.4% as compared to the 31.9% in the MPA survey. The holding periods in the stockpile before disposal were almost identical.

#### 5.6 Comparison with 2010 trade painter survey outcomes

The Sustainability Victoria (2010) *“Paint Product Stewardship Trial Proposal - Victorian Model”* summarised the outcome of a 2010 trade painter survey. 106 of 450 the Victorian MPA members responded to the survey.

A comparison of key survey outcomes is presented in Table 5-9.

**Table 5-9: Comparison of 2010 and 2013/14 trade painter surveys**

Survey outcomes	2010	2013/14
Average trade painter business stockpile (L)	604	568
Portion of stockpile to be disposed that is landfilled (%)	41%	19.8%



## 6. Waste paint in garbage, recycling and illegally disposed

### *Key outcomes – waste paint in disposal and recycling pathways*

*The quantity of waste paint in garbage and recyclables put out for collection by residents and businesses has been estimated from available waste audit data.*

*Waste paint, including packaging, is estimated to range between 0.05% and 0.14% by weight of household kerbside garbage. Waste paint, including packaging, is estimated to be about 0.008% of household kerbside recyclables.*

*Waste paint in the C&I and C&D waste stream is estimated to be 0.05%, and in the C&I and C&D recycling stream is estimated to be 0.01% of the total stream.*

*About 320 tonne/year of trade waste paint is estimated to be disposed of to industrial liquid treatment plants.*

*The illegal disposal of waste paint to sewer and stormwater is estimated to be 100 tonne/year. It appears to have fallen over the past decade, possibly as a result of education and improved access to HHC collection programs.*

### 6.1 Purpose

A significant component of waste paint is disposed of via waste and recycling collection services and direct drop offs.

In addition to the waste paint captured through the HHC programs some householders and trade painters take waste paint directly to liquid waste treatment facilities. A small quantity of waste paint is also disposed of illegally via stormwater and the sewer.

Research into these disposal pathways is presented in this section.

### 6.2 Garbage and recycling total quantities

There are three primary waste and recycling streams. There are:

- municipal;
- commercial and industrial (C&I); and
- construction and demolition (C&D).

Municipal can be split into domestic kerbside and other municipal services including (i) household hard waste, (ii) self haul to transfer stations and recycling facilities, and (iii) household skips to transfer stations. Total waste quantity data is generally available for each of these municipal waste streams.

C&I and C&D data on both waste and recycling quantities is generally available for each jurisdiction.

Estimates of the quantity of waste paint within these streams have been made as follows:

- determining total waste/recycling quantities;
- identifying best available compositional analysis through audits to determine waste paint percentage; and
- multiplying the waste paint percentage by the total quantity.

Estimated kerbside, C&I and C&D waste and recycling quantities for 2012/13 are presented in Table 6-1.

**Table 6-1: Estimated 2012/13 State and Territory garbage and recycling quantities (tonne)**

State/Territory	Kerbside		C&I		C&D	
	Waste	Recycling	Waste	Recycling	Waste	Recycling
ACT	45,100	185,000	116,900	243,500	45,700	276,100
New South Wales	1,303,000	2,457,000	2,371,500	3,099,500	1,749,000	5,156,000
Northern Territory	113,900	13,600	40,600	13,600	124,700	400
Queensland	1,242,000	1,005,000	1,673,100	1,029,300	823,500	894,100
South Australia	262,700	446,000	183,200	446,900	433,700	1,239,200
Tasmania	130,400	86,300	235,400	70,500	38,800	0
Victoria	1,438,700	1,543,600	1,605,700	2,484,400	1,386,800	3,140,700
Western Australia	673,000	521,400	1,035,200	847,000	1,885,100	1,155,400
Total	5,208,800	6,257,900	7,261,600	8,234,700	6,487,300	11,861,900

The total quantities of other municipal waste streams across all jurisdictions for 2012/13 are presented in Table 6-2.

**Table 6-2: Estimated 2012/13 State and Territory other municipal waste quantities (tonne)**

Jurisdiction	Household hardwaste	Self-haul of waste by householders	Skips to landfills/ transfer stations from residential sites
ACT	10,100	17,800	2,900
New South Wales	196,400	302,400	59,300
Northern Territory	0	9800	1,000
Queensland	122,800	265,900	41,800
South Australia	44,600	69,100	4,600
Tasmania	13,800	21,400	5,900
Victoria	151,400	234,900	40,100
Western Australia	84,000	183,500	25,900
Total	623,100	1,104,800	181,500

The source of these estimates is provided below.

### 6.2.1 Kerbside garbage (waste)

With the exception of South Australia and Western Australia, the kerbside garbage data has been obtained from the 'total municipal waste to landfill' information provided in the Department of the Environment (2013) "*National Waste Reporting 2013*" report. This report is an online resource presenting the most recently available picture of waste management and resource recovery in Australia. Most of the data in this report is for the 2010/11 financial year.

In the absence of 2012/13 data the 2010/11 waste flow data have been assumed hold for the 2012/13 financial year.

The kerbside garbage estimates have been obtained by subtracting the 'private delivery' from the 'total municipal waste to landfill'.

The South Australian data has been sourced from Rawtec (2013) "*South Australia's Recycling Activity Survey 2011-12 Financial Year Report Zero Waste SA*" and the Western Australia data from 2011-12 has been sourced from Hyder Consulting (2013). In both cases non-kerbside data has been subtracted.

### **6.2.2 Kerbside recycling**

The kerbside recycling data for a jurisdictions except for South Australia and Western Australia was obtained from the Department of the Environment (2013) "*National Waste Reporting 2013*" 2010-11 data. The South Australian and Western Australian sources are as per the kerbside waste.

As the Department of the Environment (2013) information does not provide a split between municipal and C&I recycling data for the ACT, this split is estimated from the average allocation across the other jurisdictions.

### **6.2.3 C&I and C&D waste and recycling**

The annual C&I and C&D waste and recycling quantities data for most jurisdictions has been obtained from the Department of the Environment (2013) "*National Waste Reporting 2013*".

As for the kerbside recycling the split C&I, C&D, and municipal waste and recycling data for the ACT has been estimated from the average allocation across the other jurisdictions.

For South Australian (for C&I only) and Western Australian (for C&I and C&D) the annual quantity data sources were as per the kerbside garbage. The Western Australian C&I waste estimate is calculated from the 2010/11 C&I recycling quantity of 847,012 tonne divided by the published recovery rate (45%) less the recycling quantity. The same method is applied to estimate the C&D waste quantity.

### **6.2.4 Other municipal waste**

#### **Hard waste**

Hard waste collection services occur in many municipalities across Australia with the collection being more common in metropolitan areas. These collections are usually conducted annually but are sometimes twice annual or on an annual 'at call' basis. Some Councils recycle steel cans obtained from the hardwaste.

Council information provided to households indicates that only empty paint cans or cans with dry paint residue would be collected. This is generally accepted by householders with only a minimal amount of liquid paint presented.

The primary source of the hard waste quantities has been the NSW EPA (2013b) 2011/12 data set. This data was then applied to all other states except for the Northern Territory and Western Australia on a household pro rata basis. The hardwaste in the Northern Territory was assumed to be zero as data was not provided. The Western Australian data was sourced from WA DEC (2013b).

## Self haul

Australian householders have the opportunity to haul waste to transfer stations or directly to landfills in most parts of the country. This is commonly undertaken in trailers, small trucks and utes. At many sites, the loads can be disposed of without direct supervision. At some sites signage at entry gates advises that paint cannot be disposed of. This is controlled to varying degrees.

At some sites loads are visually observed on entry and any liquid paint is rejected and householders are advised of alternative disposal methods (household chemical collections, liquid treatment plants). Many sites have no active control of paint disposal.

The self haul data sources used are:

- Department of the Environment (2013) *"National Waste Reporting 2013"* for ACT and Queensland.
- NSW Local Government Waste and Resource Recovery Data Report 2011–12 for NSW.
- Local Government Waste and Recycling Census for Western Australia.
- per capita average of ACT and NSW data for all other jurisdictions.

## Household skips

A well developed Australia wide industry exists providing 2 m<sup>3</sup> to 8 m<sup>3</sup> skips to households in urban areas. These skips are most commonly used during building renovations, site works or larger scale clean ups.

The total skip waste quantities are based upon Nolan-ITU's (2004) estimate of 2.5% of the total C&I waste stream.

### 6.3 Proportion of waste paint in garbage and recycling streams

The fractions of the waste and recycling streams that are estimated to be waste paint have been obtained from a range of audits and surveys. The fractions applied to the MFA are presented below.

#### 6.3.1 Kerbside garbage

A primary paint waste disposal route is the kerbside garbage collection system. Disposal of paint cans with dried waste paint residue is accepted in kerbside garbage collections by many Councils. A limited number of householders, despite Council's advice to the contrary, also dispose of liquid paint in the garbage bin.

Sustainability Victoria engaged EC Sustainable (2013) conducted an audit of kerbside household waste and recycling bins throughout Victoria. The audits were conducted with four metropolitan and four non-metropolitan councils. A sample of 200 households were audited for garbage bins for each council and 200 recycling bins in the four non-metropolitan areas.

Twelve paint cans were found within the 1600 garbage bins. Of the 9.7 kg/household/week EC Sustainable (2013) found that waste paint comprised 0.0079 kg. This is 0.08% of the total waste stream.

The NSW EPA (2013c) domestic kerbside audit data suggests that paint makes up 0.14% of all waste in the garbage stream.

APC Environmental Management (2009) "*Kerbside domestic waste and recycling audit*" for ACT No Waste, December 2009 found that 0.3% and 0.2% of the domestic garbage stream in the ACT contained hazardous wastes in 2007 and 2009 respectively. Hazardous wastes included paint, fluorescent lights and batteries. It is assumed that 25% of these wastes may be waste paint. On the basis of the 2009 audit an estimate of 0.05% is assumed.

Based upon the above research, the following estimates waste paint in kerbside garbage have been assumed for the MFA:

- ACT: 0.05%
- Victoria: 0.08%
- NSW: 0.14%
- All other states 0.10%

The proportion of the garbage stream that is assumed to be waste paint in the other States (Northern Territory, Queensland, South Australia, Tasmania, and Western Australia) is the mean of the above recent Victorian and NSW audit estimates

For comparison purpose the results of major kerbside garbage audits undertaken in Victoria, South Australia, NSW and Southern Tasmania in the early to mid-2000's and reported by Nolan-ITU (2004) are presented in Table 6-3.

**Table 6-3: Paint residue and cans as a percentage of the total garbage stream**

Audit	Year	Households Audited	Paint Component
Victoria	2004	400	0.10%
South Australia	2002	1,330	0.21%
NSW	2003	400	0.09%
Southern Tasmania	2002	352	0.02%
Weighted Average	-	-	0.15%

In aggregate the adopted 2012/13 estimates are slightly lower than the 2002/03 audit estimates possibly as a result of the expansion in HHC collection programs.

### 6.3.2 Kerbside recycling

Kerbside recycling services are now provided to most Australian households. Most Councils designate steel cans as a material that can be recycled through the kerbside service.

Most Councils neither encourage nor discourage households from placing steel paint cans in with the kerbside recyclables. Where such information is provided it typically advises that any minor residual paint should be dry.

All tin-plate steel paint cans in the kerbside recycling stream are recovered by magnetic separation at materials recovery facilities (MRFs) and sent for reprocessing.

APC Environmental Management (2009) "*Kerbside domestic waste and recycling audit*", for ACT No Waste, December 2009 found that hazardous wastes (paint, fluorescent lights and batteries) were found in the ACT's kerbside recycling stream,

The Australian Packaging Covenant (2013) "*Annual Report 2013*" determined that 44,100 tonnes of steel cans were recovered nationally in 2012/13. Audits of steel paint cans recovered at Victorian and NSW MRFs were carried out by Nolan-ITU (2004). The total steel can material audited was 1.94 tonnes of which 22.8 kg (1.18%) was paint cans and dried paint.

Based upon the Nolan-ITU (2004) data, and in the absence of more recent audit data, it is estimated that there was about 520 tonnes of waste paint can recovery in 2012/13 through kerbside recycling collections.

As the total national kerbside recycling rate for 2012/13 is estimated to be 6,257,853 tonne the waste paint composition across the total recycling stream is 0.008%. This is applied uniformly across all jurisdictions.

### **6.3.3 Industrial waste**

For the purposes of this study industrial waste includes commercial and industrial (C&I) waste, and construction and demolition (C&D) waste.

Limited audit data is available to determine the waste paint fractions for these waste streams.

The only relevant data source found is the NSW DECCW (2010) "*Disposal based survey of the commercial and industrial waste stream in Sydney*".

Between June and August 2008, DECCW surveyed loads of mixed C&I waste that arrived at six landfills and six transfer stations in Sydney. This included visually assessing C&I loads at the selected 12 waste sites, and sorting by weight garbage bags generated by eight selected industry sectors that were dropped off at nine of the sites. For the mixed load surveys waste paint waste found be less than 0.2% of 'Other' wastes which is 2.0% of the total mixed load waste stream.

As all or the wastes within the table of other wastes presented in NSW DECCW (2010) total a maximum of 7.2%, the waste paint share is estimated as  $0.2 \times 2 / 7.2$  (0.056%). For the purpose if the MFA this is rounded down to 0.05 % as an acknowledgement that the 0.056% is an upper limit estimate based upon the data.

The NSW EPA (2013c) advised that only extremely low amounts of paint are recorded as single material loads disposed at landfills (<5 tonnes in the Sydney Metropolitan Area for municipal waste and less than 5 tonnes for commercial and industrial waste). Based upon the total C&I waste stream sent to landfill in Sydney in 2007/08 of 2,223,856 tonnes, less than 5 tonne equates to 0.00022%. This is insignificant.

There is no direct survey or audit data available for waste paint in the C&I recycling or the C&D waste and recycling streams.

In the absence of any reliable survey data the proportion of waste paint in the C&I and C&D recycling streams is assumed to be 0.01%. This is the mean waste paint composition estimated across the nation for kerbside recycling.

In the absence of any reliable survey data the proportion of waste paint in the C&D landfill streams is assumed to be 0.05%. This is the estimated waste paint composition in the C&I waste to landfill stream.

### **6.3.4 Other municipal waste**

The compositional analysis of other municipal wastes is largely based upon research undertaken by Nolan-ITU (2014).

## Hard waste

The quantity of waste paint disposed of through hard waste collections is based upon surveys carried out by Nolan-ITU in inner urban, middle suburbs and new emerging urban fringe areas during March 2004. A total of 824 households that had access to a hardwaste collection the within the next one or two days were surveyed.

The total mass of waste paint was equivalent to 0.071 kg for each household provided with a hard waste collection service.

The composition has then been calculated by multiplying this per household weight by the number of household serviced and dividing by the total quantity of hard waste collected within the jurisdiction.

The estimated composition applied to each jurisdiction is presented in Table 6-4.

**Table 6-4: Estimated fraction of waste paint in hard waste collections**

State	Fraction
ACT	0.11%
NSW	0.10%
QLD	0.10%
SA	0.09%
TAS	0.11%
VIC	0.10%
WA	0.08%

No information on hard waste recovery in the Northern Territory was discovered during data collection for this study.

## Household skips

A survey of skips from eighty four sites across Melbourne, including a wide range of sources, was conducted in April 2004 by Nolan-ITU (2004).

The percentage of the surveyed waste that was waste paint, including containers, was 0.055%. In all 65.6 kg of waste paint, including containers, was found in the 119 tonne of waste.

Paint residue and cans is a smaller fraction of the total waste from household skips when compared to self-hauled waste. This reflects the higher volume of soils, concrete, timber and other materials that dominate this disposal route.

APC Environmental Management (2011) undertook a *Skip bin waste composition audit at Mugga Lane Landfill* on behalf of ACT NoWaste in 2011.

The audit was carried out over five days to represent weekday activity of loads delivered to the landfill from skip bins. 210 skips were visually audited. Of these loads 70% was delivered by seven contractors. In total 52% of waste conveyed was from domestic origins, 28% from construction and demolition (C&D) and 15% commercial and industrial (C&I) waste. In all 0.059% of the waste paint from the skips was assumed to be recoverable. On the basis of all information the MFA assumes that 0.055% of the household skip waste is waste paint.



## Self haul

The fraction of waste paint disposed of through self-haul to transfer stations and landfills is based upon surveys carried out by Nolan-ITU (2004) in inner urban, middle suburbs and new emerging urban fringe areas during March 2004. At a number of sites householders disposed of both empty/dry paint cans and liquid paint, even where this material is not allowed. At most sites there is no opportunity for recovery and therefore the material is landfilled. At a small number of sites staff actively recover steel, including paint cans, for recycling.

The quantity of paint waste self-hauled to landfill was determined from audits of 191 vehicles.

A total of 79 cans were recorded. Based upon empty clean steel can weights, the total weight of the steel cans was 44.6 kg, liquid paint was 38 kg, and dry paint was 11.1 kg. As the total load was 52.9 tonne this equates to a waste paint fraction of 0.176%.

This estimate is well above current expectations and is higher than the hard waste and skip estimates. It is considered that the skip estimate of 0.055% is a more realistic current estimate.

### 6.4 Proportion of waste paint that is packaging

All the identified reporting of audited waste paint material aggregates both the waste paint and the paint packaging.

The assumed proportions of the waste paint by weight that is can and paint (liquid and dry residues) for each of the disposal and recovery routes proportions are presented in Table 6-5.

**Table 6-5: Mass of product (as percentages)**

Disposal and Recovery Route	% Product by Weight		
	Packaging	Liquid Paint	Dry Residue
Kerbside collected garbage	75	0	25
Kerbside collected recyclables	75	0	25
Kerbside collected hard waste	75	0	25
Self haul to transfer station and landfills	47	41	12
Household skips	47	41	12
Household chemical collection programs	30	62.5	7.5
C&I and C&D waste	67	0	33
C&I and C&D recyclables	67	0	33
Liquid waste treatment plants	25	68.7	6.3
Sewer disposal (paint only)	0	100	0

These proportions are generally consistent with the Nolan-ITU (2004) estimates which were determined by a range of methods including advice from third parties, observations of residual amounts, and by direct weighing. Sustainability Victoria (2010) report that packaging within the DYH program collections is about 30% of the total weight.

The minor adjustments only apply to the kerbside disposal and recovery routes and reflect the greater proportion of plastic packaging that is now sold into the market. This has resulted in a reduction in the packaging component from 80% to 75%.



## 6.5 Paint density

Specific gravity estimates for water and solvent based paint are presented in Section 3.3.6.

The Nolan-ITU (2004) assumption that the equivalent liquid weight for dry paint residue (water and solvent based) is twice the weight of the dry residue has been applied to the MFA.

## 6.6 Processing at liquid waste treatment plants

The low quantity of waste paint received at liquid waste treatment facilities that is sourced directly from householder drop offs (less than 1% of that sourced from transfer stations) is considered to be due to the cost of disposal and access to HHC collection programs. For the purpose of this study this is assumed to be zero.

The quantity of trade painter sourced waste paint received at these facilities is estimated to be 320 tonne/year based upon the analysis of the trade painter survey. For comparison purposes the 2013 six month Victorian *PaintCare* trial generated 128 tonne over 6 months.

## 6.7 Illegal dumping

Nolan-ITU (2004) referenced the Monash Centre for Environmental Management (1997) report titled "*The Potential for Reduction and Recovery of Waste Paint in Melbourne*". This study referred to 22 000 L/year of waste paint being disposed of illegally via stormwater and sewer drains within metropolitan Melbourne. This converted to 148 tonne/yr nationally on a pro rata population basis.

In its 2011 submission to the ACCC Melbourne Water advised that it supported the voluntary product stewardship scheme but did not provide any information on sewerage & stormwater system waste paint loadings.

South East Water advised that waste paint disposal to sewer and stormwater is not an active focus of research. The water industry recognises the challenges of managing contaminants from diffuse sources such as domestic properties (South East Water pers. comm., 2014). As a result, they rely on community education and HHC collection programs. It has been identified that the increase in resource recovery opportunities may result in a short term increase in the discharge of paint to sewer. The increase would be driven by customers cleaning out their paint tins prior to disposal for recycling. In the response to this risk the water industry may elect to increase its education campaigns. The water industry advocates appropriate labelling on paint packaging to educate customers not to wash paint down the drain.

Sydney Water also advised that waste paint is not a focus of research as it is not considered to be a major concern. Its focus is on grease trap wastes from shopping centres and petrol stations. Sydney Water is unaware of any investigations of illegal disposal to stormwater and sewer in recent years. This is considered to be due to improved consumer awareness. Sydney Water advised that it would be extremely difficult to identify an illegal disposal of water based paint unless it entered a small treatment plant.

The Water Corporation of Western Australia advised that waste paint is not a topic that comes up frequently as there are few reports of illegal disposal incidents. The Water Authority advised that the local authorities have good household hazardous waste collection services and education programs in place.

In conclusion there is no evidence to suggest that illegal waste paint disposal to sewer and water is significant. Further the rate of disposal via these pathways is likely to have fallen over the last decade as a result of education and the access to HHC collection programs.

The trade painter survey data estimated that about 10 tonne/yr was illegally disposed of (to sewer and stormwater as well as on the ground). The household sourced waste paint disposed to sewer and stormwater in 2012/13 is assumed to be 90 tonne/yr. This represents about a 40% reduction from the Nolan-ITU (2004) estimate which is indicative of industry advice that illegal disposal is a lesser problem now that it may have been a decade ago.

## 7. Material flow outcomes

### Key outcomes – material flows

The primary outcome of the material flow analysis is the allocation of waste paint to the various pathways including stockpiling and disposal.

**Table 7-1: Storage and disposal as a percentage of sales by weight (paint only)**

Pathway	2002/03		2012/13	
	Retail	Retail	Trade	Total
<b>Total Sales (tonne)</b>	<b>72,501</b>	<b>84,820</b>	<b>111,755</b>	<b>196,575</b>
<b>Use</b>	<b>89.4%</b>	<b>92.2%</b>	<b>93.2%</b>	<b>92.8%</b>
<b>Annual increase in storage (paint only)</b>	<b>6.1%</b>	<b>0.8%</b>	<b>1.3%</b>	<b>1.1%</b>
<i>Disposal/recycling route</i>				
<i>Kerbside garbage</i>	2.5%	3.2%	-	1.4%
<i>Kerbside recycling</i>	0.2%	0.3%	-	0.1%
<i>Kerbside hardwaste</i>	0.2%	0.4%	-	0.2%
<i>Self-haul of waste by householders</i>	0.7%	0.6%	-	0.2%
<i>Skips to landfills/ transfer stations from residential sites</i>	0.1%	0.1%	-	0.0%
<i>Household hazardous chemical (HHC) collections</i>	0.6%	2.3%	-	1.0%
<i>Trade hazardous chemical (THC) collections</i>	-	-	0.2%	0.1%
<i>Trade paint to landfill (C&amp;I sources)</i>	-	-	2.1%	1.2%
<i>Trade paint to recycling (C&amp;I sources)</i>	-	-	0.5%	0.3%
<i>Trade paint to landfill (C&amp;D sources)</i>	-	-	1.9%	1.1%
<i>Trade paint to recycling (C&amp;D sources)</i>	-	-	0.7%	0.4%
<i>Illegal dumping (retail)</i>	0.2%	0.1%		0.0%
<i>Illegal dumping (trade)</i>	-	-	0.0%	0.0%
<b>Total disposal</b>	<b>4.6%</b>	<b>7.0%</b>	<b>5.5%</b>	<b>6.1%</b>

The significant increase in the HHC collection programs over the past decade, from 0.6% to 2.3% of retail sales, has resulted in a reduction in the rate of stockpile increase from 6.1% to 0.8%.

The increase in retail disposal/recycling from 4.6% in 2002/03 to 7.0% in 2012/13 is due to the increase in collection through the HHC collection programs. This has also resulted in a significant reduction in the rate of stockpile increase.

More waste paint is disposed of to landfill via the kerbside garbage system than is recovered by the HHC collection programs.

The rate of increase in the trade waste paint stockpile is estimated to be 60% greater than for the retail sector. This is in part due to limited access to designated drop off points.

Trade painters have confirmed that the trade paint stockpile is increasing.

## 7.1 Purpose

The data underpinning the MFA is presented in Sections 3 to 6 of this report. The outcomes of the MFA are presented in this section. While the focus of the assessment is the present day material flows, a 10 year projection in the change of the retail and trade waste paint stockpile has been made.

The primary data sources are in Section 4 for HHC collection program, Section 5 for trade waste paint disposal and Section 6 for all other waste paint disposal and recycling pathways.

## 7.2 Overview of key calculations

The consumption data is as provided through the GfK surveys. The calculation methods used to determine the disposal quantities are described in Sections 4 to 6.

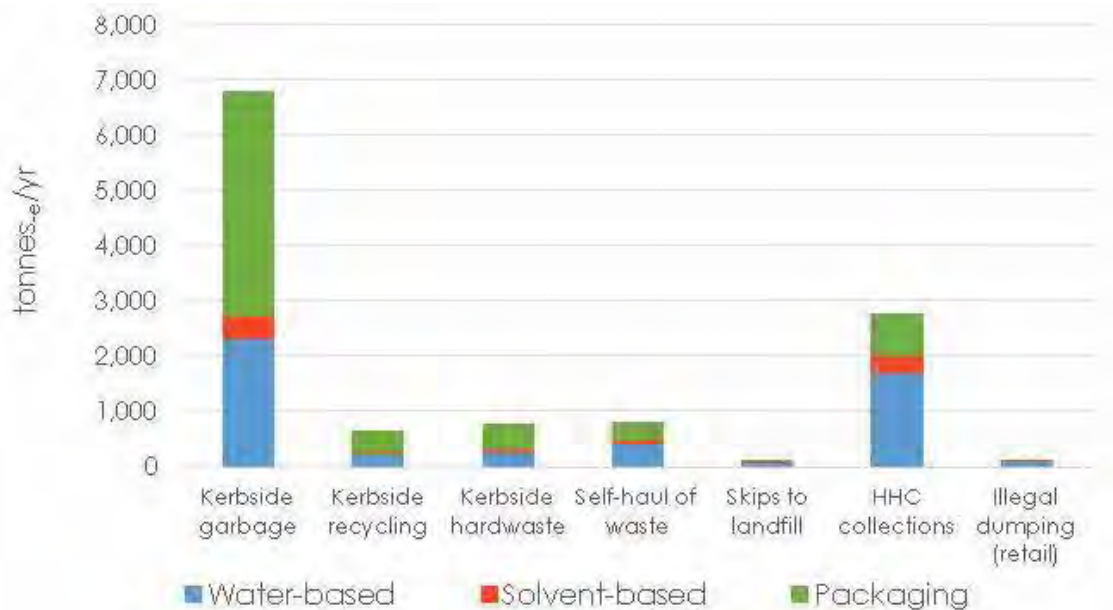
The change in storage is estimated through the difference between paint packaging sales and paint packaging disposal via all of the disposal pathways. The total change in the stockpile is then calculated by adding the weight of the paint.

The paint use is then calculated as consumption less disposal and less any increase in storage.

## 7.3 Disposal and recycling pathways

A summary of the 2012/13 material flows is presented in Table 7-2.

Figure 7-1 presents the estimated 2012/13 disposal and recycling quantities for all retail disposal pathways.



**Figure 7-1: Retail waste paint estimated 2012/13 disposal and recycling pathways**

This indicates that while the HHC collection programs have been successful, there is still a large quantity disposed of to landfill via the kerbside garbage system.

Worksheet name:	Summary table	
Description:	Summary tables for the 2012-13 year	2013 Select year as required
References:	Calculated value	
Worksheet comments:		

Table 7.2: Summary of 2012/13 waste paint material flows

Use phase	Retail			Trade			Combined Retail and Trade			
	Water-based (tonnes-e)	Solvent-based (tonnes-e)	Packaging (tonnes-e)	Water-based (tonnes-e)	Solvent-based (tonnes-e)	Packaging (tonnes-e)	Water-based (tonnes-e)	Solvent-based (tonnes-e)	Packaging (tonnes-e)	Total (tonnes-e)
Consumption	72,867	11,953	6,276	100,949	10,806	6,365	173,816	22,758	12,641	209,215
Use	67,358	10,888	N/A	94,363	9,822	N/A	161,721	20,710	N/A	182,431
Paint use as a % of consumption	92.4%	91.1%	N/A	93.5%	90.9%	N/A	93.0%	91.0%	N/A	92.8%
Storage change (+ve value is increase in storage)	480	181	179	1,082	346	329	1,758	527	509	2,598
Storage - cumulative	21,656	8,788	8,249	12,815	4,244	3,934	20,993	527	509	2,598
Storage change as a % of consumption (paint only)	0.7%	1.5%	2.9%	1.1%	3.2%	5.2%	0.9%	2.3%	4.0%	1.1%
Disposal route										
01 - Kerbside garbage	2,310	410	4,080	0	0	0	2,310	410	4,080	6,800
02 - Kerbside recycling	220	40	390	0	0	0	220	40	390	650
03 - Kerbside hardwaste	260	50	460	0	0	0	260	50	460	770
04 - Self-haul of waste by householders	400	70	340	0	0	0	400	70	340	810
05 - Skips to landfills/ transfer stations from residential sites	70	10	60	0	0	0	70	10	60	140
06 - Household hazardous chemical (HHC) collections	1,690	300	770	0	0	0	1,690	300	770	2,760
07 - Trade hazardous chemical (THC) collections	0	0	0	230	30	80	230	30	80	340
08 - Trade paint to landfill (C&I sources)	0	0	0	2,150	250	2,440	2,150	250	2,440	4,840
09 - Trade paint to recycling (C&I sources)	0	0	0	490	60	550	490	60	550	1,100
10 - Trade paint to landfill (C&D sources)	0	0	0	1,920	220	2,170	1,920	220	2,170	4,310
11 - Trade paint to recycling (C&D sources)	0	0	0	700	80	790	700	80	790	1,570
12 - Illegal dumping (retail)	80	10	0	0	0	0	80	10	0	90
13 - Illegal dumping (trade)	0	0	0	10	0	0	10	0	0	10
Total	5,030	890	6,100	5,500	640	6,030	10,530	1,530	12,130	24,190
Disposal as a % of consumption (paint only)	6.9%	7.4%	97.2%	5.4%	5.9%	94.7%	6.1%	6.7%	96.0%	6.1%
Final fate										
Landfill	2,970	520	4,860	4,070	470	4,610	7,040	990	9,470	17,500
Steel recycling	470	80	1,240	1,210	140	1,430	1,680	220	2,670	4,570
Energy recovery and paint recycling	1,510	270	0	210	20	0	1,720	290	0	2,010
Stormwater, sewer and ground	80	10	0	10	0	0	90	10	0	100
Total	5,030	880	6,100	5,500	630	6,040	10,530	1,510	12,140	24,180

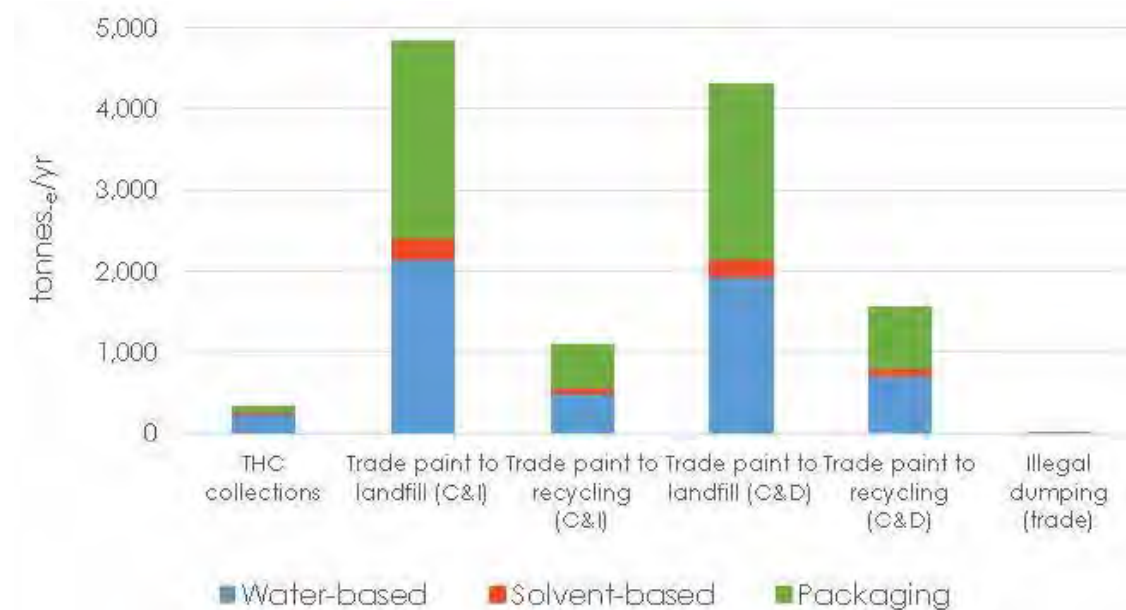
The relative proportions of the disposal and recycling pathways presented in Figure 7-1 are of a similar order to that presented in the Australian Bureau of Statistics survey on Environmental Issues: Waste Management, Transport and Motor Vehicle Usage of Mar 2012. This survey reported on household disposal pathways for waste paint and their containers. Responses, as shown in Table 7-3 were obtained from 974,600 households.

**Table 7-3: ABS 2012 survey - Ways households disposed of waste paint and their containers**

Disposal pathway	Proportion (%)
Collected from house as part of municipal kerbside recycling	13.6
Collected from house with the usual (non-recycled) garbage	34.8
Collected from house by a special service	5.2
Took it to a general/special area at the dump/waste transfer station	37.9
Took it to a business or shop/central point	8.3
Poured down the drain	.(1)
Buried/gave away/sold	1.7
Other	1.2

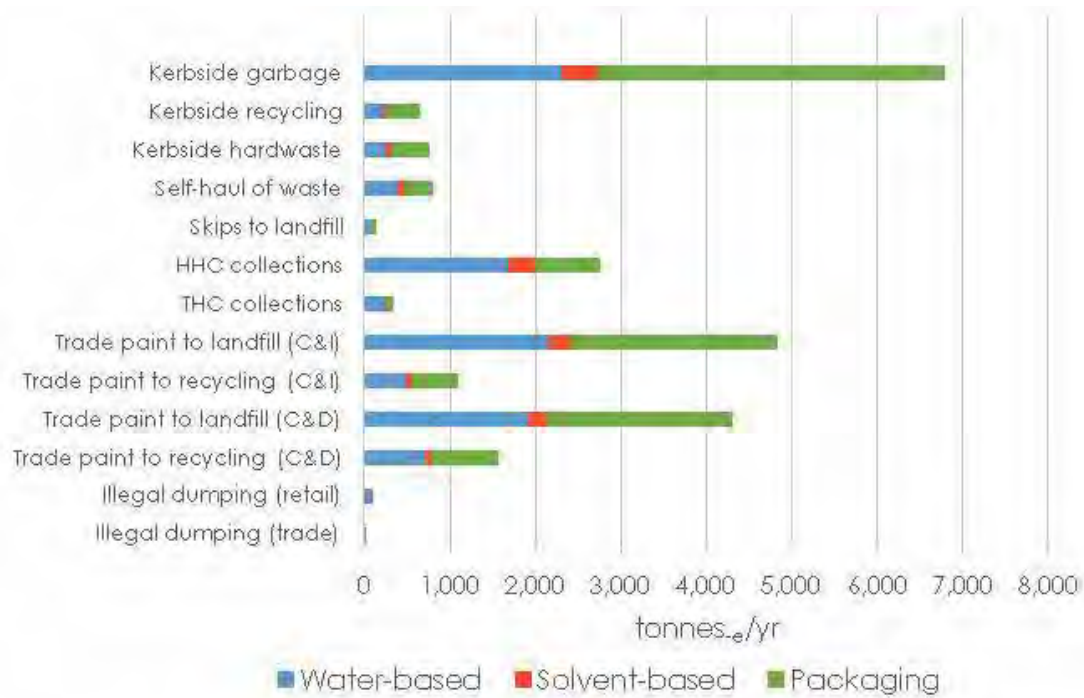
(1) Not available for publication, therefore assumed to be less than 1%.

Figure 7-2 presents the estimated 2012/13 disposal and recycling quantities for all trade paint disposal pathways. While the overall quantities are lower than for the retail waste paint, there is significant disposal to landfill.



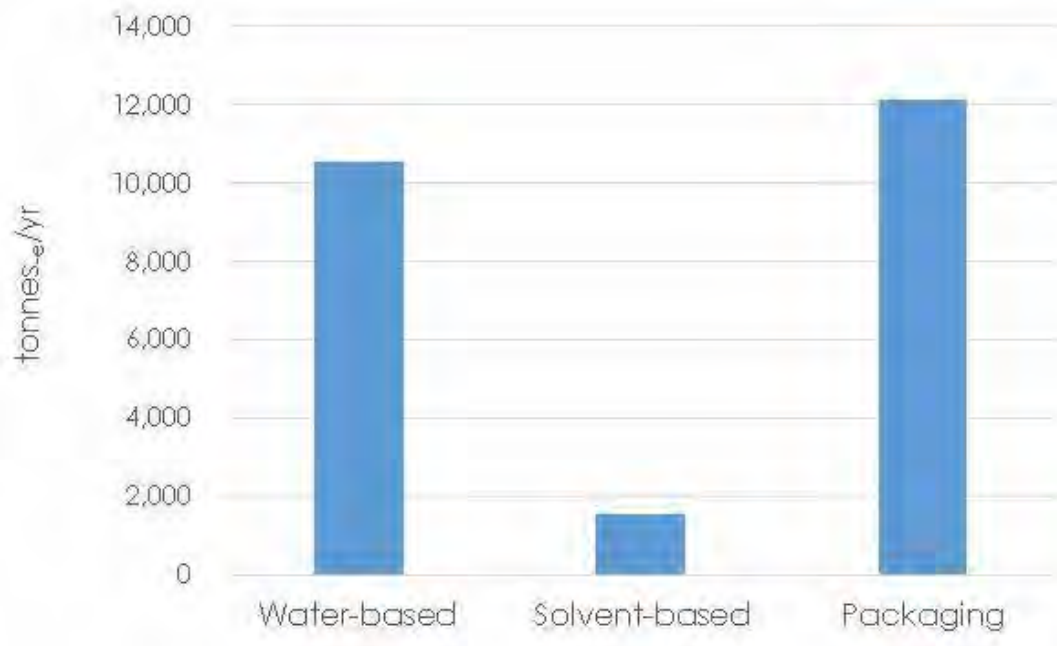
**Figure 7-2: Trade waste paint estimated 2012/13 disposal and recycling pathways**

Figure 7-3 presents the estimated 2012/13 disposal and recycling quantities for all retail and trade paint disposal pathways. This confirms the significant opportunity to improve in waste paint recovery particularly from the waste streams being disposed of to landfill.



**Figure 7-3: Total waste paint estimated 2012/13 disposal and recycling pathways**

Figure 7-4 presents the breakdown of the disposal and recycling quantities into water and solvent based paint as well as packaging.

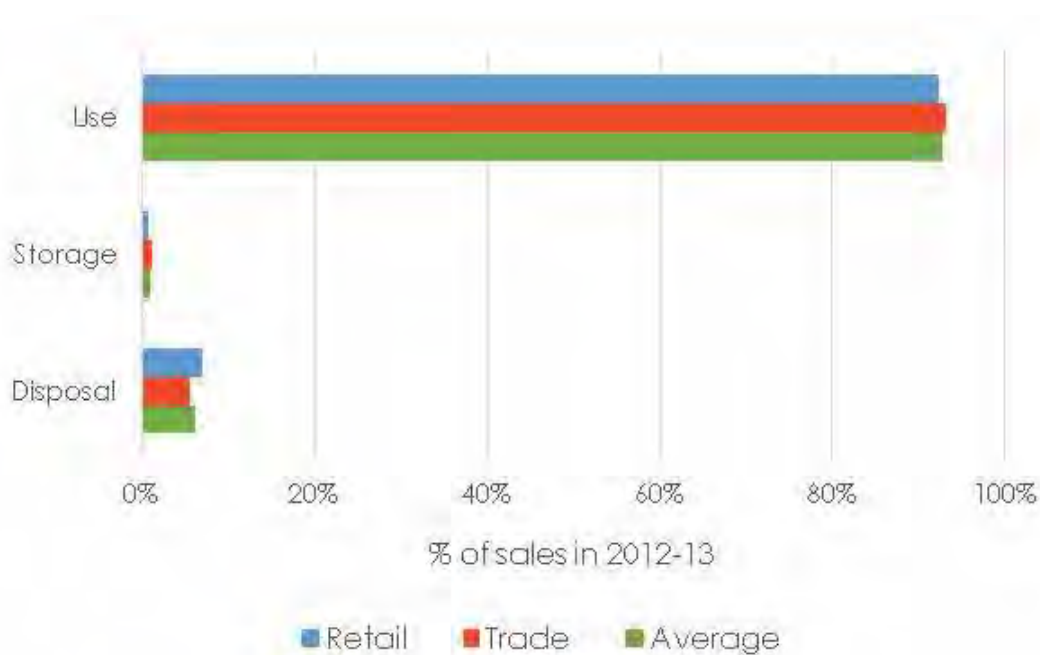


**Figure 7-4: Total waste paint estimated 2012/13 disposal and recycling water and solvent based waste paint and packaging estimates**

It is evident that water based paint should be the primary focus of the voluntary stewardship scheme and that consideration also need to be given to the packaging.

Figure 7-5 presents the estimated paint consumption, use, storage, and disposal 2012/13 ratios for retail, trade and total (as percentages).





**Figure 7-5: Estimated paint consumption, use, storage, and disposal 2012/13 ratios for retail, trade and total (as percentages)**

The storage and disposal estimates for the paint only, as fractions of consumption are presented in Table 7-1 for 2012/13. This table also compares the 2002/03 estimates for the retail sector.

The slight increase in retail disposal/recycling from 4.6% in 2002/03 to 6.8% in 2012/13 is due to the increase in collection through the HHC collection programs. This has also resulted in a significant reduction in the rate of stockpile increase.

Trade painters have confirmed that there is the trade paint stockpile is increasing.

#### 7.4 Trends in stockpiling

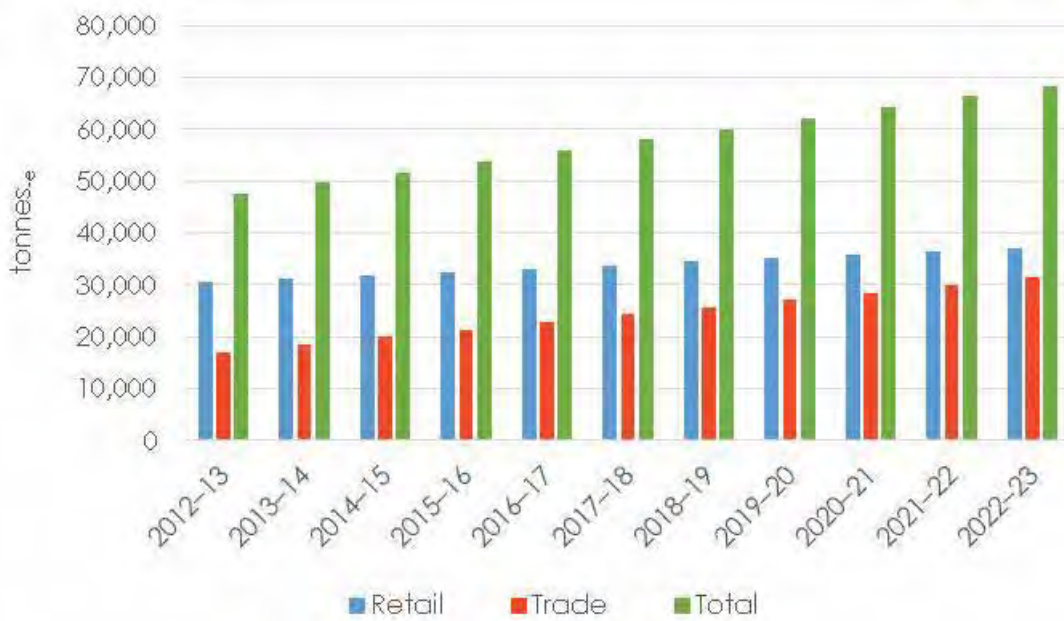
As the annual paint sales are assumed to be static over the next decade and without an increase in the waste paint collections, with or without a stewardship program, the only projection that can be made is the change in storage.

Very indicative estimates of the size of the stockpile of waste paint have been estimated by assuming:

- any stockpiled paint that is more than 10 years old is excluded; and
- the annual stockpile increases, as of 2012/13, are as shown in Table 7-2.

Figure 7-6 presents the retail, trade and total stockpile projections for the next decade.





**Figure 7-6: Retail, trade and total stockpile projections (waste paint only) – 2012/13 to 2022/23 – Do nothing case**

The projected 2012/13 trade waste paint stockpile of 17,000 tonne is significantly greater than estimated in the trade painter survey.

Further research into the quantity of waste paint in both the retail and trade stockpiles is recommended.

## 8. Data reliability

The reliability of key and significance of key data used in the MFA is presented in Table 8-1.

**Table 8-1: Data reliability**

Data	Accuracy	Significance	Comment
Sales	H	H	Provided by Industry
HHC collection program quantities	M-H	H	Accurate in all states, except for some Queensland Councils and Northern Territory.
Waste paint in kerbside garbage	M	H	Based upon audit data from most jurisdictions.
Waste paint in kerbside recycling	L-M	M	Based upon audit data from only a few jurisdictions.
Waste paint in C&I and C&D waste streams	L	H	Very limited data based upon NSW audit.
Waste paint to packaging ratios in HHC collections	M-H	M-H	Provided through HHC program reporting.
Waste paint to packaging ratios in other disposal routes	L	M-H	Based upon 2003 audits, Nolan Consulting developed estimates, and some industry verification.
Current stockpile estimates	L	M-H	Current estimates based upon MFA modelling with limited verification available.

It is recommended that the highest priorities for future data collection focus on:

- auditing for waste paint in C&I and C&D waste and recycling streams;
- survey to estimate waste paint to packaging ratios for the key disposal routes; and
- physical survey to assist in quantifying current stockpiles.

## 9. Conclusions

### 9.1 Sales

1. 152.7 million litres of water based and solvent based A&D paints, including imports, was sold into the Australian market in 2012/13. Retail sales accounted for 43% of all sales. The paint to be included in the voluntary product stewardship scheme as per the waste paint definition accounted for 126.7 million litres in 2012/13.
2. 94% of the paint sales proposed to be subject to the voluntary product stewardship scheme is A&D paint. The remaining six percent is woodcare products (wood stains, lacquers, and oils).
3. 90% of paint sales are water based paints with remaining 10% being solvent based. The solvent based paints are less widely used than a decade ago.
4. On a volumetric basis, 68% of paint is sold in steel packaging with 32% sold in plastic packaging. The plastic packaging is currently limited to 10 L and 15 L units and is typically about 65% of the weight of steel packaging for the equivalent packaging unit size.
5. The specific gravity of paint is about 1.3 kg/L for water based paint and about 1.2 kg/L for solvent based paint.
6. The proportion of total paint sales, by volume, that are retail sales has fluctuated around an average of about 40% over the past decade. It has increased from 38% in 2008/09 to 43.5% in 2012/13.
7. Based upon historical trends zero growth in paint sales is assumed over the next decade.

### 9.2 Current systems and processes

8. All Household Hazardous Chemical (HHC) collection programs include waste paint.
9. Victoria, NSW, South Australia and Western Australia have State sponsored HHC collection programs. HHC collection programs in Queensland, the ACT and the Northern Territory are provided by individual Councils. No formal HHC collection program with waste paint treatment is currently provided in Tasmania.
10. HHC collections occur from temporary (mobile) and permanent drop off sites.
11. In 2012/13 a total of 2,760 tonne of waste paint, including packaging, is estimated to have been collected through the HHC programs across the nation. This is an increase of over 2,200 tonne since 2003/04. The States of NSW, Victoria and Queensland collect close to 80% of 2012/13 total.
12. Apart from the PaintCare trial undertaken in Victoria in 2013 there have been no dedicated collection programs for waste paint generated by trade painters.
13. Most solvent based waste paint is either used as a high calorific value fuel source for cement kilns or is distilled to recover solvents for reuse with the residual sludge generally used as a fuel source.
14. Most water based waste paint is immobilised and disposed of to landfill with the bulk of the remainder being used as a low calorific value fuel source.
15. Research is underway to develop new treatment and recycling pathways for waste paint with a particular focus on water based paint.

### 9.3 Trade painter practices

16. About 32% of the waste paint in trade painter stockpiles is destined for disposal. The three most popular disposal pathways from the stockpile are (i) solidify and landfill disposal, (ii) donation and (iii) Council drop off site. The primary direct disposal pathway is to leave the waste paint with the customers.
17. The average trade painter business stockpile is 568 L. This is slightly less than the 604 L found as part of the Victorian trade painter survey conducted in 2010.

### 9.4 Waste paint in disposal and recycling pathways

18. The quantity of waste paint in garbage and recyclables put out for collection by residents and businesses has been estimated from available waste audit data.
19. Waste paint, including packaging, is estimated to range between 0.05% and 0.14% by weight of household kerbside garbage. Waste paint, including packaging, is estimated to be about 0.008% of household kerbside recyclables.
20. Waste paint in the C&I and C&D waste stream is estimated to be 0.05%, and in the C&I and C&D recycling stream is estimated to be 0.01%.
21. About 320 tonne/year of trade waste paint is estimated to be disposed of to industrial liquid treatment plants.
22. The illegal disposal of waste paint to sewer and stormwater is estimated to be 100 tonne/year. It has fallen over the past decade as a result of education and the access to HHC collection programs.

### 9.5 Material flows

23. 152.7 million litres of water-based and solvent-based A&D paints, including imports, was sold into the Australian market in 2012/13.
24. On average 92.8% by weight of the A&D and woodcare paint that is sold into the Australian market is used.
25. On average 7.2% by weight of the A&D and woodcare paint that is sold into the Australian market is waste arising (both stockpiled and paint requiring disposal).
26. Of this 7.2%, approximately 1.1% of the overall annual paint sales, by weight, contributes to an increase in the waste paint stockpile.
27. Therefore, the remaining 6.1% of paint consumed/sold annually in Australia becomes waste arising, or waste paint requiring disposal.
28. The total waste paint being stockpiled annually in Australia is estimated to be approximately 2,600 tonnes.
29. The total waste paint and packaging requiring disposal in Australia each year is estimated to be approximately 24,200 tonnes.
30. This can be broken down into the following:
  - a) Total waste paint requiring disposal annually in Australia estimated to be approximately 12,060 tonnes; and
  - b) Total paint packaging requiring disposal annually in Australia estimated to be approximately 12,130 tonnes.

31. Of the estimated 12,060 tonnes of waste paint requiring disposal in 2012/13, approximately 87% was water based and 13% was solvent based.
32. The usage 'efficiency' of paint sold to the retail market is estimated to have increased by 2.8% since 2002/03.
33. The primary disposal pathway of waste paint is via collection with general waste and disposal to landfill (3.2% of sales for retail and 4.0% for trade).
34. For retail paint, the next largest disposal pathway, at 2.4%, is via the HHC collection system.
35. The significant increase in the HHC collection programs over the past decade, from 0.6% to 2.4% of retail sales, has resulted in a reduction in the rate of stockpile increase from 6.1% to 0.8%.
36. The increase in retail disposal/recycling from 4.6% in 2002/03 to 7.0% in 2012/13 is due to the increase in collection through the HHC collection programs. This has also resulted in a significant reduction in the rate of stockpile increase.
37. The rate of increase in the trade waste paint stockpile is estimated to be 60% greater than for the retail sector. This is in part due to limited access to designated drop off points. Trade painters have confirmed that the trade paint stockpile is increasing.

## **9.6 Data reliability**

38. The highest priority for future data collection to enhance the accuracy of the material flow analysis is considered to be through:
  - auditing for waste paint in C&I and C&D waste and recycling streams;
  - survey to estimate waste paint to packaging ratios for the key disposal routes; and
  - survey to assist in quantifying current stockpiles.

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## 11. Glossary of terms

Term	Description
A&D paint	Architectural and decorative paint.
ChemClear	A collection and disposal pathway for unwanted chemicals from Australian agricultural and veterinary chemical users.
drumMUSTER	A recycling pathway for Australian agricultural and veterinary chemical users for eligible empty agvet chemical containers.
Paint	Paint is any liquid that, after application to a substrate in a thin layer, converts to a solid film.
Permanent collections	Household hazardous chemicals collections from permanent drop off site. Drop off occurs at a regular frequency.
Stockpile	Unused paint stored for disposal or recycling.
Temporary collections	One-off collections of household hazardous chemicals at temporary sites which may include Council depots. Transfer stations, resource recovery facilities. These collections are often referred to as mobile collections.
Waste paint	Unused paint requiring disposal. For the proposed voluntary stewardship scheme it includes all decorative and architectural paints from trade and domestic sources including woodcare products (stains and decking oils) and their respective containers and excludes spray packs (aerosols), bagged render, texture coatings, isocyanates, paint strippers, industrial coatings and anti-fouling paints.
Woodcare products	Stains, oils, and lacquers for internal and external timber.



# Appendix A

## Stakeholders consulted



## Appendix A Stakeholders Consulted

The following organisations assisted Nolan Consulting in the undertaking of this study.

Sector	Organisation
Federal agencies	Department of Environment (member of WPIWG)
State & Territory Jurisdictions	Sustainability Victoria (WPIWG Secretariat)
	Queensland Dept. of Environment & Heritage Protection (member of WPIWG)
	NSW Environment Protection Authority
	Western Australia Department of Environment Regulation
	Zero Waste SA
	ACT Environment and Sustainable Development Directorate
	Northern Territory Environment Protection Authority
	Australian Paint Manufacturers' Federation (member of WPIWG)
	Dulux (member of WPIWG)
	Valspar (member of WPIWG)
Retailers	Bunnings (member of WPIWG)
Trade Painters	Master Painters Association of Victoria and Tasmania (member of WPIWG)
	Master Painters Association of NSW
	Master Painters Association of Queensland
	Master Painters Association of South Australia
	Master Painters & Decorators Australia (WA)
	National Institute of Painting & Decorating (NIP&D)
Water Authorities	Melbourne Water
	South East Water
	Sydney Water
	Water Corporation of WA
Waste paint collectors, treaters, and recyclers	Toxfree
	Veolia
	Transpacific (Transpacific)
	Geocycle
	Independent Cement and Lime (ICL)



## Appendix B

# Graphs of paint sales – 2002/03 to 2012/13



## Appendix B Graphs of paint sales – 2002/03 to 2012/13

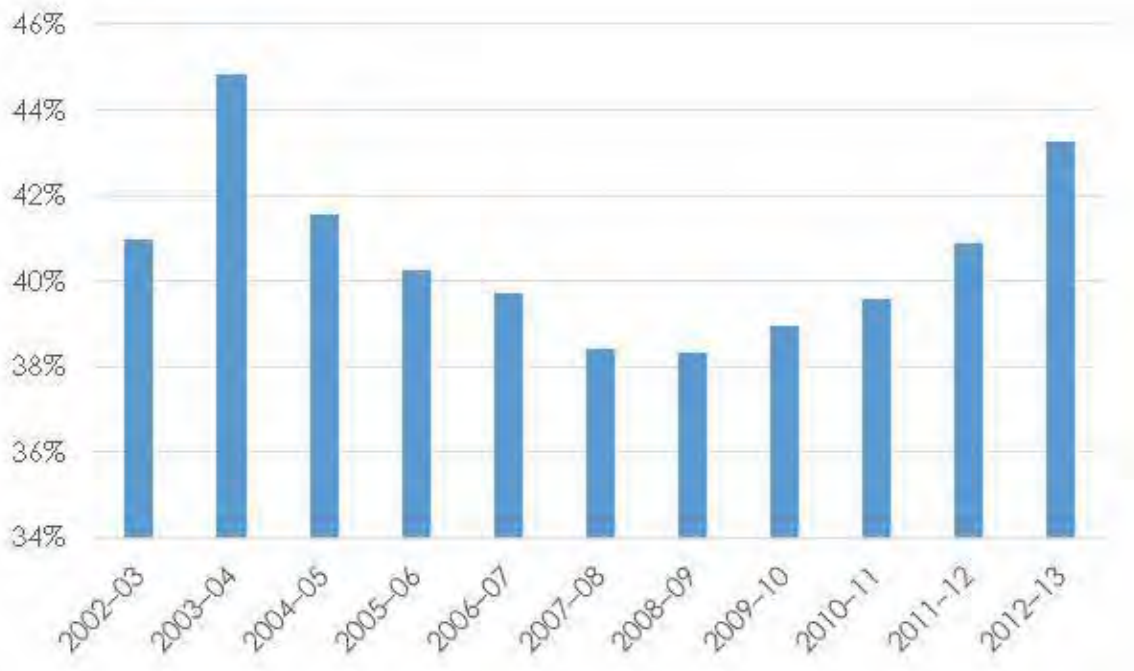


Figure B-1: Retail paint consumption as a percentage of total (2002/03 to 2012/13)

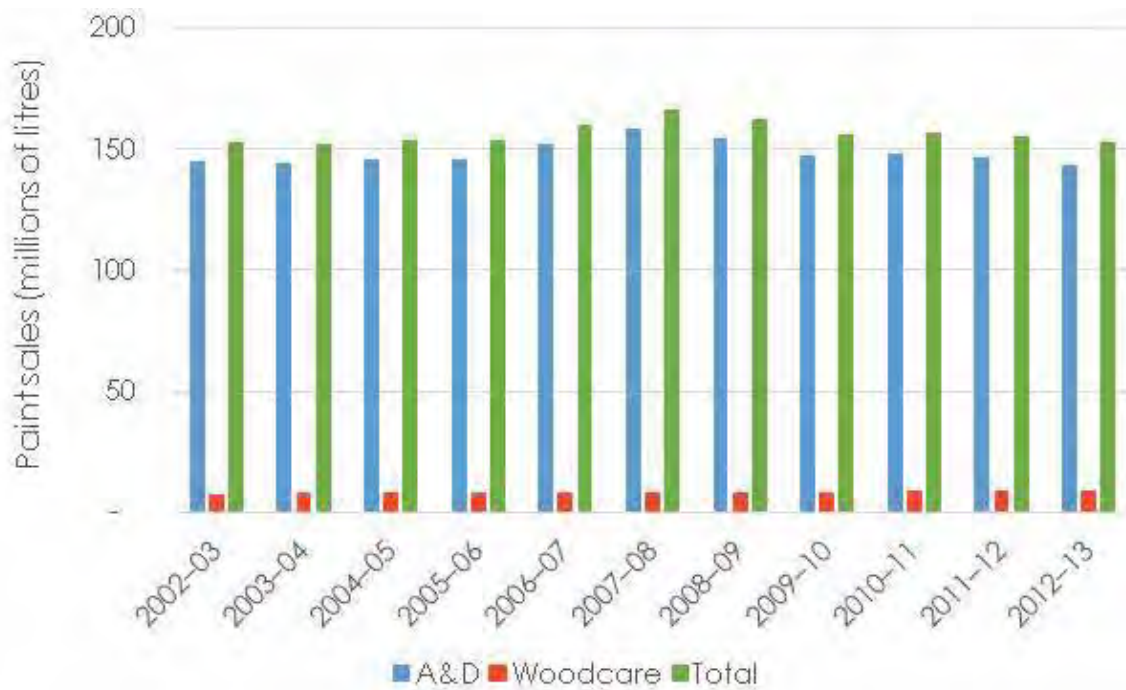


Figure B-2: A&D and Woodcare paint sales (2002/03 to 2012/13)





## Appendix C

# Figures showing municipalities serviced by HHC collection programs



## Appendix C

### List of figures

- 4.1 Victorian municipalities serviced with household chemical collections (including waste paint) in 2012-13
- 4.2 NSW municipalities serviced with household chemical collections (including waste paint) in 2012-13
- 4.3 South Australia municipalities serviced with household chemical collections (including waste paint) in 2014
- 4.4 Tasmanian municipalities serviced with household chemical collections (including waste paint) from March 2009 – December 2012
- 4.5 Western Australian municipalities serviced with household chemical collections (including waste paint) in 2012-13
- 4.6 Queensland municipalities serviced with household chemical collections (including waste paint) in 2012-13
- 4.7 ACT household chemical collections localities (including waste paint) in 2012/13
- 4.8 Northern Territory municipalities serviced with household chemical collections (including waste paint) in 2012-13



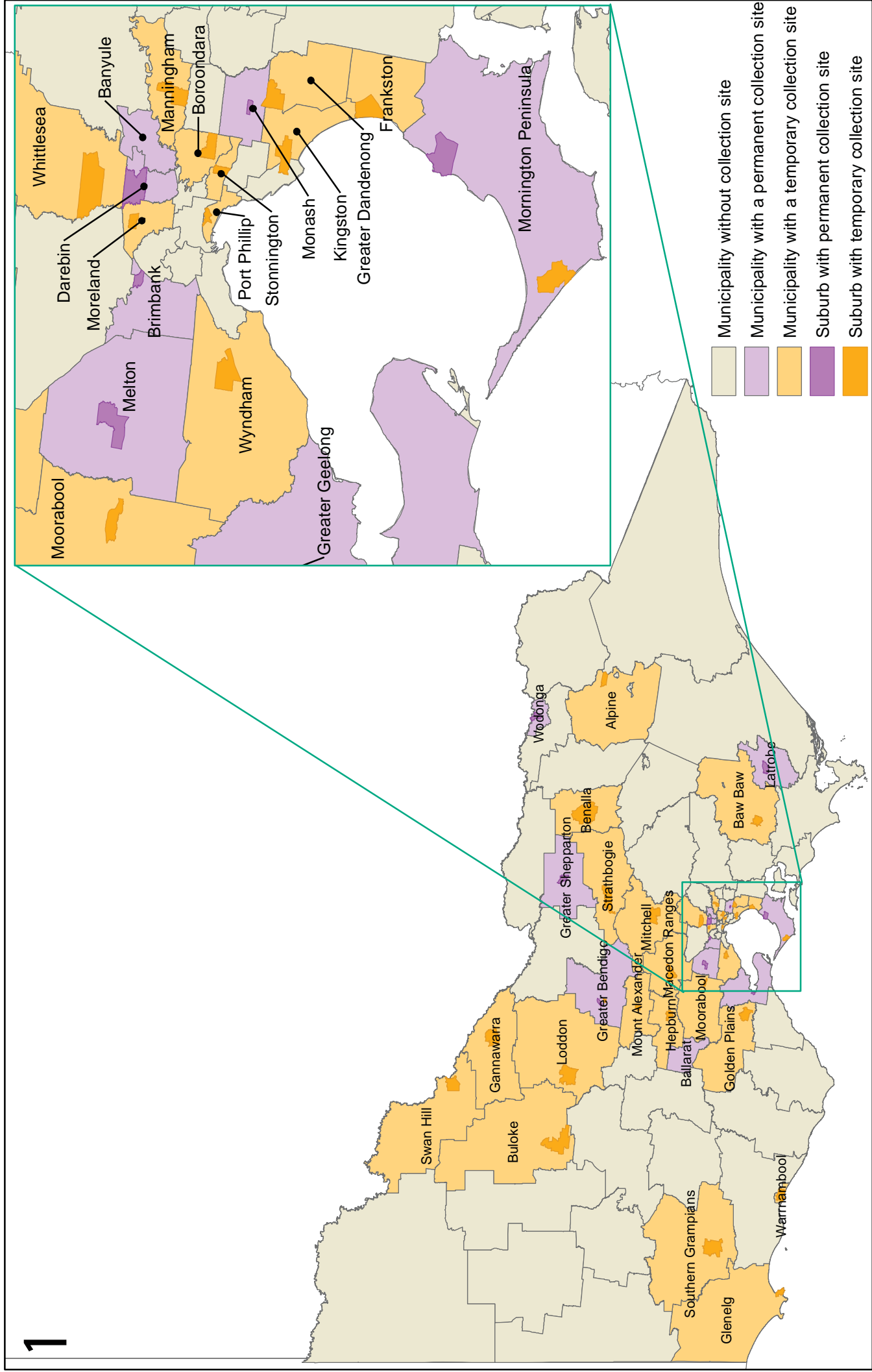


Figure 4.1. Victorian Municipalities serviced with household chemical collections (including waste paint) in 2012-13

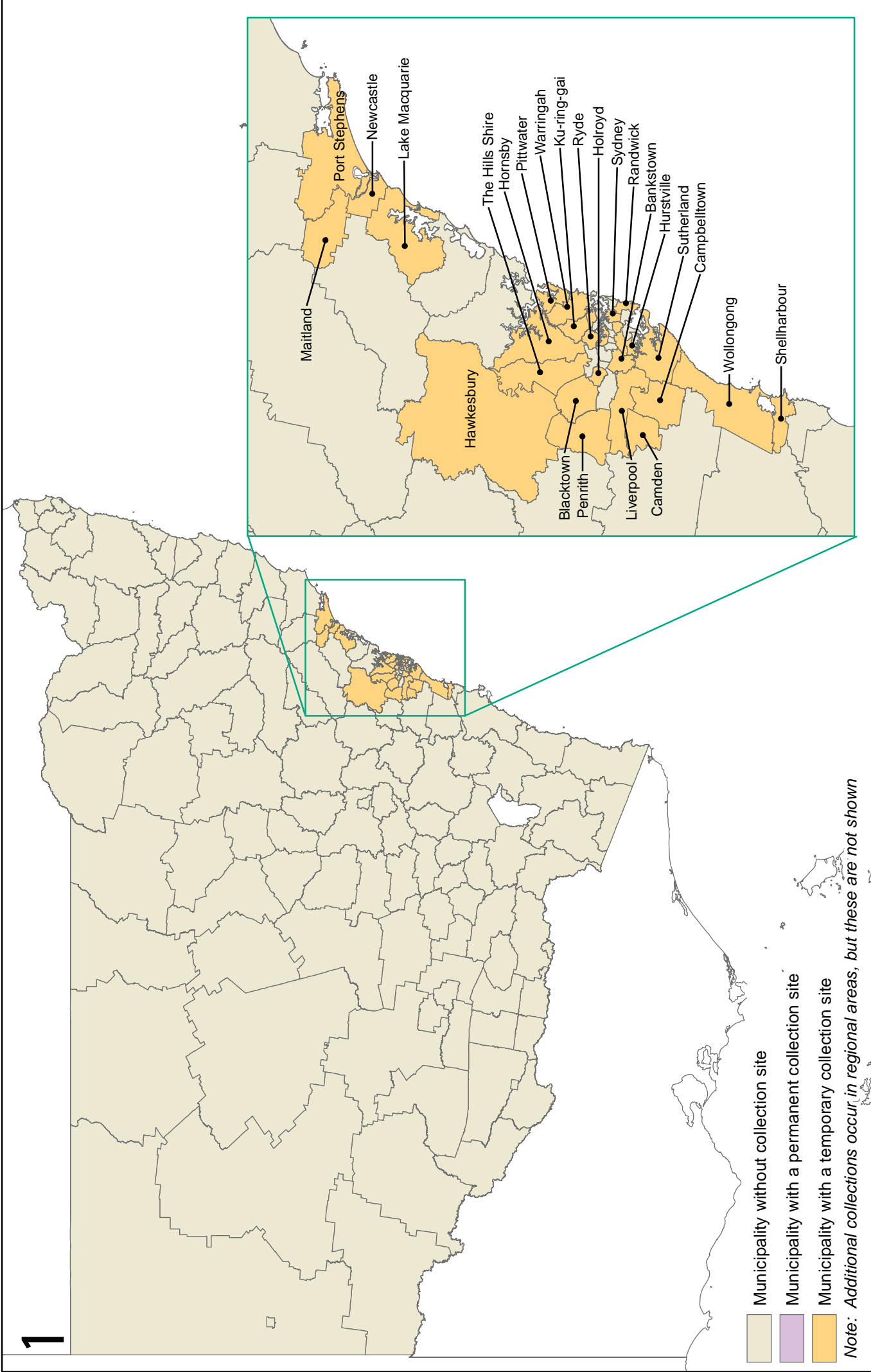


Figure 4.2. New South Wales Municipalities serviced with household chemical collections (including waste paint) in 2012-13

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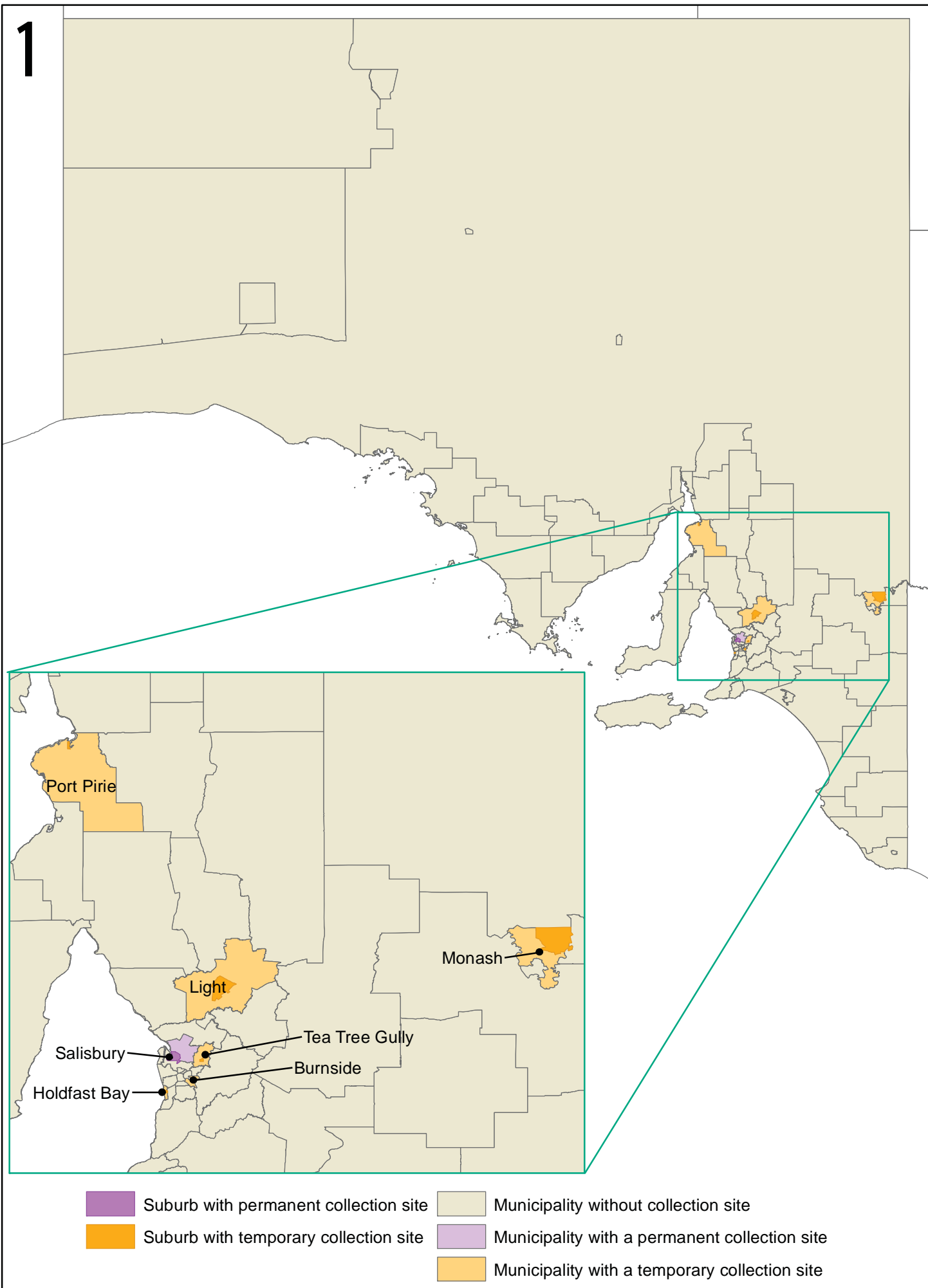


Figure 4.3. South Australian Municipalities serviced with household chemical collections (including waste paint) in 2014

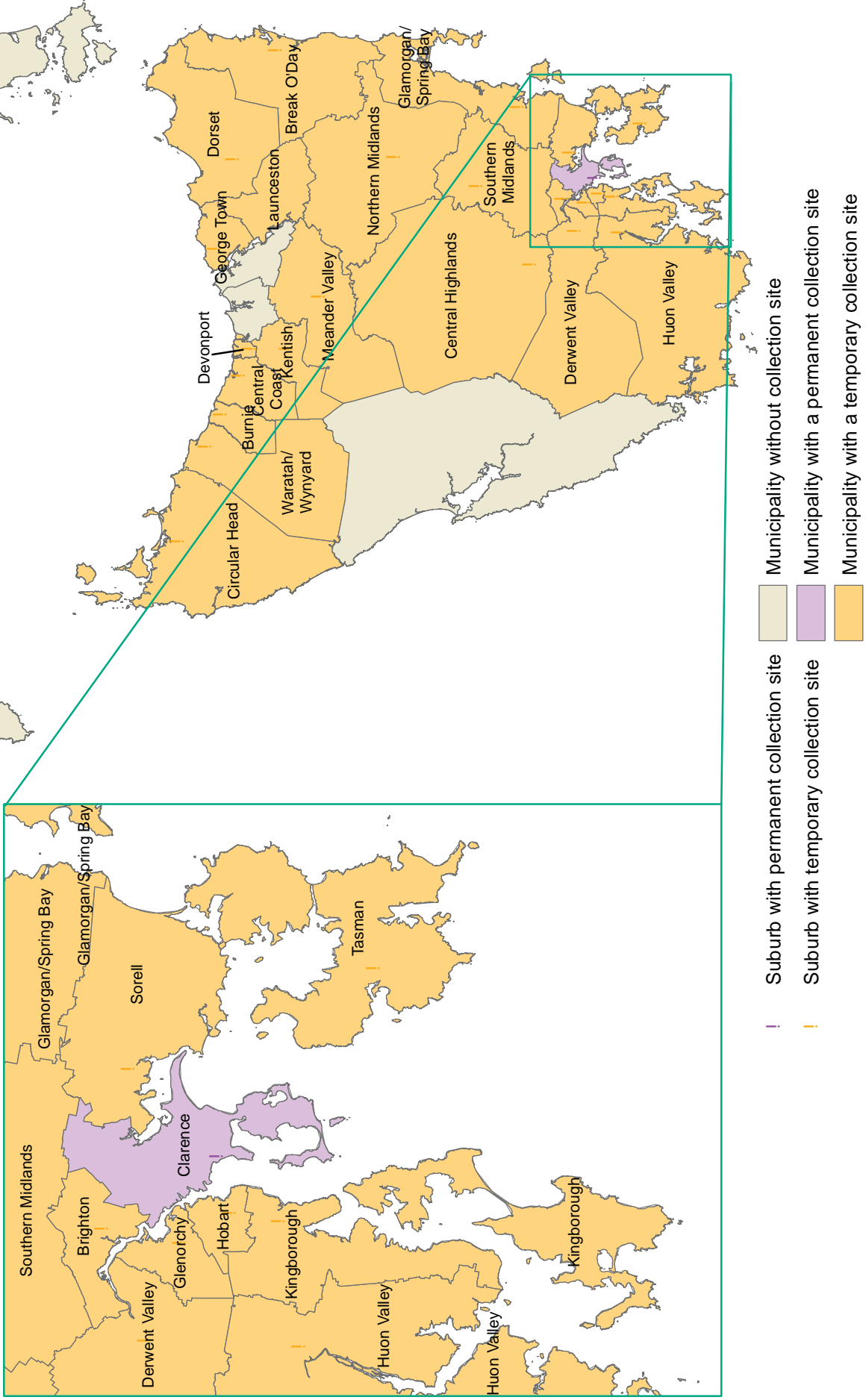


Figure 4.4. Tasmanian Municipalities serviced with household chemical collections (including waste paint) from March 2009 - December 2012



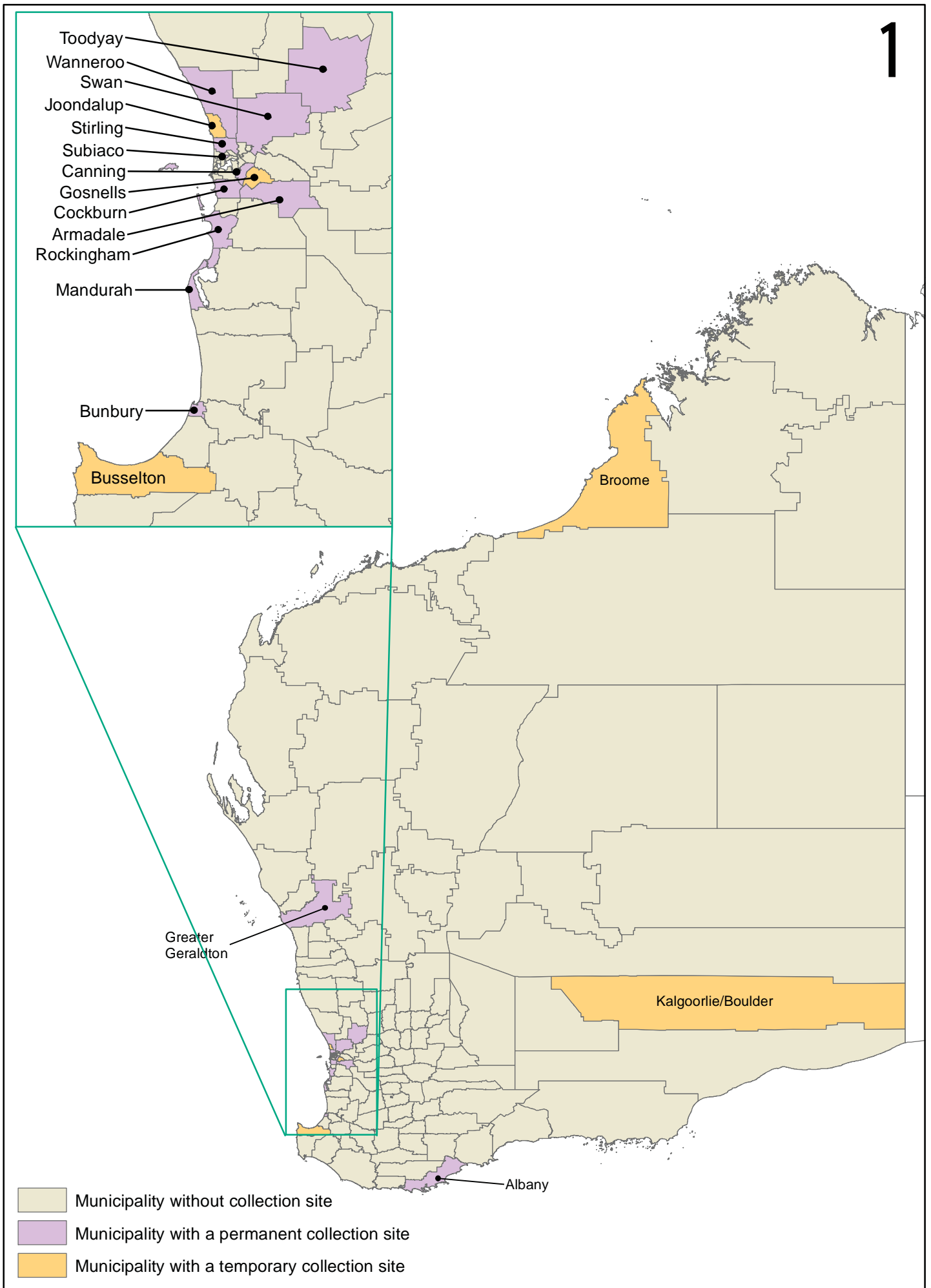


Figure 4.5. Western Australian Municipalities serviced with household chemical collections (including waste paint) in 2012-13

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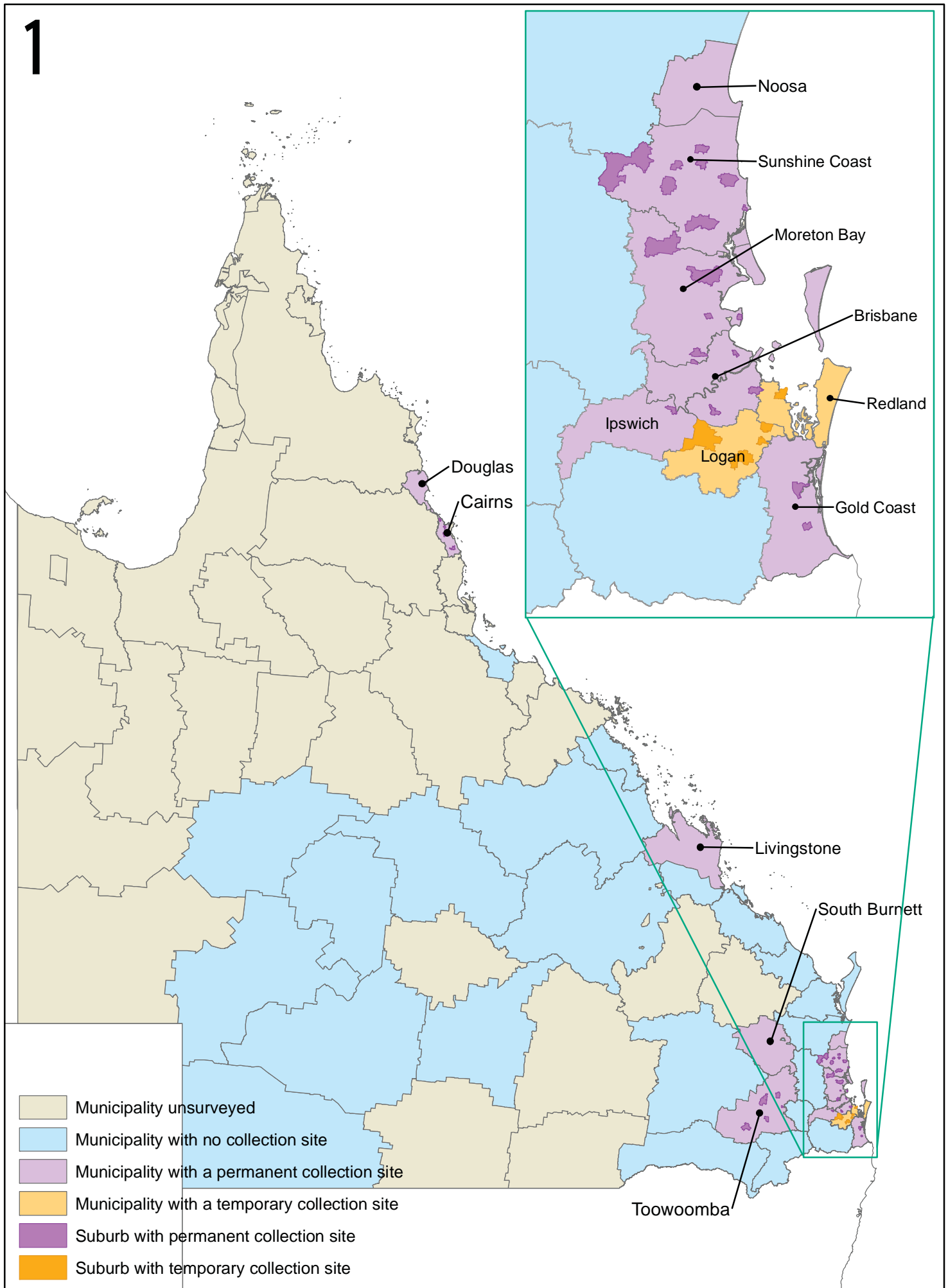
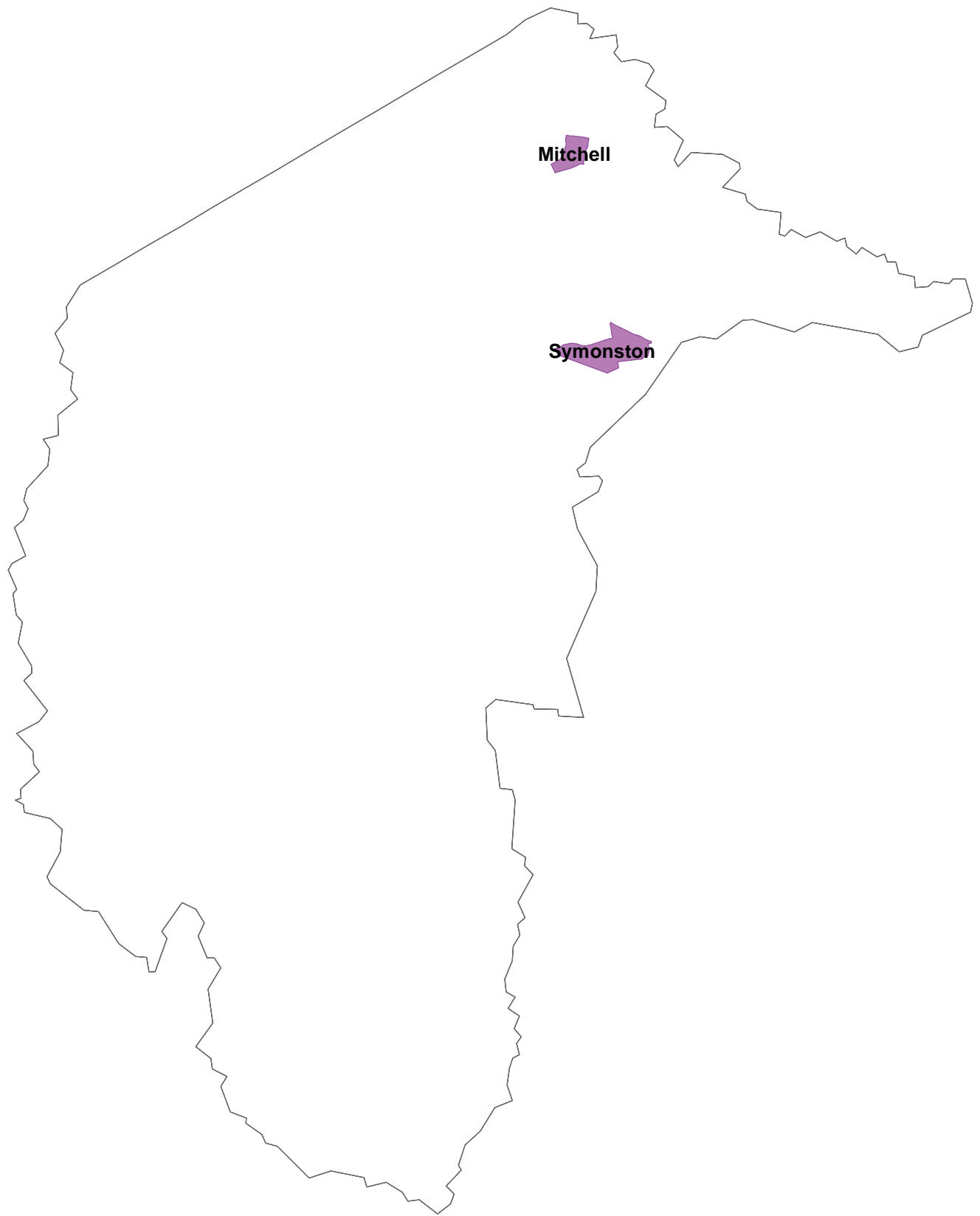


Figure 4.6. Queensland Municipalities serviced with household chemical collections (including waste paint) in 2012-13

1




 Locality with permanent collection site

Figure 4.7. Australian Capital Territory household chemical collection localities (including waste paint) in 2012-13

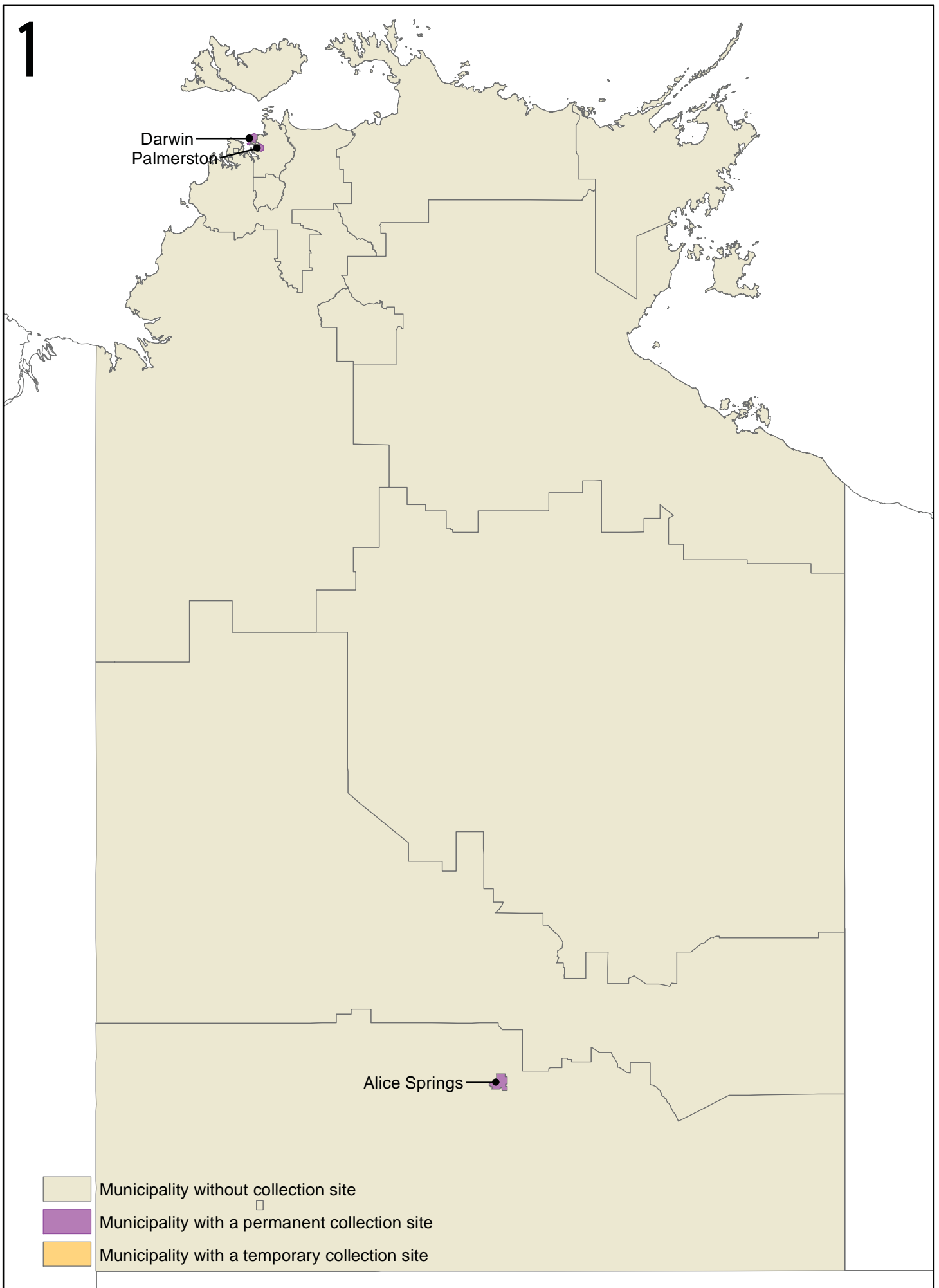


Figure 4.8. Northern Territory Municipalities serviced with household chemical collections (including waste paint) in 2012-13





# PaintCare Trade Trial



ToxFree Solutions Ltd  
Sustainability Victoria  
Australian Paint Manufacturers Federation  
Master Painters Association

November 2013

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## Background

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On 11 April 2013 the Council of Australian Government's (COAG) Standing Council on Environment and Water (SCEW) agreed to place the development of product stewardship arrangements for waste architectural and decorative (A&D) paint on the 2013/14 SCEW work plan. Waste A&D paint was then listed on the priority product list released by the Australian Government on 30 June 2013.

Ministers asked officials to develop a work program in partnership with the paint industry to deliver a draft national model scheme by the end of 2014 for SCEW consideration at the first meeting of 2015.

The Australian Paint Manufacturers Federation (APMF) is one of the oldest industry associations in Australia. The APMF represents 34 paint manufacturing companies in all states and territories with a combined revenue stream of \$2.5 billion. Together, APMF membership accounts for ~90% of all paint manufactured in Australia.

The paint industry estimates 11% of A&D paint sold in Australia becomes residual (18,000 tonnes including packaging) per annum with estimates in the region of 5% requiring disposal (Nolan ITU, 2004). Household chemical collection models, operated by state governments, collect and treat large volumes of waste paint. Of the chemicals collected >65% is waste paint by cost and ~80% by volume (Sustainability Victoria, 2011). These services are theoretically only available to households, leaving waste A&D paint from trade sources unmanaged. A&D paint from both trade and domestic sources are essentially the same chemical and therefore require the same management approach. Alternative disposal for waste trade paint is costly between \$2-4 per litre promoting unsafe and inappropriate disposal methods.

Waste paint may contain a number of environmentally harmful substances including heavy metals and surfactants which inhibit oxygen and the photosynthesis process when disposed of in waterways and may leachate when disposed of in landfill in solid form. Therefore, effective management is required to increase the recovery of waste A&D paint in Australia and prevent this product from polluting the environment at end-of-life.

## Scope of activities

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From 31 March through to 31 August 2013, Toxfree partnered with Sustainability Victoria (SV), the Master Painters Association (MPA) and APMF to conduct the PaintCare trial at six existing Detox your Home (DYH) sites for the purpose of collecting, managing and disposing of waste trade paint and providing previously unknown data on the potential volume of unwanted trade paint in the trade community as well as behaviour patterns of participating trade painters.

Having successfully collected in excess of 127 tonnes of unwanted trade paint (including packaging); the success of the trial would suggest that there is a need in the trade painting community to provide a safe, accessible and cost effective service of removing and managing significant quantities of unwanted trade paint.



The sites were selected to offer a broad geographical coverage as well as the ability to service the extra volume and resources required to carry out a successful trial. The sites selected were:

- Metropolitan Melbourne sites
  - Monash
  - Melton
  - Mornington
- Regional Victorian sites
  - Barwon
  - Shepparton
  - Bendigo

Initially, additional paint storage units (1.2 cubic metre stillages) were deployed to the sites which were dedicated for use in the PaintCare trial. Signage on the stillages was provided by way of magnetic identification to separate the identity of the PaintCare trial from existing DYH unwanted/waste paint. The collections were coordinated either with an existing scheduled DYH service or on demand as required by the host site. Both Monash and Melton requested an extra weekly pickup specifically to collect material from the PaintCare trial. The paint collected was managed in the usual manner through energy recovery and steel and plastic recycling streams.

## Trial observations

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### Promotion versus volume

The program was not promoted heavily prior to commencing or in the early stages as there was concern that legacy material held by painters in personal storage may rapidly erode the available funding before information could be gathered on the volume and types and issues around 'waste arising' material that was likely to be generated. The program was promoted, however, through the MPA Victoria branch on their website and in emails and flyers to its members. The intention of the trial was not to collect large volume, but to understand this previously undefined waste stream

As expected, the program did not gather a lot of traction in the first six weeks averaging 3,074 kg per week compared to the overall average during the trial of 4,727 kg per week. For the final eight weeks of the trial the volume levelled out to around 4,000 kg per week combined from all of sites.

Figure 1 shows the subscription to the trial over time. The time lag in the beginning can be seen as the messaging begins to be communicated through the MPA members for the first six weeks, then a spike in volume at week seven, followed by the normalisation from weeks 20 through to 27.



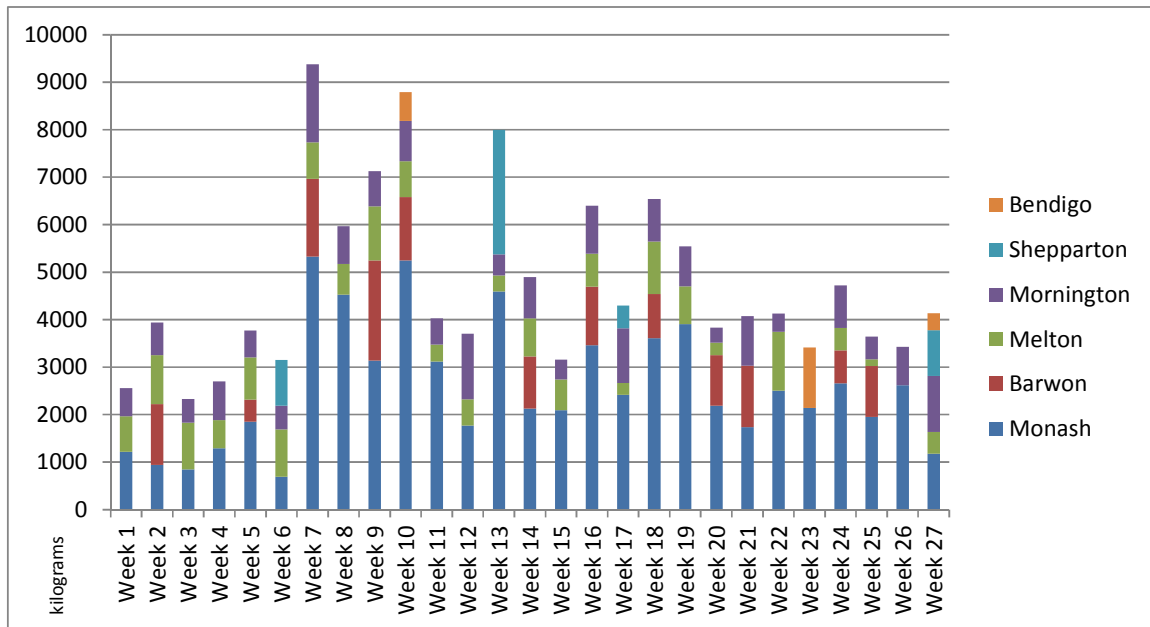


Figure 1 – Volume trends per site

### Contamination

There were two potential sources of contamination during the trial. The first and more easily identifiable was non-target materials being incorrectly placed into the PaintCare stillages. Although this was not a significant quantity it would still need to be considered in a larger scale program. Non-target materials could include thinners/turpentine for brush washing or other more hazardous materials from different products streams hidden in the used paint cans.

The second source of contamination from the trial was target material that did not come from target sources. That is, materials not coming from trade painters but domestic sources. Even though the stillages used for the trial were clearly labelled and, wherever possible geographically isolated at the facilities, there was the potential for material from non-target sources to find its way into the PaintCare stillages. This material was obviously not able to be quantified once the stillages were collected however it was noted by drivers collecting the PaintCare materials that on occasions the stillages were stored together with domestic material once full. Similarly, the reverse may also have been possible whereby members of the public could potentially have utilised the PaintCare stillages as opposed to the DYH stillages.

### Data analysis

During the six months of the trial a total of 127.6 tonnes was collected and processed, of this 77% was waste paint (98.25 tonnes) and 23% packaging (29.35 tonnes) indicating that residual paint requiring

disposal is of a significant volume and not just a question of collecting packaging with a small amount of waste paint. Of the packaging type collected, 86% was metal and 14% was plastic allowing for good recovery and on sell into steel commodity markets. The data was captured weekly and analysed to allow for future financial and operational modelling. Figure 2 shows the volume collected per site and the ratio between solvent and water based paints being 31% and 69% respectively. Sales figures suggest water based paint is approximately 90% of the market which provides an indication of a time lag between purchase and disposal. The data also shows that future collections will continue to trend towards a higher rate of water based paints. This can be seen in more mature paint collections operating in other countries showing an approximate 85:15 ratio of water based to solvent based paint coming through the waste stream.

Site	(kg) Solvent Based	(kg) Water Based	Total paint + packaging collected (kg)	Detox Volume 6 months	Site disposal Cost Summary	Site Hours	Site Collection Cost Summary	Total (ex GST)	% by weight
Barwon	4071	10144	14,215	23,556	\$ 16,347.25	16.0	\$ 1,680.00	\$ 18,027.25	11%
Melton	4781	11884	16,665	26,912	\$ 19,164.75	43.0	\$ 4,515.00	\$ 23,679.75	13%
Monash	21289	47872	69,161	71,110	\$ 79,535.15	108.0	\$ 11,340.00	\$ 90,875.15	54%
Mornington	6602	13734	20,336	55,226	\$ 23,386.40	30.5	\$ 3,202.50	\$ 26,588.90	16%
Shepparton	1609	3410	5,019	4,742	\$ 5,771.85	4.0	\$ 420.00	\$ 6,191.85	4%
Bendigo	612	1623	2,235	10,948	\$ 2,570.25	3.0	\$ 315.00	\$ 2,885.25	2%
<b>Total (kg)</b>	<b>38964</b>	<b>88667</b>	<b>127,631</b>	<b>192,494</b>	<b>\$146,775.65</b>	<b>204.50</b>	<b>\$21,472.50</b>	<b>\$168,248.15</b>	<b>100%</b>
	31%	69%			87%		13%		

Figure 2 – Collection volume and cost

Figure 2 identifies the cost ratio between transport and disposal at 13% and 87% respectively, indicating the collection time and transport to be efficient. Sales of A&D paint in Australia are split approximately to 55% trade and 45% domestic. On average, the volume of trade waste paint collected via PaintCare is 63% of the volume of domestic waste paint collected from the Victorian DYH program (Figure 3). It may be that the volume of trade waste paint collected is less than the volume of domestic waste paint collected due to more accurate sizing of surface area and paint required by trained trade painters, and that trade painters have the option of leaving the residual paint with the client. However, this percentage, calculated from the PaintCare trial data, will assist in modelling a national scheme and estimating collection rates.

Figure 3 also shows the ratio between metropolitan and regional centres. Monash collected 54% of the total volume which does not represent a normal collection site. The DYH site at Monash also collects the highest volume of domestic waste paint. Therefore, Monash was chosen because of its high through-put as a busy DYH collection site, and to see how including trade waste paint would impact an already high

collecting site. Figure 3 indicates that the further away from a metropolitan centre the less paint is available for collection and the less the sites are used, this was also observed by transfer station managers and ToxFree staff in the trial. This would have implication designing accessibility of a national scheme.

Monthly Average		
Location	tonnes	cost
Barwon	2.4	\$ 3,005
Melton	2.8	\$ 3,947
Monash	11.5	\$ 15,146
Mornington	3.4	\$ 4,431
Shepparton	0.8	\$ 1,032
Bendigo	0.4	\$ 481
<b>Total monthly Avg</b>	<b>3.5</b>	<b>\$ 4,674</b>
83% <b>Metro Average</b>	<b>5.9</b>	<b>\$ 7,841</b>
17% <b>Regional Average</b>	<b>1.2</b>	<b>\$ 1,506</b>

Accuracy Ratio Trade vs Domestic (kg)	
3 month Domestic (Detox)	96,247
3 month trial (Trade)	57,430
% additional trade paint	60%

Accuracy Ratio Trade vs Domestic	
6 month Domestic (Detox)	192,492
6 month trial (Trade)	127,631
% additional trade paint	66%

Figure 3 – Average volume and cost

Figure 4 shows the volume collected per week and cumulatively over the life of the trial. It can be seen that the weekly volume is relatively liner allowing for volume predictions to be made against the cumulative total.

The data shows collection rates stabilised at week 20 indicating the amount of time needed for sites to stabilise once opened. This can be applied to rolling out a progressive national collection model.

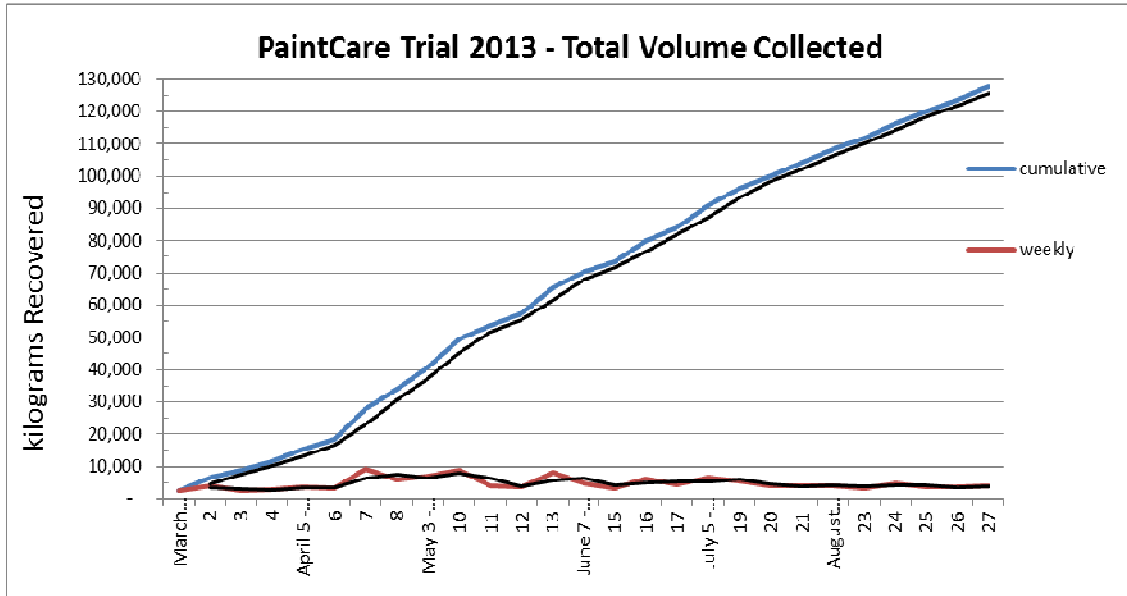


Figure 4 – Weekly and cumulative trends

### Considerations for larger scale collection

#### Resources

In the event that volumes were to increase, resources and capacities to deliver a collection program may become stretched at the permanent facilities. Consideration will need to be given to the following:

- Extra deliveries and collections may result in traffic management issues.
- Extra stillages on site may create storage issues.
- Extra volumes of materials on various sites may create compliance issues with respect to the storage and handling of dangerous goods.
- Environment Protection Authority classifications differ state-to-state for waste deriving from trade sources.

#### Servicing

The extra volume of material collected may require shorter turnaround times depending on the behaviours of the trade painters. Consideration will need to be given to the scheduling of regular and on-call services. Although this was sufficiently managed for the duration of the trial, depending on the geographic needs of the service, strong communication between the host site and the collection/management agency will be a key success factor.

Depending on how much use is made of the collection points on the weekends, the requirement for servicing and stillages may be stretched. For example, if a large volume is dropped off on the weekend, then a booking can only be made on the following Monday which means servicing the site is not likely to

be conducted until at least the Tuesday. This may be mitigated by having a regular servicing schedule supported by an on call arrangement where necessary and/or an emergency call arrangement for after-hours callout (i.e. weekend) services. Careful monitoring of the transport/processing cost ratio will be needed to ensure efficiencies are met and the system does not become too cost heavy on transport of waste paint rather than processing of waste paint.

### **Segregation**

Depending on the model scheme, segregation between trade and domestic may be required to analyse data from different waste streams. To achieve this, clear separation of the stillages would be required along with training transfer station staff and separate communications for the two waste streams. However, segregation would incur greater costs and may create problems on the ground when one stream is a capacity. It would be recommended that PaintCare collect both streams indiscriminately with waste tracking audits conducted as required.

Segregation of non-target materials is also a key area of consideration to avoid the potential of incompatible dangerous goods being stored on site and ultimately transported in appropriately. This may be mitigated by offering ongoing training to host sites as well as robust agreements in place with willing participating sites.

### **Resource recovery considerations**

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A key output for the management of waste paint is ensuring there is a sustainable approach and existing end markets for the collected material. This should not only be restricted to waste paint but extended to the waste packaging of paint products. The trial indicated that approximately 69% of the total waste paint received was water based waste paint. As this figure rises toward the current sales figure of 90%, energy recovery costs will increase. Research into alternative processing methods for water based paint will be required.

The current reprocessing for waste paint as a product is via energy recovery where by the calorific value inherent in the material is utilised in the cement manufacturing process as a fuel substitute. As the volume of water based waste paint continues to grow, this diminishes the calorific value of waste paint as a whole. Whilst the current practice is to combine low calorific materials with high calorific yielding waste streams the energy present in the final product is of low use/value if energy recovery continues as the primary reprocessing use for waste paint, especially as water based paint consumption rises.

However, it is important to understand the long term economic impact of increasing volumes of water based products and their effect on the fuel application. It is therefore of equal importance to investigate other possible end uses for water based paint and their potential to add value to current markets and processes. Similarly, the packaging of water based materials is trending towards plastic as opposed to steel. The existing practice to compress steel packaging is less effective on plastic due to the memory within polymers. This makes plastic packaging less attractive to using pressure as the means to de-package and more attractive to alternative processes such as shredding.

## Summary

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Overall, PaintCare was a successful trial collecting 127.6 tonnes of material, of which 77% was paint clearly demonstrating the need for a safe, accessible and cost effective system for collecting and processing waste paint from both trade and domestic sources. It is clear that waste residual paint exists in significant volume and trade painters want to do the right thing and drop off their waste paint for processing. This observation is consistent with discussions with the MPA.

The overall cost of collection and processing during the trial was \$168,248 which breaks down to \$1.32 per kg. The processing costs were 87% of the total costs with the site collection costs at 13%. Therefore, research into reducing the processing costs or changing the end-of-life usage from energy recovery to an application with a higher market value will reduce the high processing weighting. It is worth noting that the total costs did not include any advertising material of site launch events. This would incur additional costs at the national level. Flyers and posters were printed and distributed via the MPA and launch events conducted at five of the six sites at a cost of approximately \$15,000. However, communication was not factored into the trial as it was shared across APMF, MPA and SV. In the event of a national model a standard communications plan including a fixed budget will need to be factored into the operational costs.

The results of the trial provide quantifiable evidence that supports previous assumptions that waste paint from trade sources does exist, and indicates there is a need for a safe and accessible system to receive this waste stream. It would be recommended that PaintCare collect both trade and domestic streams indiscriminately to minimise on-the-ground issues which may arise from segregation. Data from the different waste streams can be captured through waste tracking audits as and when required.

Waste paint from trade sources, until now have not be quantified making the PaintCare trial a first of its kind in Australia. Data captured from the trial will be applied to the development of a national paint stewardship model which industry and government are currently working toward.

## References

Nolan-ITU, 2004 Paint and Paint Can Recovery – National Audit and Strategic Plan prepared for the Australian Paint Manufacturers' Federation.

SV (Sustainability Victoria), 2011 Detox Your Home Strategic Review Public Report. Available at [http://www.sustainability.vic.gov.au/resources/documents/Detox\\_Your\\_Home\\_Strategic\\_Review\\_WEB.pdf](http://www.sustainability.vic.gov.au/resources/documents/Detox_Your_Home_Strategic_Review_WEB.pdf)

## Contact Information

For further information regarding this report, please contact;

Tim Sheldon-Collins, National Sales & Business Development Manager – Technical & Environmental Services, Toxfree  
[t.sheldon-collins@toxfree.com.au](mailto:t.sheldon-collins@toxfree.com.au)

John Polhill, Product Stewardship Specialist, Sustainability Victoria,  
[john.polhill@sustainability.vic.gov.au](mailto:john.polhill@sustainability.vic.gov.au)

Richard Phillips, Executive Director, Australian Paint Manufacturers Federation  
[Richard.phillips@apmf.asn.au](mailto:Richard.phillips@apmf.asn.au)

Mark Amos, Chief Executive Officer, Master Painters Association Victoria  
[mark@mpav.com.au](mailto:mark@mpav.com.au)

Bourke Place  
600 Bourke Street Melbourne VIC 3000  
GPO Box 9925 Melbourne VIC 3001  
Tel +61 3 9672 3000  
Fax +61 3 9672 3010  
[www.corrs.com.au](http://www.corrs.com.au)

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**Draft: 23 June 2015**

# Constitution of Paint Stewardship Limited

Adopted on the date of incorporation of the company by written agreement of the persons specified in the application for the Company's registration as the persons who consent to become members, pursuant to section 136(1)(a) of the *Corporations Act 2001*.



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## 1 Name of Corporation

The name of the company is **Paint Stewardship Limited**.

## 2 Status of the Constitution

### 2.1 Constitution of the Company

This is the constitution of the Company.

### 2.2 Replaceable Rules

This Constitution displaces the Replaceable Rules, accordingly, none of the Replaceable Rules apply.

## 3 Interpretation

### 3.1 Definitions

In this Constitution these terms have the following meanings:

<b>A&amp;D Paint</b>	Has the meaning given to that term in the Waste Paint Agreement.
<b>Auditor</b>	The person appointed for the time being as the auditor of the Company.
<b>Board</b>	The Directors and alternates present at a meeting, duly convened as a Board meeting, at which a quorum is present.
<b>Business Day</b>	A day which is not a Saturday, Sunday or bank or public holiday in Melbourne, Victoria.
<b>Chairperson</b>	The chairperson of the Board pursuant to <b>clause 17.1(a)</b> .
<b>Chief Executive Officer</b>	Any person appointed for the time being as a chief executive officer of the Company.
<b>Company</b>	Paint Stewardship Limited.
<b>Constitution</b>	The constitution for the time being of the Company as constituted by this document and any resolutions of the Company modifying this document.
<b>Containers</b>	Has the meaning given to that term in the Waste Paint Agreement.
<b>Corporations Act</b>	The <i>Corporations Act 2001</i> (Cth).
<b>Director</b>	A person who is a director for the time being of the Company and <b>Directors</b> means more than one Director, and in relation to rules applying to meetings of the Board,

	including voting by Directors and material personal interests, references to Directors include alternates.
<b>Effective Date</b>	Has the meaning given to that term in the Waste Paint Agreement.
<b>Independent Director</b>	A director who is a non-executive of the Company or any Member and who is free of any business or other relationship that could materially interfere with - or could reasonably be perceived to materially interfere with - the independent exercise of their judgement.
<b>Levy Contribution</b>	Has the meaning given to that term in the Waste Paint Agreement.
<b>Member</b>	A person who is, or who is registered as, a member of the Company and <b>Members</b> means more than one Member.
<b>Member's Guarantee Amount</b>	An amount equal to \$100.
<b>Membership</b>	Being a Member of the Company.
<b>Nominated Members</b>	The Members specified or contemplated in <b>clause 7.2</b> as being the 'Nominated Members' of the Company for the purposes of this Constitution for the time being.
<b>Product Stewardship Act</b>	The <i>Product Stewardship Act 2011</i> (Cth), and any exemption, modification, declaration or order made in respect of that legislation which applies to the Company.
<b>Register of Members</b>	The register of Members maintained pursuant to the Corporations Act.
<b>Replaceable Rules</b>	The replaceable rules applicable to a public company limited by guarantee set out in the Corporations Act.
<b>Scheme</b>	A national product stewardship scheme in Australia under the Product Stewardship Act to manage the collection, treatment and disposal of Waste Paint, including Containers, for the purpose of reducing the health and environmental impacts of unwanted or left over Waste Paint.
<b>Scheme Participant</b>	Has the meaning given to that term in the Waste Paint Agreement.
<b>Seal</b>	The common seal for the time being of the Company.
<b>Secretary</b>	Any person appointed for the time being as, or to perform the functions of, secretary of the Company.
<b>Top Three Levy Remitters</b>	Has the meaning in <b>clause 7.2(a)(i)</b> .
<b>Waste Paint</b>	Has the meaning given to that term in the Waste Paint

Agreement.

**Waste Paint Agreement**

The Waste Paint Collection and Treatment Scheme Agreement between the Company and the initial scheme participants listed in schedule 1 of that document, and any other scheme participant who accedes to that document (as amended, supplemented, extended or replaced from time to time).

### **3.2 Interpretation**

In this Constitution:

- (a) the words 'including', 'include' and 'includes' are to be construed without limitation;
- (b) a reference to legislation is to be construed as a reference to that legislation, any subordinate legislation under it, and that legislation and subordinate legislation as amended, re-enacted or replaced for the time being;
- (c) a reference to a 'person' includes a corporate representative appointed pursuant to section 250D of the Corporations Act;
- (d) headings are used for convenience only and are not intended to affect the interpretation of this Constitution; and
- (e) a word or expression defined in the Corporations Act and used, but not defined, in this Constitution has the same meaning given to it in the Corporations Act.

## **4 Objects and purpose**

### **4.1 Objects**

The Company shall have the following objects:

- (a) to implement the Scheme;
- (b) to monitor, audit and report on the development of the Scheme;
- (c) to undertake education, awareness and information activities to promote the Scheme;
- (d) to support early stage research and market development to improve resource recovery from unwanted or left over Waste Paint;
- (e) to result in a net environmental benefit targeting Waste Paint;
- (f) to minimise damage to the environment from inappropriate disposal of Waste Paint;
- (g) to promote or support changes to the law designed or likely to help all or any of the objects of the Company and to oppose any changes therein designed or likely to impede the same and to effect or attempt to effect improvements in administration for the purposes aforesaid; and

- (h) to do all such lawful things as the Company may think incidental or conducive to attainment of the objects of the Company or any of them.

#### **4.2 Application of income and property for objects only**

The profits (if any), other income and property of the Company, however derived, must be applied solely toward the promotion of the objects of the Company as set out in **clause 4.1**.

#### **4.3 No dividend, bonus, distribution or profit paid to Members**

No part of the profits, income or property of the Company may be paid or transferred to a Member, either directly or indirectly by way of dividend, bonus, distribution or otherwise.

#### **4.4 Payments by Company in good faith**

**Clause 4.3** does not prevent payment in good faith to an officer of the Company or a Member, or to a firm of which an officer of the Company is a partner:

- (a) of remuneration for services provided by that officer or Member to the Company;
- (b) for goods supplied in the ordinary course of business;
- (c) of interest at a rate not exceeding the rate fixed for the purpose of this clause by the Company in general meeting on money borrowed from an officer of the Company or a Member; or
- (d) of reasonable rent for premises let by an officer of the Company, or a Member.

## **5 Modification or repeal of this Constitution**

### **5.1 Modifying or repealing Constitution**

This Constitution may be modified or repealed only by a special resolution of the Company in a general meeting.

### **5.2 Date of effect of modification or repeal**

Any modification or repeal of this Constitution takes effect on the date the special resolution is passed or any later date specified, or provided for, in the resolution.

## **6 Member's liability**

### **6.1 Liability to contribute**

Subject to this Constitution, each person who is a Member, and each person who was a Member during the year ending on the day of the commencement of the winding up of the Company, undertakes to contribute to the property of the Company for:



- (a) payment of debts and liabilities of the Company;
- (b) payment of the costs, charges and expenses of winding up; and
- (c) any adjustment of the rights of the contributories among Members.

## 6.2 Limited liability

The amount that each Member or past Member is liable to contribute under **clause 6.1** is limited to the amount of the Member's Guarantee Amount.

# 7 Members

## 7.1 Number of Members

- (a) The Company must have at least one Member.
- (b) On the adoption of this Constitution, the members of the Company are:
  - (i) PPG Industries Australia Pty Limited;
  - (ii) DuluxGroup (Australia) Pty Ltd;
  - (iii) Henry Haymes Proprietary Limited;
  - (iv) Valspar Paint (Australia) Pty Ltd; and
  - (v) Resene Paints (Australia) Limited.

## 7.2 Nominated Members

- (a) Subject to **clause 7.2(b)**, the Nominated Members of the Company will be:
  - (i) the three Members who have remitted the highest aggregate Levy Contribution in the 12 month period ending on the 31 December occurring before the expiration of the term of the current Nominated Members (**Top Three Levy Remitters**) as determined in accordance with **clause 17.4(a)(i)**; and
  - (ii) one other Member who is a manufacturer and/or importer and seller of A&D Paint as determined by the Board in accordance with **clause 17.4(a)(ii)**,

or any replacement appointed by the Board in accordance with **clause 17.4(c)**. The Nominated Members for the time being will occupy that position for the term specified in **clause 7.2(c)**.

- (b) On the implementation of this Constitution, the Nominated Members of the Company (in no particular order) are:
  - (i) PPG Industries Australia Pty Limited;
  - (ii) DuluxGroup (Australia) Pty Ltd;
  - (iii) Henry Haymes Proprietary Limited; and
  - (iv) Valspar Paint (Australia) Pty Ltd.

- (c) The Nominated Members specified in **clause 7.2(b)** will be the Nominated Members of the Company for a term commencing on the adoption of this document and ending on the third anniversary of the Effective Date. Thereafter, the Nominated Members will be the Nominated Members of the Company for successive periods of three years.
- (d) For the avoidance of any doubt, if a Member ceases to be a Nominated Member, that Member remains a Member.

### **7.3 Pre-condition to Membership**

A person is entitled to become a Member if that person agrees in writing to assume the liability to pay the Member's Guarantee Amount.

### **7.4 Becoming a Member**

Subject to the Corporations Act, a person becomes a Member on the registration of that person's name in the Register of Members.

### **7.5 Eligibility for Membership**

Any person is eligible to become a Member if the person is a body corporate.

### **7.6 Consideration for application for Membership**

If a body corporate applies to become a Member of the Company and satisfies the criteria in **clause 7.5**, at the first general meeting of the Company after such an application has been received by the Company, the Company must consider the application. For any application to be accepted a special resolution to that effect must be passed.

### **7.7 Registration as Member**

If the Company accepts an application for Membership pursuant to **clause 7.6**, as soon as practicable, the Company Secretary must register the name of the body corporate in the Register of Members.

### **7.8 Application for Membership**

The Board may prescribe the form of the application for Membership.

## **8 Rights of Members are non-transferable**

The rights and obligations of a Member are personal and are not transferable.

## **9 Cessation of Membership**

### **9.1 Cessation of Membership of a body corporate**

A body corporate ceases to be a Member:

- (a) if the body corporate resigns as a Member in accordance with this Constitution;

- (b) if the body corporate ceases to satisfy the eligibility requirements for Membership under this Constitution;
- (c) if the body corporate is expelled as a Member in accordance with this Constitution;
- (d) if the body corporate is placed under external administration or makes any composition or arrangement with its creditors; or
- (e) if the body corporate is the subject of an order by a court of competent jurisdiction directing the body corporate to be wound up.

## **9.2 Resignation of Member**

A Member may resign from the Company by giving the Board at least 30 days' notice.

## **9.3 Expulsion of Member**

If the Company passes a special resolution that it is not in the best interests of the Company for a body corporate to remain as a Member, that body corporate is automatically expelled as Member.

# **10 Maintenance of Register of Members**

## **10.1 Register of Members**

The Secretary must maintain a Register of Members setting out:

- (a) the name and address of each Member;
- (b) the date on which each person became a Member; and
- (c) in respect of each person who has ceased to be a Member, the date on which that person ceased to be a Member.

## **10.2 Inspection of Register of Members**

The Register of Members must be kept at the Company's registered office or the principal place of business. A Member may inspect the Register of Members at between the hours of 9.00 am and 5.00 pm on any Business Day. No amount may be charged for inspection.

# **11 General meetings**

## **11.1 Annual general meetings**

The Company must hold its first annual general meeting within 18 months after its incorporation.

## **11.2 Director convening a general meeting**

Any Director or the Directors may convene a general meeting.

### **11.3 Meetings requested by Members**

- (a) If the Board receives a request from at least two Members to call and arrange to hold a general meeting, the Board must give notice of a general meeting within 21 days after the date of receipt of that request.
- (b) The request must detail any proposed resolution, the names of the Members requesting the meeting and be signed by all of the Members making the request. For this purpose, signatures of the Members may be contained in more than one document.
- (c) A general meeting requested by the Members must be held no later than two calendar months after the request is received.

### **11.4 Notice of general meeting**

At least 21 days' notice of a general meeting must be given to the Members, Directors and Auditor. The notice must:

- (a) state the date, time and place (or places) of the meeting;
- (b) state the general nature of the business to be conducted at the meeting;
- (c) state any proposed resolutions;
- (d) state the names of proxies that have been appointed (if any); and
- (e) contain a statement informing the Members of the right to appoint a proxy.

### **11.5 Calculation of period of notice**

In computing the period of notice under **clause 11.3**, both the day on which the notice is given or taken to be given and the day of the meeting convened by it are to be disregarded.

### **11.6 Directors entitled to notice of general meeting**

A Director is entitled to receive notice of and to attend all general meetings of the Company and is entitled to speak at those meetings.

### **11.7 Shorter notice of general meeting**

Subject to the Corporations Act, shorter notice of a general meeting may be given if the calling of the notice of the general meeting on shorter notice is agreed by all Members and accordingly, any such general meeting will be treated as having been duly convened.

### **11.8 Notice of resumption of an adjourned meeting**

If a general meeting is adjourned for 30 days or more, at least 30 days' notice must be given to the Members, Directors and Auditor of the day, time and place (or places) for the resumption of the adjourned general meeting.

### **11.9 General meetings at two or more places**

A general meeting may be held in two or more places. If a general meeting is held in two or more places, the Company must use technology that gives Members a reasonable opportunity to participate at that general meeting.

### **11.10 Postponement or cancellation of general meeting**

Subject to this Constitution and the Corporations Act, the Board may change the place (or places) of, postpone or cancel a general meeting.

### **11.11 Notice of change, postponement or cancellation of meeting**

- (a) If the Directors have convened a general meeting, the Board may change the place (or places) of the general meeting, postpone or cancel the general meeting. If a Director has convened a general meeting, only the Director who convened the general meeting may change the place (or places) of the general meeting, or postpone or cancel the general meeting.
- (b) If the Board changes the place (or places) of a general meeting, notice must be given to each Member and each person entitled to receive notice of the meeting of the new place (or places) of the meeting.
- (c) If the Board postpones a general meeting, notice must be given to each Member and each other person entitled to receive notice of the new date, time and place (or places) of the meeting.
- (d) If the Board cancels a general meeting, notice must be given to each Member and each other person entitled to receive notice of general meetings.

### **11.12 Omission to give notice relating to general meeting**

No resolution passed at or proceedings at any general meeting will be invalid because of any unintentional omission or error in giving or not giving notice of:

- (a) that general meeting;
- (b) any change of place (or places) of that general meeting;
- (c) postponement of that general meeting including the date, time and place (or places) for the resumption of the adjourned meeting; or
- (d) resumption of that adjourned general meeting.

## **12 Proceedings at general meetings**

### **12.1 Quorum**

- (a) A quorum at a general meeting is two thirds or more of Members, who must be present in person or by proxy. The quorum must be present at all times during the general meeting.
- (b) If a Member has appointed more than one proxy and two or more proxies attend a general meeting, only one proxy will be counted for the purposes of determining whether there is a quorum.

## **12.2 Lack of quorum**

- (a) If a quorum is not present within 30 minutes after the time appointed for a general meeting (or any longer period of time as the chair may allow) or ceases to be present at any time during the general meeting:
  - (i) the general meeting is adjourned to be resumed on a day, time and place (or places) as the chair determines or if the chair is not present as the Directors at the meeting may determine; or
  - (ii) if the Directors do not so determine, no Director is present or no Director present determines:
    - (A) the date for the resumption of the adjourned general meeting will be on the same day in the next week;
    - (B) the time for the resumption of the adjourned general meeting will be at the same time as the adjourned meeting; and
    - (C) the place (or places) for the resumption of the adjourned general meeting, will be at the same place (or places) as the adjourned meeting.
- (b) If a quorum is not present within 30 minutes after the time appointed for the resumption of the adjourned general meeting or ceases to be present during the meeting, the general meeting is dissolved.

## **12.3 Chairing general meetings**

- (a) The chair of the general meeting will be the Director elected for the time being as chair of the Board meetings.
- (b) If the chair is not present within 15 minutes after the time appointed for any general meeting or if the chair is unwilling or unable to act as chair for the whole or any part of that general meeting, the Directors present may elect a Director present to chair that general meeting.
- (c) If no Director is elected or if all the Directors present decline to take the chair for the whole or any part of that general meeting, the Members present (whether in person or by proxy) may elect a Member present (in person) to chair for the whole or any part of that general meeting. If the Members do not so elect a chair, the meeting will be adjourned to be resumed on the same day, at the same time and at the same place (or places) in the following week.

## **12.4 Conduct of general meetings**

The chair of each general meeting has charge of conduct of that meeting, including of the procedures to be adopted and the application of those procedures at that meeting.

## **12.5 Adjournment**

- (a) The chair of a general meeting at which a quorum is present may adjourn the general meeting.

- (b) If a majority of Members present at a general meeting in person or by proxy determine that the meeting should be adjourned, the chair must adjourn the meeting to another date, time and place (or places) determined by the chair.
- (c) No business may be transacted on the resumption of an adjourned or postponed general meeting other than the business left unfinished at the adjourned or postponed general meeting.

## 13 Proxy

### 13.1 Appointment of proxy

- (a) A Member may appoint a person as proxy to attend, speak and vote for that Member at a general meeting of the Company. The instrument appointing a proxy may restrict the exercise of any power.
- (b) A proxy may be, but does not have to be, a Member.

### 13.2 Proxy instruments

- (a) An appointment of a proxy must be in writing and be signed by the Member appointing the proxy or by the duly authorised attorney of the Member and state:
  - (i) the Member's name and address;
  - (ii) the Company's name;
  - (iii) the proxy's name or the name of the office held by the proxy; and
  - (iv) the general meeting at which the proxy may be used, or if the appointment is a standing one, a clear statement to that effect.
- (b) Where a proxy is signed pursuant to a power of attorney, a copy of the power of attorney (certified as a true copy of the original) must be attached to the proxy instrument sent to the Company.
- (c) An instrument appointing a proxy may direct the way in which a proxy is to vote on a particular resolution. If an instrument contains a direction, the proxy must vote as directed in the instrument, and is not entitled to vote on the proposed resolution except as directed in the instrument. If an instrument does not contain a direction, the proxy is entitled to vote on the proposed resolution as the proxy considers appropriate.

### 13.3 Proxy to be received by Company

An instrument purporting to appoint a proxy is not effective unless it is received, together with any additional documentation, including a copy of the power of attorney (certified as a true copy of the original), by the Company at least 48 hours before the general meeting or, as the case may be, the resumption of an adjourned general meeting, at any of the following:

- (a) the registered office; or

- (b) a place, facsimile number or electronic address specified for that purpose in the notice of the general meeting.

### **13.4 Power to demand poll**

A proxy may demand, or join in demanding, a poll in accordance with this Constitution.

### **13.5 Revocation of proxy**

The appointment of a proxy may be revoked by the Member who appointed the proxy by notice to the Company from the Member or, as the case may be, the duly authorised attorney of the Member, stating that the appointment of a proxy is revoked or by appointing a new proxy.

### **13.6 Validity of votes of proxy**

A vote cast by a proxy will be valid unless before the start of a general meeting (or, in the case of an adjourned or postponed general meeting, not less than 48 hours before the resumption of the adjourned or postponed general meeting) at which a proxy votes:

- (a) the Member who appointed the proxy ceases to be a Member; or
- (b) the Company receives notice of:
  - (i) the revocation of the instrument appointing the proxy;
  - (ii) the appointment of a new proxy; or
  - (iii) the revocation of any power of attorney under which the proxy was appointed.

### **13.7 No liability**

The Company is not responsible for ensuring that any directions provided in the instrument appointing the proxy or the way in which a proxy is to vote on a particular resolution are complied with, and accordingly is not liable if those directions are not complied with.

## **14 Body corporate representative**

### **14.1 Appointment of corporate representative**

- (a) If a Member is a body corporate, it may appoint a natural person as its representative to exercise on its behalf any or all of the powers it may exercise:
  - (i) at meetings of the Members;
  - (ii) at meetings of creditors or debenture holders; or
  - (iii) relating to resolutions to be passed without meetings.
- (b) The appointment of a corporate representative may be a standing one.



## **14.2 Authority to act as corporate representative**

- (a) An appointment of a corporate representative must be in writing and be signed by the body corporate appointing the representative and state:
  - (i) the Member's name and address;
  - (ii) the Company's name;
  - (iii) the representative's name or the name of the office held by the representative; and
  - (iv) the general meeting at which the representative may act, or if the appointment is a standing one, a clear statement to that effect.
- (b) The instrument appointing the corporate representative may restrict the exercise of any power.

## **14.3 Instrument to be received by Company**

- (a) An instrument purporting to appoint the corporate representative is not valid unless it is received by the Company at least 48 hours before the general meeting or, in the case of an adjourned meeting, at least 48 hours before the resumption of an adjourned general meeting.
- (b) An instrument appointing a corporate representative must be received by the Company at any of the following:
  - (i) the registered office; or
  - (ii) a place, facsimile number or electronic address specified for that purpose in the notice of the general meeting.

## **14.4 Revocation and appointment of corporate representative**

The appointment of a corporate representative may be revoked by the Member who appointed the corporate representative by notice to the Company from the Member stating that the appointment of the corporate representative is revoked or by appointing a new corporate representative.

## **14.5 Validity of votes of corporate representative**

A vote cast by a corporate representative will be valid unless before the start of the general meeting (or, in the case of an adjourned or postponed general meeting, not less than 48 hours before the resumption of the adjourned or postponed general meeting) at which a corporate representative votes:

- (a) the Member who appointed the corporate representative ceases to be a Member; or
- (b) the Company has received notice of:
  - (i) the revocation of the instrument appointing the corporate representative; or
  - (ii) the appointment of a new corporate representative.

## **14.6 No liability**

The Company is not responsible for ensuring that the terms of appointment of a corporate representative are complied with, and accordingly is not liable if those terms are not complied with.

## **15 Voting**

### **15.1 Entitlement to one vote**

Each Member may vote in person or by proxy at a general meeting. Each Member has one vote, whether on a show of hands, or on a poll.

### **15.2 Questions to be decided by majority**

Subject to this Constitution and the requirements of the Corporations Act, a resolution is taken to be carried if a simple majority of the votes cast on the resolution are in favour of it.

### **15.3 Questions to be decided by special resolution**

Any decision to amend or repeal this Constitution, or any decision which this Constitution requires to be passed by a special resolution of Members, is taken to be carried if:

- (a) at least 75% of the votes cast by Members on the resolution are in favour of it; and
- (b) at least 75% of the Nominated Members vote in favour of the resolution.

### **15.4 Casting vote**

Without limiting **clause 15.2**, if on any ordinary resolution an equal number of votes is cast for and against a resolution, the chair has a casting vote.

### **15.5 Proxy vote to be identified**

Before a vote is taken the chair must inform the Members present whether any proxy votes have been received and, if so, how the proxy votes are to be cast.

### **15.6 Voting on resolution**

At any general meeting, a resolution put to a vote must be determined by a show of hands unless a poll is demanded in accordance with this Constitution.

### **15.7 Objection to right to vote**

- (a) A challenge to a right to vote at a general meeting:
  - (i) may only be made at that general meeting; and
  - (ii) must be determined by the chair.
- (b) A determination made by the chair in relation to a challenge to a right to vote is binding on all Members and is final.

## **15.8 Written resolutions**

Members may pass a resolution without a general meeting being held if all the Members sign a document containing a statement that they are in favour of the resolution set out in the document. For this purpose, signatures of the Members may be contained in more than one document.

## **15.9 Minutes**

- (a) Unless a poll is demanded in accordance with this Constitution, a declaration by the chair that a resolution has, on a show of hands, been:
- (i) carried;
  - (ii) carried unanimously;
  - (iii) carried by a particular majority; or
  - (iv) lost or not carried by a particular majority,

is conclusive evidence of the fact declared. An entry to that effect made in the minute book of the Company signed by the chair is evidence of that fact unless the contrary is proved.

- (b) Within one month after each general meeting, the Directors must record or cause to be recorded in the minute book:
- (i) the proceedings and resolutions of each general meeting;
  - (ii) any declarations at each general meeting ; and
  - (iii) all resolutions passed by Members without a general meeting.
- (c) The chair, or the chair of the next meeting, must sign the minutes within one month after the general meeting.
- (d) The minute books must be kept at the registered office.
- (e) Members may inspect the minute books between the hours of 9.00 am and 5.00 pm on any Business Day. No amount may be charged for inspection.

## **15.10 Disputes to be resolved by chair**

The chair will determine any dispute in relation to any vote, and the determination of the chair is binding on all Members and is final.

## **16 Poll**

### **16.1 Chair may determine to take a poll**

The chair of a general meeting may determine that a poll be taken on any resolution.

### **16.2 Right to demand poll**

A poll may be demanded on any resolution at a general meeting other than the election of a chair or the question of an adjournment by any Member.

### **16.3 Procedure for demanding poll**

- (a) A poll may be demanded:
  - (i) before a vote on a show of hands is taken;
  - (ii) before the result of a vote on a show of hands is declared; or
  - (iii) immediately after the result of a vote on a show of hands is declared.
- (b) If a poll is demanded on the election of a chair or on the question of an adjournment, it must be taken immediately. If a poll is demanded on any other matter, it may be taken in the manner and at the time and place (or places) as the chair directs.
- (c) Other than where a poll is demanded on the election of a chair or the question of an adjournment, a demand for a poll may be withdrawn at any time by the person or persons who demanded it. A demand for a poll which is withdrawn does not invalidate the result of a show of hands declared before the demand for the poll was made.
- (d) Other than where a poll is demanded on the election of a chair or the question of an adjournment, a demand for a poll does not prevent the general meeting continuing for the transaction of any business.

## **17 Appointment and removal of Directors**

### **17.1 Number of Directors**

The number of Directors (not counting alternates) must not be less than four or more than eight, to be made up as follows:

- (a) up to two Independent Directors, one of whom must be appointed to the position of Chairperson;
- (b) one nominee Director of each of the Nominated Members;
- (c) up to two additional Directors from time to time.

### **17.2 Directors below minimum required**

If the number of Directors is below the minimum fixed by this Constitution, the Directors must not act except in emergencies, or for appointing one or more Directors in order to make up a quorum for a meeting of the Board, or to call and arrange to hold a general meeting of Members.

### **17.3 First Directors**

- (a) The first Directors are those Directors listed in column A of **schedule 1** and named in the application for registration of the Company.
- (b) Each person who holds office as a Director upon the registration of the company has been appointed in the manner set out in column B **schedule 1** and must be treated as appointed in accordance with this Constitution.

## 17.4 Nominee Directors of each Nominated Member

- (a) For the purposes of determining the Nominated Members in accordance with **clause 7.2(a)**, not less than 30 Business Days prior to the expiration of the term of the current Nominated Members:
  - (i) the Chairperson must obtain and review all relevant data to determine the Top Three Levy Remitters, and notify the Board as soon as practicable of the determination after such determination has been made; and
  - (ii) the Board must decide (by special resolution) one other Member to become a Nominated Member.
- (b) Once the Nominated Members have been determined in accordance with **clause 17.4(a)**, the Board must notify the new Nominated Members of the determination. For the avoidance of any doubt, a retiring Nominated Member is eligible for re-appointment as a Nominated Member.
- (c) If a Nominated Member does not want to exercise its right to appoint a nominee Director for the next term, it must notify the Board within 5 days of receipt of notification from the Board, in which case the Board will choose another Member (by special resolution) to replace that Nominated Member for the next term and give notice to that Member.
- (d) Each Nominated Member nominates (as a standing nomination) its respective managing director or chief executive officer or equivalent manager (as applicable) as its nominee Director.
- (e) Once the process contemplated in **clauses 17.4(a) to 17.4(d)** has concluded, the Board must notify all Members accordingly. Such notification must include the following information:
  - (i) the date that the current Nominated Members cease to be the Nominated Members;
  - (ii) the date that the new Nominated Members commence to be Nominated Members and the identity of the new Nominated Members; and
  - (iii) the name of the person that each new Nominated Member appoints as its nominee Director.
- (f) A nominee Director of each of the Nominated Members will be appointed for a term of three years, being the same period as the term of the appointing Nominated Member.
- (g) A retiring Director is eligible for re-appointment.
- (h) If a nominee Director of each of the Nominated Members changes during the Director's term, that Nominated Member must notify the Company:
  - (i) of the removal of that person as its nominee Director; and
  - (ii) the name of its new nominee Director, together with that person's consent to act as a Director of the Company.

## **17.5 Appointment of Directors**

- (a) Subject to this Constitution:
  - (i) in relation to the appointment of the nominee Director of each of the Nominated Members, each Nominated Member appoints its respective managing director or chief executive officer or equivalent manager (as applicable) as its nominee Director, or if such person is removed as Director pursuant to **clause 17.7**, that Member is entitled to appoint any person as its replacement Director. The Company and the Board must take all necessary steps to ensure that each nominee Director of a Nominated Member is appointed to the Board; and
  - (ii) in relation to the appointment of all other Directors, the Company may by special resolution at a general meeting appoint a person as a Director on the terms (including the length of tenure) of the resolution.
- (b) Subject to this Constitution, the Board may by special resolution at a Board meeting appoint a natural person as a Director, as an additional Director or to fill the office of a Director vacated when a Director ceases to be a Director.
- (c) An appointment of a person as a Director is not effective unless a signed consent to the appointment is provided by that person to the Company. The appointment of a person as a Director will take effect on the later of the date of appointment and the date on which the Company receives the signed consent.

## **17.6 Confirmation of appointment**

If a person is appointed as a Director by the Board, the Company must confirm the appointment at the next annual general meeting. If the appointment is not confirmed, the person ceases to be a Director at the conclusion of the annual general meeting.

## **17.7 Removal of Director**

- (a) The Company may remove a Director by resolution at a general meeting.
- (b) At least two months' notice must be given to the Company of the intention to move a resolution to remove a Director at a general meeting.
- (c) If notice of intention to move a resolution to remove a Director at a general meeting is received by the Company, the Director must be given a copy of the notice as soon as practicable.
- (d) The Director must be informed that the Director:
  - (i) may submit a written statement to the Company for circulation to the Members before the meeting at which the resolution is put to a vote; and
  - (ii) may speak to the motion to remove the Director at the general meeting at which the resolution is to be put to vote.

- (e) At least 21 days' notice must be given to the Members of a general meeting at which the resolution for the removal of a Director is proposed. The notice must set out the proposed resolution and the grounds for the proposed resolution.

### **17.8 Cessation of Directorship**

A person ceases to be a Director and the office of Director is vacated if the person:

- (a) is removed from office as a Director by a resolution of the Company at a general meeting;
- (b) resigns as a Director in accordance with this Constitution;
- (c) if the person is subject to assessment or treatment under any mental health law and the Board resolves that the person should cease to be a Member;
- (d) dies;
- (e) is disqualified from acting as a Director under the Corporations Act;
- (f) is absent from Board meetings for a continuous period of 6 months without leave of absence from the Board and the Board does not resolve that the Director should not cease to be a Director; or
- (g) ceases to be a Director pursuant to **clause 17.4**.

### **17.9 Resignation of Directors**

A Director may resign from the office of Director by giving notice of resignation to the Company at its registered office.

## **18 Powers and duties of Board**

- (a) Subject to this Constitution and the Corporations Act, the activities of the Company are to be managed by, or under the direction of, the Board.
- (b) Subject to this Constitution and the Corporations Act, the Board may exercise all powers of the Company that are not required to be exercised by the Company in a general meeting.
- (c) The powers of the Board include (but are not limited to) the power to:
  - (i) borrow or otherwise raise money;
  - (ii) mortgage, charge (including in the form of a floating charge) any of the Company's assets (both present and future); and
  - (iii) issue debentures and other securities, and any instrument (including any bond).
- (d) The Board may delegate any of its powers to:
  - (i) a Director;
  - (ii) a committee of Directors;

- (iii) an employee of the Company; or
- (iv) any other person.

## 19 Negotiable instruments

All negotiable instruments and all receipts for money paid to the Company must be signed, drawn, accepted, endorsed or otherwise executed in such manner as the Board may determine.

## 20 Chief Executive Officer

- (a) The Board may appoint a Chief Executive Officer of the Company, for such period, and on such terms (including as to remuneration), as the Board determines.
- (b) The Board may confer on a Chief Executive Officer any of the powers that the Board may exercise.
- (c) The Board may vary or revoke a conferral of any power on the Chief Executive Officer.
- (d) The Board may at any time vary or revoke an appointment of a Chief Executive Officer.

## 21 Alternate Directors

### 21.1 Appointment and terms of appointment

- (a) Any Director may appoint a natural person to act as the alternate of that Director and may specify the terms of the alternate's appointment. The terms of that appointment may provide for the alternate to exercise some or all of the powers of that Director.
- (b) A person may be appointed as the alternate of more than one Director.
- (c) An alternate is not an agent of the Director appointing the alternate.
- (d) The Director appointing an alternate must give notice to the Company of that appointment. If the notice does not detail the terms of the appointment, the alternate will have the power to exercise all of the powers of the Director. The appointment will continue until notice of termination of the appointment is received by the Company.
- (e) Where the alternate is not a Director, an appointment of a person as an alternate is not effective until a signed consent to the appointment is provided by that person to the Company. Accordingly, such an appointment will take effect on the later of the date of appointment and the date on which the Company received the signed consent.



## **21.2 No liability**

The Company is not responsible for ensuring that the terms of appointment of an alternate are complied with and accordingly, is not liable if those terms are not complied with.

## **21.3 Remuneration of alternate**

An alternate is not entitled to receive any fee (or other remuneration) from the Company for services performed as an alternate.

## **21.4 Notice and attendance at Board meetings**

If the notice appointing the alternate provides that the alternate is to receive notice of Board meetings, the Company must provide each alternate with notice. By notice to the Company, the Director who appointed an alternate may at any time require that the notice cease to be given to the alternate. An alternate may not attend any board meeting at which the Director who appointed the alternate is present, except where the alternate is appointed by more than one Director and the alternate is attending that Board meeting in respect of a Director who is not present.

## **21.5 Voting of alternate**

An alternate is entitled to a vote for each Director that the alternate represents in addition to any vote the alternate may have as a Director in the alternate's own right.

## **21.6 Termination of appointment of alternate**

- (a) A Director who appointed an alternate may terminate the appointment of the alternate at any time by notice to the alternate, the Directors and the Company.
- (b) An alternate may terminate the alternate's appointment at any time by notice to the Directors and the Company.
- (c) A termination of appointment does not take effect until the Company has received notice of termination.

## **21.7 Cessation of appointment of alternate**

An alternate ceases to be an alternate if the person who appointed that alternate ceases to be a Director.

# **22 Remuneration and reimbursement for expenses**

## **22.1 Remuneration of Independent Directors**

- (a) The Independent Directors will be remunerated for their services as Directors by:
  - (i) an amount or value of remuneration each year (if any) as the Board determines (by special resolution); or

- (ii) an aggregate amount or value of remuneration (if any) not exceeding the maximum amount or value as the Board determines (by special resolution), to be divided among them in such proportion and manner as they agree or if they do not agree, equally.
- (b) The remuneration for Independent Directors must be a fixed amount or value and not a commission of any nature.
- (c) The aggregate maximum amount of remuneration for Independent Directors must not be increased except with the prior approval of the Board. Particulars of the amount of the proposed increase and the new maximum amount of value that may be paid to the Independent as a whole must be detailed in the notice convening the meeting.

## **22.2 Remuneration of other Directors**

The Board may determine (by special resolution) to pay Directors other than Independent Directors any fee (or other remuneration) for services performed as a Director.

## **22.3 Reimbursement of expenses**

Directors and alternates are entitled to be reimbursed by the Company for reasonable costs and expenses incurred or to be incurred in connection with attendance at meetings of the Board and committees of the Board.

# **23 Board meetings**

## **23.1 Convening meetings**

- (a) In the ordinary course, the Secretary will convene Board meetings in accordance with the determinations of the Board.
- (b) A Director may at any time convene a Board meeting by notice to the other Directors.

## **23.2 Notice of meetings**

- (a) Reasonable notice of each Board meeting must be given to the Directors and each alternate entitled to receive notice (if any).
- (b) Each notice must state:
  - (i) the date, time and place (or places) of the Board meeting;
  - (ii) the general nature of the business to be conducted at the Board meeting; and
  - (iii) any proposed resolutions.

## **23.3 Omission to give notice**

No resolution passed at or proceedings at any Board meeting will be invalid because of any unintentional omission or error in giving or not giving notice of:

- (a) that Board meeting;
- (b) any change of place (or places) of that Board meeting;
- (c) postponement of that Board meeting; or
- (d) resumption of that adjourned Board meeting.

#### **23.4 Use of technology**

- (a) A Board meeting may be convened or held using any technology consented to by all Directors. The consent may be a standing one. A Director may withdraw consent to the use of a particular technology within a reasonable time period before a Board meeting.
- (b) If a number of Directors equal to the quorum is able to hear or to see and to hear each other Director contemporaneously using any technology consented to by all Directors, there is a meeting and that meeting is quorate. The rules relating to meetings of Directors apply to each such meeting as determined by the chair of the meeting.
- (c) A Director participating at a meeting using technology consented to by all Directors is treated as being present in person at the meeting.
- (d) A meeting using technology consented to by all Directors is to be taken to be held at the place determined by the chair of the meeting.
- (e) A Director may not leave a meeting using technology consented to by all Directors unless the chair consents to that Director leaving.
- (f) A Director is presumed conclusively to have been present and to have formed part of a quorum at all times during a meeting using technology consented to by all Directors, unless the chair consents to that Director leaving in which case that Director will be treated as having been present until that Director leaves.

#### **23.5 Quorum at meetings**

A quorum at a Board meeting is at least two thirds or more of the Directors, who must be present in person. The quorum must be present at all times during the Board meeting.

#### **23.6 Chair of meetings**

- (a) The Chairperson will act as chair of the Board meetings.
- (b) If the chair is not present within 15 minutes after the time appointed for a Board meeting or if the chair is unwilling or unable to act as chair for the whole or any part of that Board meeting, the Directors present may elect a Director present to chair that Board meeting.

#### **23.7 Passing resolutions at meetings**

- (a) Subject to **clause 23.7(b)**, a resolution of the Board must be passed by a majority of the votes cast by the Directors entitled to vote on the resolution.

- (b) The following decisions of the Board must be passed by a special resolution:
  - (i) any amendments to or extension of the Waste Paint Agreement;
  - (ii) determining a Nominated Member in accordance with **clause 17.4(a)(ii)**;
  - (iii) appointing a new Nominated Member in accordance with **clause 17.4(c)**;
  - (iv) appointing a Director in accordance with **clause 17.5(b)**;
  - (v) determining the remuneration of Independent Directors in accordance with **clause 22.1(a)**, and of other Directors in accordance with **clause 22.2**;
  - (vi) passing a resolution to implement the Scheme in accordance with clause 2(b) of the Waste Paint Agreement; and
  - (vii) making any changes to the Waste Levy in accordance with clause 5 of the Waste Paint Agreement.
- (c) Any decision which this Constitution requires to be passed by a special resolution of the Board, is taken to be carried if:
  - (i) at least 75% of the votes cast on the resolution by the Directors entitled to vote on the resolution are in favour of the resolution; and
  - (ii) at least 75% of the nominee Directors of the Nominated Members vote in favour of the resolution.
- (d) Each Director present in person or by alternate is entitled to vote and has one vote.

### **23.8 Casting vote**

Without limiting **clause 23.7**, if on any resolution an equal number of votes is cast for and against a resolution, the chair has a casting vote in addition to any vote cast by the chair as a Director.

### **23.9 Conduct of meetings**

The chair of each Board meeting has charge of conduct of that meeting, including of the procedures to be adopted and the application of those procedures at that meeting.

### **23.10 Written resolutions**

The Board may pass a resolution without a Board meeting being held if all the Directors entitled to vote on the resolution sign a document containing a statement that they are in favour of the resolution set out in the document. For this purpose, signatures can be contained in more than one document, with each document to be identical to each other document.

### **23.11 Minutes of meetings**

- (a) Within one month after each Board meeting, the Directors must record or cause to be recorded in the minute books:
  - (i) the proceedings and resolutions of each Board meeting; and
  - (ii) all resolutions passed without a Board meeting.
- (b) The chair, or the chair of the next Board meeting, must sign the minutes within one month after the meeting.
- (c) The minute books must be kept at the registered office.
- (d) The Directors may inspect the minute books between the hours of 9.00 am and 5.00 pm on any Business Day. No amount may be charged for inspection.

### **23.12 Validity of acts of Directors**

All acts done at a meeting of the Directors, or by a person acting as a Director, are, even if it is afterwards discovered that:

- (a) there was a defect in the appointment or continuance in office of a person as a Director or of the person so acting; or
  - (b) a person acting as a Director was disqualified or not entitled to vote,
- valid as if the relevant person had been duly authorised or had duly continued in office and was qualified and entitled to vote.

### **23.13 Committee meetings**

The rules of this Constitution relating to meetings (including resolutions and minutes) and proceedings of the Board with any necessary modifications apply to the meeting of any committee of the Board except that a quorum for a meeting of any committee is from time to time to be determined by the Board.

## **24 Director's interests**

### **24.1 Declaration of interest**

- (a) Any Director who has a material personal interest in a contract or proposed contract of the Company, holds any office or owns any property such that the Director might have duties or interests which conflict or may conflict either directly or indirectly with the Director's duties or interests as a Director, must give the Board notice of the interest at a Board meeting.
- (b) A notice of a material personal interest must set out:
  - (i) the nature and extent of the interest; and
  - (ii) the relation of the interest to the affairs of the Company.
- (c) The notice must be provided to the Board at a Board meeting as soon as practicable.

## **24.2 Voting by interested Directors**

A Director who has a material personal interest in a matter that is being considered at a Board meeting must not:

- (a) vote on the matter at a meeting; or
- (b) be present while the matter is being considered at the meeting, and accordingly will not count for the purposes of determining whether there is a quorum,

except as provided by section 195 of the Corporations Act.

## **25 Appointment of Secretary**

- (a) The Company must have at least one Secretary. The Board has the power to appoint a natural person to act as secretary on the terms and for such period as the Board may determine.
- (b) Any Secretary appointed may be removed at any time by the Board.
- (c) The Company may pay a Secretary any fee (or other remuneration) it determines by resolution for services performed as Secretary.

## **26 Removal and remuneration of Auditor**

### **26.1 Remuneration of Auditor**

The remuneration of the Auditor may be determined by the Company at a general meeting. If the remuneration is not determined at a general meeting, it may be determined by the Directors at a Board meeting.

### **26.2 Removal of Auditor**

- (a) The Company may remove an Auditor by resolution at a general meeting.
- (b) At least two months' notice must be given to the Company of the intention to move a resolution to remove an Auditor at a general meeting.
- (c) If notice of an intention to move a resolution to remove the Auditor at a general meeting is received by the Company, the Auditor must be given a copy of the notice as soon as practicable.
- (d) The notice of an intention must also inform the Auditor that the Auditor:
  - (i) may submit written representations to the Company within seven days after receiving the notice and that the Auditor may request the Company to send a copy of the written representations to the Members before the resolution is voted upon; and
  - (ii) may speak at the general meeting or request that the written representations be read at the general meeting at which the resolution is to be put to a vote.

### **26.3 Auditor's attendance at general meetings**

The Auditor must be notified of, and may attend, any general meeting. The Auditor is entitled to be heard at any general meeting it attends on any part of the business of the general meeting which concerns the Auditor.

## **27 Seal**

- (a) If the Company has a Seal the Directors must provide for the safe custody of the Seal (and any duplicate of it).
- (b) The Seal (and any duplicate of it) must not be used without the prior authority of the Board, and when used, the Seal must be used in accordance with any direction of the Board.
- (c) If a document is to be executed by the use of the Seal, the fixing of the Seal must be witnessed by two Directors or a Director and Secretary.

## **28 Financial records**

### **28.1 Fundamental principles regarding commercially sensitive information**

- (a) It is a fundamental principle agreed to by the Members and the Board that, in implementing the objectives of the Company, to the extent practicable and to the extent permitted by law, any financial record or other record of the Company that contains commercially sensitive information of the Members and any Scheme Participant in respect of the Waste Paint Agreement will not be disclosed to any Member or Director (other than an Independent Director or the Chief Executive Officer, if that person is a Director).
- (b) As soon reasonably practicable after the incorporation of the Company, the Board must devise and implement appropriate protocols to:
  - (i) effectively manage commercially sensitive information to minimise to the extent practicable the receipt by the Company of commercially sensitive information of Members and Scheme Participants, which may include the appointment of a collection agent; and
  - (ii) manage any access to financial records and other Company records by Members and Directors under **clauses 28.2** and **28.3**.
- (c) The protocols referred to in **clause 28.1(b)** must have regard to **clause 28.1(a)**.

### **28.2 Member's access to financial records**

The Board may determine whether and, if so, the extent to which and at what times and which place and under what conditions any financial record or other records of the Company be inspected by Members.

### **28.3 Directors' access to financial records**

Subject to **clause 28.1**, any Director may at any time access and inspect any financial record of the Company.

### **28.4 Access to financial records after ceasing to be a Director**

The Board may determine that any person who is to cease or has ceased to be a Director may continue to have access to and inspect any financial record of the Company relating to the time during which the person was a Director.

## **29 Notices**

### **29.1 General**

Any notice, statement or other communication under this Constitution must be in writing, except that any notice convening a Board meeting does not need to be in writing.

### **29.2 How to give a communication**

- (a) In addition to any other way allowed by the Corporations Act, a notice or other communication may be given by being:
  - (i) personally delivered;
  - (ii) left at the person's current address as recorded in the Register of Members;
  - (iii) sent to the person's address as recorded in the Register of Members by pre-paid ordinary mail or, if the address is outside Australia, by pre-paid airmail;
  - (iv) sent by fax to the person's current fax number for notices; or
  - (v) sent by email to the person's current email address for notices.

### **29.3 Communications by post**

A communication is given if posted:

- (a) within Australia to an Australian address, three Business Days after posting;
- (b) outside Australia to an address outside Australia, ten Business Days after posting.

### **29.4 Communications by fax**

A communication is given if sent by fax, when the sender's fax machine produces a report that the fax was sent in full to the addressee. That report is conclusive evidence that the addressee received the fax in full at the time indicated on that report.



## **29.5 Communications by email**

A communication is given if sent by email, when the information system from which the email was sent produces a confirmation of delivery report which indicates that the email has entered the information system of the recipient, unless the sender receives a delivery failure notification, indicating that the email has not been delivered to the information system of the recipient.

## **29.6 After hours communications**

If a communication is given:

- (a) after 5.00 pm in the place of receipt; or
- (b) on a day which is a Saturday, Sunday or bank or public holiday in the place of receipt,

it is taken as having been given at 9.00 am on the next day which is not a Saturday, Sunday or bank or public holiday in that place.

# **30 Indemnity and insurance**

## **30.1 Indemnity**

- (a) To the extent permitted by the Corporations Act and subject to the Corporations Act, the Company must indemnify each officer, Director and Secretary or any person who has been an officer, a Director or Secretary of the Company out of the assets of the Company against any liability, loss, damage, cost or expense incurred or to be incurred by the officer, Director or Secretary in or arising out of the conduct of any activity of the Company or in or arising out of the proper performance of the officer's, Director's or Secretary's duties including any liability, loss, damage, cost, charge and expense incurred by that officer, Director or Secretary in defending any proceedings, whether civil or criminal, which relate to anything done or omitted to be done or alleged to have been done or omitted to be done by the officer, Director or Secretary, in which judgment is given in the officer's, Director's or Secretary's favour or in which the officer, Director or Secretary is acquitted or in connection with any application in relation to any such proceedings in which relief is granted by the court to the officer, Director or Secretary.
- (b) This indemnity is not intended to indemnify any officer, Director or Secretary in respect of any liability in respect of which the Company must not give an indemnity, and should be construed and, if necessary, read down accordingly.

## **30.2 Documenting indemnity**

The Company must enter into an agreement or deed containing an indemnity in favour of any officer, Director or Secretary. The Board will determine the terms of the indemnity contained in the agreement or deed.

### **30.3 Insurance**

- (a) To the extent permitted by the Corporations Act and subject to the Corporations Act, the Company must pay any premium in respect of a contract of insurance between an insurer and a officer, Director or Secretary or any person who has been a officer, Director or Secretary of the Company in respect of the liability suffered or incurred in or arising out of the conduct of any activity of the Company and the proper performance by the officer, Director or Secretary of any duty.
- (b) If the Board determines, the Company may execute a document containing rules under which the Company agrees to pay any premium in relation to such a contract of insurance.

## **31 Winding up**

If the Company is wound up, any property that remains after:

- (a) satisfaction of all debts and liabilities of the Company; and
- (b) the payment of the costs, charges and expenses of winding up;
- (c) any adjustment of the rights of the contributories among Members,

must not be distributed among the Members but shall be given or transferred to some other institution or institutions having objects similar to the objects of the Company.

# Schedule 1

## First Directors

Column A	Column B
Tim Welsh	<b>Term:</b> As per <b>clause 7.2(c)</b> <b>Remuneration:</b> None
Patrick Jones	<b>Term:</b> As per <b>clause 7.2(c)</b> <b>Remuneration:</b> None
Rodney Walton	<b>Term:</b> As per <b>clause 7.2(c)</b> <b>Remuneration:</b> None
Richard Meagher	<b>Term:</b> As per <b>clause 7.2(c)</b> <b>Remuneration:</b> None

Bourke Place  
600 Bourke Street Melbourne VIC 3000  
GPO Box 9925 Melbourne VIC 3001  
Tel +61 3 9672 3000  
Fax +61 3 9672 3010  
[www.corrs.com.au](http://www.corrs.com.au)

**CORRS  
CHAMBERS  
WESTGARTH**  
lawyers

Sydney  
Melbourne  
Brisbane  
Perth

Draft: 23 June 2015

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Paint Stewardship Limited

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The parties listed in Schedule 1

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# Waste Paint Collection and Treatment Scheme Agreement

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draft

**Date**

## Parties

**Paint Stewardship Limited** ACN [●] of [●]

The Scheme Participants

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## Background

- A. The initial Scheme Participants, in consultation with APMF, the national industry body that represents the architectural and decorative paint manufacturing industry, have established a new product stewardship organisation, PSL, to implement the Scheme.
  - B. PSL is a not-for-profit company limited by guarantee. The Scheme Participants will support and promote the Scheme through funding by a levy on the sale of A&D Paint which will be the subject of an authorisation by the ACCC.
  - C. This Agreement sets out the structure of the Scheme, the Waste Levy and the funding and other obligations of the Scheme Participants.
-

# Agreed terms

## 1 Definitions and Interpretation

### 1.1 Definitions

In this document these terms have the following meanings:

<b>A&amp;D Paint</b>	All decorative and architectural paints supplied in Containers described in <b>column A</b> of <b>schedule 4</b> , but excluding those products described in <b>column B</b> of <b>schedule 4</b> .
<b>ACCC</b>	The Australian Competition and Consumer Commission.
<b>Act</b>	The <i>Competition and Consumer Act</i> 2010.
<b>Agreement</b>	This document.
<b>APMF</b>	Australian Paint Manufacturers' Federation Inc.
<b>Audit Notice</b>	Has the meaning in <b>clause 6(d)</b> .
<b>Board</b>	The board of directors of PSL.
<b>Collection Agent</b>	Any person appointed by PSL for the time being to perform the role of 'Collection Agent' for the purposes contemplated by this document.
<b>Containers</b>	All paint containers 1 litre and over and up to and including 20 litres but excluding all aerosol containers.
<b>Deed of Accession</b>	The deed of accession in the form set out in <b>Schedule 3</b> .
<b>Effective Date</b>	Has the meaning defined in <b>clause 2(b)</b> .
<b>Intellectual Property Rights</b>	Any patents, trade marks, service marks, designs, copyright, business names, trade secrets, know how and other intellectual property rights and interests (in each case whether or not registered under any law of any of the states or territories).
<b>Interest</b>	Interest at the interest rate being the daily average cash rate as published in the Market Snapshot section of the Australian Financial Review or, if the average cash rate is discontinued, then as otherwise advised by PSL as a reasonable substitute therefor, plus 300 basis points, compounding for each day from the due date for payment



until payment is made.

<b>Levy Contribution</b>	The aggregate amount, net of any allowable adjustments in accordance with <b>Schedule 2</b> , which each Scheme Participant is required to contribute to PSL for each month as calculated in accordance with <b>Schedule 2</b> .
<b>Monthly Invoices</b>	Has the meaning in <b>Schedule 2</b> .
<b>Product Stewardship Act</b>	The <i>Product Stewardship Act 2009</i> (Cth), and any exemption, modification, declaration or order made in respect of that legislation which applies to PSL.
<b>PSL</b>	Paint Stewardship Limited ACN [●].
<b>Scheme</b>	A national product stewardship scheme in Australia under the Product Stewardship Act to manage the collection, treatment and disposal of Waste Paint, including Containers, for the purpose of reducing the health and environmental impacts of unwanted or left over Waste Paint.
<b>Scheme Participants</b>	Means: (a) the initial scheme participants being listed in <b>Schedule 1</b> , who are parties to this Agreement; and (b) any new Scheme participants who have become a party to this Agreement pursuant to <b>clause 9</b> .
<b>Term</b>	Has the meaning in <b>clause 4(a)</b> .
<b>Waste Levy</b>	The amount of the levy to be imposed on the wholesale price of each litre of A&D Paint, being an amount determined by the Board in accordance with <b>clause 5(a)</b> .
<b>Waste Paint</b>	Residual A&D Paint that is no longer wanted and requires disposal. For collection purposes, the Scheme will accept as Waste Paint all A&D Paint as defined in this Agreement.

## 1.2 Interpretation

In this Agreement, unless the contrary intention appears from the context:

- (a) words in the singular also import the plural and vice versa and words in one gender include the other genders;
- (b) references to a person refer to a natural person, firm, body corporate, unincorporated association, body politic and authority;

- (c) headings are included for guidance only and do not affect the interpretation of this Agreement;
- (d) where a particular term is defined, other grammatical forms of that term have corresponding meanings;
- (e) a reference to a person includes that person acting through any of its officers, servants or agents; and
- (f) references to a statute, ordinance, code or other law include regulations, directions and other instruments under it and consolidations, amendments re-enactments or replacements of them from time to time.

## 2 Conditions precedent

The terms of this document will not come into effect until each condition referred to below has been fulfilled:

(a) **(ACCC authorisation)**

The ACCC grants an authorisation to give effect to this document pursuant to section 88 of the Act.

(b) **(Board resolution)**

The Board being satisfied that the Scheme is ready for implementation and passing a special resolution to implement the Scheme on and from the "**Effective Date**" (being the date specified in the resolution), provided that (without limiting other relevant considerations by the Board):

- (i) the ACCC authorisation referred to in **clause 2(a)** has been obtained; and
- (ii) A&D Paint classified as trade waste across all States/Territories to be reclassified in full alignment with waste classification from retail sources.

## 3 Implementation and management of Scheme

With effect on and from the Effective Date:

- (a) PSL will implement the Scheme in accordance with the terms of this document and otherwise consistent with the objects of PSL as set out in PSL's constitution, and will be responsible for the ongoing management of the Scheme; and
- (b) each Scheme Participant will comply with the terms of this document, and the reasonable and lawful directions of PSL regarding the implementation of the Scheme.

## 4 Term

- (a) The term will commence on the Effective Date and will continue for a period of five years or such longer period as determined by PSL in accordance with its constitution, provided that the ACCC grants an extension of the authorisation (or an interim authorisation) pursuant to section 88 of the Act for at least such longer period (**Term**), subject to the operation of the terms of this Agreement.
- (b) PSL will notify each Scheme Participant of the Effective Date and any extension to the Term under **clause 4(a)**.
- (c) On and from the Effective Date, each Scheme Participant will be bound by this document for the Term, unless terminated in accordance with **clause 10**.

## 5 Levy collection and remittance

- (a) The Board will determine by special resolution the amount of the Waste Levy from time to time, provided that the amount must not exceed the maximum amount approved by the ACCC, and that any changes to the Waste Levy are made in accordance with **clause 5(c)**.
- (b) On the Effective Date, the Waste Levy will be [15 cents].
- (c) The Board may change the amount of the Waste Levy during the Term, provided that each Scheme Participant is given not less than 12 months written notice of the date when such change takes effect.
- (d) On and from the Effective Date, each Scheme Participant will impose, collect and remit the Waste Levy in accordance with **Schedule 2**.

## 6 Audit

- (a) Each Scheme Participant must procure that its external auditor or, if the company is not required to be audited, an external firm of accountants, undertake an audit of the Monthly Invoices issued by the Scheme Participant referable to each financial year of the Scheme Participant and issues to the Collection Agent (or to PSL if so directed by PSL), within 4 months of the end of each financial year of such Scheme Participant, either of the following (as applicable):
  - (i) a Certificate of Compliance in the form of a letter signed by the auditor or accountants (as applicable) confirming that the contents of each of the Monthly Invoices for the period under review are materially accurate and comply with the requirements of **Schedule 2**; or
  - (ii) a letter of advice signed by the auditor or accountants (as applicable) confirming that the contents of each of the Monthly Invoices for the period under review are materially accurate and

comply with the requirements of **Schedule 2** other than for the matters specified in detail in the letter (any such matters being referred to as **Deviations**).

Provided that the scope of work and format of the Certificate of Compliance or letter of advice (as applicable) is acceptable to PSL (acting reasonably) the marginal cost of each Scheme Participant's compliance with this **clause 6(a)** will be re-chargeable to PSL.

- (b) The Scheme Participants agree that, from time to time, PSL may, on a confidential basis and in circumstances where PSL determines that a special audit is required, arrange for an audit of the supporting documentation for any Monthly Invoice provided by a Scheme Participant pursuant to **Schedule 2**. The Scheme Participants agree that in the event of a request by PSL for an audit, the Scheme Participant must, within 14 days of the request, at its cost, provide full cooperation and all relevant documentation and access required by the auditors to perform and complete the audit.
- (c) If an audit of any Scheme Participant under **clause 6(b)** discloses that the Levy Contributions for that Scheme Participant has not been correctly calculated or paid to PSL, PSL will advise the Scheme Participant and provide details of the audit report.
- (d) PSL may within 21 days of issuing an audit notice under **clause 6(c)** or at any time following receipt of a letter of advice under **clause 6(a)(ii)** invoice the Scheme Participant for any shortfall identified by the audit under **clause 6(c)** or in respect of any Deviations, together with Interest on the outstanding amount, the costs of the audit (as applicable) and any legal expenses reasonably incurred by PSL (**Audit Notice**). The Scheme Participant must pay that invoice as a debt due within 14 days of invoice, which is deemed to be final and binding, unless it gives written notice that it disputes the invoice within that time.
- (e) If the Scheme Participant disputes the results of any audit under this **clause 6** or Audit Notice, the Scheme Participant must provide PSL with a written statement of the basis of its dispute including copies of all information relied upon within 14 days of the Audit Notice.

## 7 Confidentiality

- (a) Subject to **clause 7(b)**, PSL acknowledges and agrees with each Scheme Participant that any information disclosed to it or to the Collection Agent pursuant to **clauses 5 and 6** and **Schedule 2** of this Agreement is confidential information, and, as such, must not be disclosed or used by PSL or the Collection Agent (as applicable) except for the purposes of calculating the Scheme Participant's Levy Contribution and for the purpose of the implementation of this Agreement (**Confidential Information**).

- (b) Without limiting **clause 7(a)**, PSL and the Collection Agent may disclose or use Confidential Information disclosed to it under or in respect of **clauses 5 and 6** and **Schedule 2** of this Agreement as required by law or by request or order of any court, arbitrator, mediator or regulatory agency or where:
  - (i) the Confidential Information is disclosed or used in aggregate form only, such that no Scheme Participant is referred to by name or in any other way which would enable it to be identified; or
  - (ii) the prior written consent to such disclosure or use has been obtained from the Scheme Participant who disclosed the information to PSL or the Collection Agent (as applicable).
- (c) PSL will use its best endeavours to ensure that the Collection Agent complies with **clauses 7(a)** and **7(b)**.
- (d) Where a person becomes a Scheme Participant after the Effective Date, that person must comply with this Agreement including this **clause 7** as from the date that they become a Scheme Participant pursuant to **clause 9.2**.
- (e) Each Scheme Participant must keep available for not less than a five year period, in a form reasonably required by PSL as advised from time to time, accurate and proper records of its sales of A&D Paint which are subject to the Waste Levy.

## 8 Intellectual Property Rights

- (a) The Scheme Participants hereby assign, and will ensure that their employees assign, to PSL all their existing and future Intellectual Property Rights in all the intellectual property created in relation to the development and promotion of the Scheme. The Scheme Participants must do all things necessary as required by PSL to perfect the assignments contemplated by this clause.
- (b) The Scheme Participants acknowledge that PSL owns all rights (including the Intellectual Property Rights) in the intellectual property created in relation to the development and promotion of the Scheme.
- (c) PSL grants to the Scheme Participants a non-transferable, non-exclusive, royalty-free licence to exercise all of the Intellectual Property Rights created in relation to the development and promotion of the Scheme which the Scheme Participants need in order to exercise any of their rights or perform any of their obligations under this Agreement and only to the extent necessary to perform those obligations.
- (d) The Scheme Participant must not use, and must ensure that its employees do not use, the Intellectual Property Rights created in relation to the development and promotion of the Scheme except for the purposes of carrying out this Agreement.

- (e) PSL must prepare, as soon as practicable following the date of this Agreement but prior to the Effective Date and thereafter may revise as appropriate, advertising guidelines in relation to the manner in which Scheme Participants, PSL and participating retailers may advertise the Scheme and their respective roles in connection with the Scheme (**Scheme Advertising Guidelines**). The requirements of the Scheme Advertising Guidelines must be established and revised as appropriate to best promote and support the Scheme. Each party to this Agreement agrees to abide by the Scheme Advertising Guidelines in force from time to time.

## 9 New Scheme Participants

### 9.1 Eligibility

An entity or organisation which is not a Scheme Participant may become a Scheme Participant if:

- (a) it is in the business of manufacturing and/or importing and selling A&D Paint (whether or not it is a member of the APMF);
- (b) PSL has agreed in writing that that entity or organisation may become a Scheme Participant; and
- (c) it agrees to commit to participate in the Scheme in accordance with this Agreement for the Term.

### 9.2 Becoming a party to this Agreement

Subject to **clause 9.1**, an entity or organisation may become a party to this Agreement by executing a Deed of Accession, and on and from the later of the date of execution of the Deed of Accession and the date of agreement by PSL that the entity or organisation may become a Scheme Participant, it will be obliged to impose the Waste Levy on and from that date, and collect and remit the Waste Levy in accordance with **Schedule 2**.

## 10 Termination

### 10.1 Termination

- (a) This Agreement terminates:
  - (i) on the expiration of the Term; or
  - (ii) if the ACCC authorisation referred to in **clause 2(a)** is no longer in force under the Act.
- (b) In either circumstance referred to in **clause 10.1(a)**, PSL will notify the Scheme Participants and this Agreement will terminate effective on the date so notified.
- (c) A Scheme Participant may resign as a participant under this Agreement by giving the Board not less than 12 months' written notice of its intention

to do so. The Scheme Participant's participation in the Scheme terminates on the expiration of such notice.

## 10.2 Effect of termination

- (a) If this Agreement terminates under **clause 10.1(a)**, or a Scheme Participant participating in the Scheme terminates under **clause 10.1(c)**, each relevant Scheme Participant is required to:
- (i) continue to impose the Waste Levy up to and including on the termination date;
  - (ii) after the termination date, collect and remit the Waste Levy in accordance with **Schedule 2** on any Waste Levy that is due and payable as at the termination date, until all outstanding amounts have been collected and remitted to PSL; and
  - (iii) on and from the day after the termination date, a Scheme Participant must cease to impose the Waste Levy.

## 11 GST

### 11.1 Definitions

In this **clause 11**:

- (a) words and expressions which are not defined in this Agreement but which have a defined meaning in GST Law have the same meaning as in the GST Law; and
- (b) **GST Law** has the meaning given to that expression in the A New Tax System (Goods and Services Tax) Act 1999.

### 11.2 Consideration GST exclusive

Unless otherwise expressly stated, all prices or other sums payable or consideration to be provided under this Agreement are exclusive of GST.

### 11.3 Payment of GST

If GST is payable in respect of any supply made under this Agreement, then any party (the **Recipient**) that is required to provide consideration to another party (**Supplier**) for that supply must pay to the Supplier an amount equal to the GST payable on the supply. Subject to **clause 11.4**, the recipient will pay the amount referred to in this **clause 11.3** in addition to and at the same time that the consideration for the supply is to be provided under this Agreement.

### 11.4 Tax invoices

- (a) The parties agree that the Recipient shall issue recipient created tax invoices (**RCTIs**) in respect of taxable supplies made by the Supplier, by reference to or in connection with this Agreement, and the parties effect a written agreement in accordance with the conditions set out by the Commissioner of Taxation in GST Ruling 2000/10 as follows:

- (i) the Recipient can issue tax invoices in respect of the services provided by the Supplier in accordance with **Schedule 2** of this Agreement (**Services**);
  - (ii) the Supplier will not issue tax invoices in respect of its Services in accordance with this Agreement;
  - (iii) the Supplier acknowledges that it is registered for GST as at the date of this Agreement and will notify the Recipient if it ceases to be registered;
  - (iv) the Recipient acknowledges that it is registered for GST as at the date of this Agreement and will notify the Supplier if it ceases to be registered;
  - (v) the Recipient will issue an adjustment note to the Supplier for any adjustment events that arise in relation to a supply for which a RCTI has been issued;
  - (vi) the Recipient and the Supplier acknowledge that the RCTI to be issued in accordance with this Agreement is a tax invoice belonging to the class of invoices that the Commissioner of Taxation has determined in writing may be issued by the recipient of a taxable supply; and
  - (vii) the agreement in this **clause 11.4(a)** will terminate immediately if the Recipient or the Supplier cease to satisfy any of the requirements under the GST Act for issuing a RCTI.
- (b) In respect of taxable supplies to which **clause 11.4(a)** does not apply, no payment of any amount pursuant to **clause 11.3** is required until the supplier has provided a tax invoice or adjustment note as appropriate to the recipient.

## **11.5 Adjustment event**

If an adjustment event arises in respect of a taxable supply made by a supplier under this Agreement, the amount payable by the recipient under **clause 11.3** will be recalculated to reflect the adjustment event and a payment will be made by the recipient to the supplier or by the supplier to the recipient as the case requires.

## **11.6 Reimbursements**

Where a party is required under this Agreement to pay or reimburse an expense or outgoing of another party, the amount to be paid or reimbursed by the first party will be the sum of:

- (a) the amount of the expense or outgoing less any input tax credits in respect of the expense or outgoing to which the other party is entitled; and
- (b) if the payment or reimbursement is subject to GST, an amount equal to that GST.



## 12 No merger

The rights and obligations of the parties under this Agreement shall survive, and remain binding and enforceable, notwithstanding the expiration of the Term, or the termination of this Agreement to the extent necessary to preserve the intended benefits of such provisions.

## 13 General

### 13.1 Governing Law

This Agreement is governed by and is to be construed in accordance with the laws of Victoria. Each party irrevocably and unconditionally submits to the non-exclusive jurisdiction of the courts of Victoria entitled to hear appeals from these courts.

### 13.2 Costs and counterparts

- (a) Each party must bear its own costs and expenses of negotiating, preparing, executing and performing this Agreement, including all legal costs and expenses.
- (b) This Agreement may be executed in counterparts.

### 13.3 Notices

Any notice or other communication required or permitted to be given by or pursuant to this Agreement must be given in writing and either delivered personally, sent by prepaid registered post, facsimile or sent in an electronic form (such as e-mail) with a copy of the electronic notice being sent by facsimile or mail as soon as possible afterwards, to the relevant party or to such other person or address as the relevant party may from time to time notify in writing.

### 13.4 Deemed receipt of a notice or other communication

Any notice or other communication will be deemed to be received:

- (a) if delivered personally, on the date of delivery;
- (b) if sent by prepaid registered post, 7 days after the date of posting unless actually received earlier;
- (c) if sent by facsimile, on production by the machine from which the facsimile was sent of a transmission report which confirms that the facsimile was sent in its entirety to the facsimile number of the recipient; and
- (d) if sent in an electronic form, on the date on which the recipient's e-mail system logs the e-mail message as being received.

### 13.5 Amendment

- (a) This Agreement can only be amended, supplemented or replaced by another agreement in accordance with the constitution of PSL.

- (b) PSL must notify each Scheme Participant in writing of such amendment, supplement or replacement as soon as practicable after same. Such amendment, supplement or replacement will be effective and binding on each Scheme Participant upon receipt of such notification.

**13.6 Assignment**

A party cannot assign, novate or otherwise transfer any of its rights or obligations under this Agreement without the prior written consent of PSL.

**13.7 Severability**

If any one or more of the provisions of this Agreement should be found to be illegal or unenforceable, the validity and enforceability of the remainder of the provisions will not be affected. It is the intention of the parties that any provision found to be illegal or unenforceable should not be terminated but that it be amended to the extent necessary to render it valid and enforceable.

**13.8 No partnership or agency**

Nothing in this Agreement will be considered to constitute a joint venture, partnership or agency between any of the parties to this Agreement or to merge the assets, liabilities and undertaking of those parties and no party to this Agreement will have the authority to bind any other party to this Agreement in any way.

**13.9 Indemnity**

PSL provides an indemnity to Scheme Participants against any funds not used in accordance with the terms of this document, including misappropriated funds.

# Schedule 1

## Scheme Participants

Name	Contact details	Authorised contact person
DuluxGroup (Australia) Pty Ltd	1956 Dandenong Road, Clayton, Victoria, 3168  Phone No: 03 9263 5678	Patrick Jones
Henry Haymes Propriety Limited	Waringa Drive, Wendouree Industrial Park, Ballarat, Victoria, 3350  Phone No: 1800 033431	Rodney Walton
Valspar Paint (Australia) Pty Ltd	Level 4, 2 Burbank Place, Norwest Business Park, Baulkham Hills, New South Wales, 2153  Phone No: 02 8867 3333	Richard Meagher
PPG Industries Australia Pty Limited	McNaughton Road, Clayton, Victoria, 3168  Phone No: 03 9263 6000	Tim Welsh
Resene Paints (Australia) Limited	64 Link Drive, Yatala, Queensland, 4207  Phone No. 1800 738 383	Lee Pomfret

## Schedule 2

### Levy collection and remittance

- (a) Subject to **paragraph (c)** below, each Scheme Participant must impose the Waste Levy on all sales of A&D Paint to customers in Australia, including any bonus sales of A&D Paint (for example, “two-for-one” offers, or where six litres of A&D Paint is being sold for the price of four litres of A&D Paint).
- (b) Without limitation, A&D Paint is deemed to be intended for supply to a customer within Australia if any of the following apply:
  - (i) the A&D Paint is delivered to a location in Australia;
  - (ii) the customer invoice address is located in Australia; or
  - (iii) the delivery docket address is in Australia.
- (c) The treatment of donations, gifts and sponsorship agreements is to be determined by the Board.
- (d) Each Scheme Participant must ensure that all customer invoices:
  - (i) clearly identify those products that incur the Waste Levy; and
  - (ii) clearly and separately state the total Waste Levy payable by the customer,

unless otherwise approved by PSL.

- (e) Within 21 days after the end of each calendar month each Scheme Participant will provide the Collection Agent (or to PSL if so directed by PSL), on a confidential basis, a recipient generated tax invoice (**Monthly Invoice**) setting out the following information and such additional information as may be reasonably requested by PSL from time to time:
  - (i) the net volume by litres of A&D Paint supplied to all customers in Australia in the previous month (**Monthly Volume Figure**);
  - (ii) the Levy Contribution for the relevant month, which will be calculated as: Monthly Volume Figure x Waste Levy;
  - (iii) any applicable GST or other tax or duty applicable to the Levy Contribution for the relevant month. For the avoidance of doubt, in addition to the Levy Contribution and any other moneys payable under this Agreement by Scheme Participants, the Scheme Participants must pay the amount of any GST or other tax or duty applicable to that Levy Contribution; and
  - (iv) any relevant adjustments on account of:

- (A) returned A&D Paint in accordance with **paragraph (h)**;
- (B) bad debts in accordance with **paragraph (i)**; or
- (C) any other adjustment agreed by PSL from time to time.

An example Monthly Invoice is attached as **Annexure A**.

- (f) Each Scheme Participant must pay the monthly Levy Contribution in full and without delay or set off (other than as permitted under this **Schedule 2**) to the Collection Agent (or to PSL if so directed by PSL) by the last day of the month after the month in which the Monthly Invoice is provided.
- (g) If a Scheme Participant fails to pay the Levy Contribution by the due date, that Scheme Participant must pay Interest on the relevant Levy Contribution.
- (h) Where a customer returns A&D Paint to a Scheme Participant, the Scheme Participant may claim an adjustment to their Levy Contribution in the month that immediately follows the relevant return.
- (i) Where a Scheme Participant has paid its relevant Levy Contribution, and it subsequently incurs a bad debt (as determined in accordance with the relevant Scheme Participant's ordinary accounting practices) in respect of any such money paid, the Scheme Participant may claim an adjustment to their Levy Contribution in the month that immediately follows the date on which the bad debt is incurred.
- (j) In circumstances where a Collection Agent is to be appointed, PSL must ensure that the Collection Agent is engaged on terms that are consistent with the provisions of this Agreement, including this **Schedule 2** and the confidentiality obligations under **clause 7**.

## Schedule 3

### Deed of Accession

**Deed of Accession made at** \_\_\_\_\_ **on** \_\_\_\_\_

**Granted By:** [Insert company name and ABN] of [insert address] ("New Scheme Participant")

**In Favour of:** Paint Stewardship Limited [ ] ("PSL")

[Insert company name and ABN] of [insert address] [Insert details of Initial Scheme Participants and any other Scheme Participants who have previously executed a Deed of Accession to the Waste Paint Collection and Treatment Scheme Agreement]

(together the "Existing Scheme Participants")

#### Recitals

- A. The Existing Scheme Participants have entered into a Waste Paint Collection and Treatment Scheme Agreement with PSL dated [insert date].
- B. The New Scheme Participant wishes to become a party to the Waste Paint Collection and Treatment Scheme Agreement.

With effect from the date of this deed of accession, the New Scheme Participant agrees with the Existing Scheme Participants and PSL (as fully and effectively as if they were a party to this Deed of Accession) to:

- (a) become a party to the Waste Paint Collection and Treatment Scheme Agreement; and
- (b) be bound by the terms and conditions of the Agreement as if references in the Waste Paint Collection and Treatment Scheme Agreement to Scheme Participants included references to the New Scheme Participant.

**Executed** as a deed poll

**Executed by [New Scheme Participant]** )  
)

.....  
Company Secretary/Director Director

.....  
Name of Company Secretary/Director Name of Director (print)  
(print)

draft

# Schedule 4

## A&D Paint

Column A	Column B
<p><b>In-Scheme A&amp;D paint</b></p> <ul style="list-style-type: none"> <li>• Interior and exterior architectural paint – water and solvent based</li> <li>• Deck coatings and floor paints</li> <li>• Primers, undercoats and sealers</li> <li>• Stains and shellacs</li> <li>• Varnishes and urethanes (single component)</li> <li>• Wood coatings (containing no pesticides)</li> </ul>	<p><b>Out-of-Scheme A&amp;D paint</b></p> <ul style="list-style-type: none"> <li>• Industrial maintenance coatings</li> <li>• Original equipment manufacturer (e.g. car manufacturing) and industrial surface coating (shop application) paints and finishes</li> <li>• Aerosol paints</li> <li>• Automotive paints</li> <li>• Anti-fouling coatings</li> <li>• Melamine, metal and rust preventative</li> <li>• Caulking compounds, epoxies, glues or adhesives</li> <li>• Colorants and tints</li> <li>• Resins</li> <li>• Paint thinners, mineral spirits or solvents</li> <li>• Paint additives</li> <li>• Roof patch or repair</li> <li>• Tar-based or bitumen-based products</li> <li>• 2-component coatings</li> <li>• Deck cleaners</li> <li>• Traffic paints</li> <li>• Texture coatings</li> <li>• Bagged renders</li> <li>• Isocyanates</li> <li>• Metal Coatings</li> </ul>



	<ul style="list-style-type: none"><li>• Paint Washings</li></ul>
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draft

# Execution

**Signed** as an agreement.

**Executed by Paint Stewardship Limited** )  
)

.....  
Company Secretary/Director

.....  
Director

.....  
Name of Company Secretary/Director (print)

.....  
Name of Director (print)

**Executed by PPG Industries Australia Pty Limited** )  
)

.....  
Company Secretary/Director

.....  
Director

.....  
Name of Company Secretary/Director (print)

.....  
Name of Director (print)

**Executed by DuluxGroup (Australia) Pty Ltd** )  
)

.....  
Company Secretary/Director

.....  
Director

.....  
Name of Company Secretary/Director (print)

.....  
Name of Director (print)

**Executed by Henry Haymes** )  
**Proprietary Limited** )

.....  
Company Secretary/Director

.....  
Director

.....  
Name of Company Secretary/Director  
(print)

.....  
Name of Director (print)

**Executed by Valspar Paint (Australia)** )  
**Pty Ltd** )

.....  
Company Secretary/Director

.....  
Director

.....  
Name of Company Secretary/Director  
(print)

.....  
Name of Director (print)

**Executed by Resene Paints** )  
**(Australia) Limited** )

.....  
Company Secretary/Director

.....  
Director

.....  
Name of Company Secretary/Director  
(print)

.....  
Name of Director (print)

draft

## Annexure A

Monthly Invoice (being a recipient generated tax invoice)

draft

# 'WILLINGNESS TO PAY' REPORT FOR A NATIONAL PAINT STEWARDSHIP SCHEME

Report prepared for the National Paint Stewardship Scheme  
Implementation Working Group

*Report prepared by  
Clare Bernadette  
Keogh*

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## Executive Summary

This *Willingness to Pay* report is based on the results of a survey of paint customers completed in April 2014. These 102 surveys were conducted in Victorian hardware stores. The surveys and this report were commissioned by Sustainability Victoria with the support of the Australian Government and the Australian Paint Manufacturers' Federation. This report forms part of the work towards the development of a national scheme model to collect and process waste paint in an environmentally sound manner.

The results of the survey found that a large majority (44%) of respondents store their left over paint when they are finished painting. For some respondents this was so they could touch up any scratches or paint chips later on. But others stored their paint because they weren't sure how to properly dispose of it. All but two of the respondents were supportive of a national scheme to collect and process waste paint. Furthermore, most respondents were willing to pay for the scheme. For a 4 L tin of paint respondents were, on average, willing to pay a fee of \$2.06 or \$1.04 (depending on the survey question) for the scheme. Some respondents (5%) were not willing to travel to deposit their waste paint preferring a kerbside pickup instead. For those that were willing to travel, the average distance reported they would go was 9.07 km, when provided in time the average time reported was 17.3 minutes. The findings from this survey show that the majority of respondents are supportive of a national scheme, would be willing to pay for it and would be willing to travel to deposit their waste paint and packaging.



## 1. Objectives

The purpose of this report is to support the development of a model industry-led paint product stewardship scheme. This scheme will aim to increase the recovery of, and minimise the environmental, health and safety footprint of waste paint in Australia. Waste architectural and decorative paint was listed in June 2013 as one of the *Priority Products* for development of a stewardship scheme on the *2013-14 Priority Product List* as required by the *Product Stewardship Act 2011* (the Act). The scheme being developed will be suitable for voluntary accreditation under the Act.

This report presents the key findings from a *Willingness to Pay* survey completed in April 2014. The key objectives of these surveys were to provide an understanding of the general public's:

- level of support or interest for a national scheme to safely collect and process waste paint and packaging;
- willingness to pay for the national scheme by means of a fee added to the cost of all paint items;
- willingness to travel to deposit waste paint and packaging;
- current use of paint and disposal methods.

## 2. Context

The *Willingness to Pay* report survey was conducted by Sustainability Victoria with support from the Australian Government and the Australian Paint Manufacturers' Federation. This report forms part of the work towards developing a national scheme to collect and process waste paint in an environmentally sound manner.

## 3. Methodology

The data collection for the *Willingness to Pay* report came from in-store surveys taken at seven hardware stores within the greater metropolitan Melbourne area, Victoria. A total of 102 paint customers were surveyed over a two week period. The surveys were conducted on weekdays and weekends during store opening hours (generally from 10 am – 4 pm). The store details and surveying times can be seen in Table 1.

*Table 1. Details of the hardware stores involved in the surveys and the times spent at each store.*

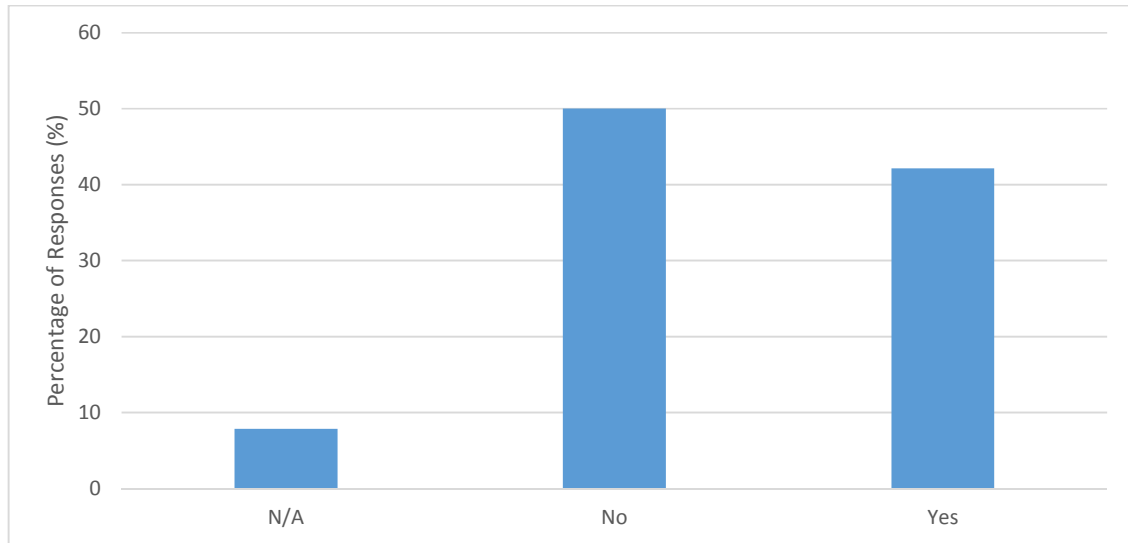
<b>HARDWARE STORE</b>	<b>DATE AND TIME OF SURVEY</b>
Masters Home Improvement – Dandenong South	Sunday 6 <sup>th</sup> April; 10 am – 1 pm
Bunnings – Boxhill	Wednesday 9 <sup>th</sup> April; 1:30 pm – 3:30 pm
Flatmans Home Timber and Hardware – Mount Waverly	Saturday 13 <sup>th</sup> April; 9 am – 12 pm
Tait Home Timber and Hardware – Tooronga	Saturday 13 <sup>th</sup> April; 1 pm – 3:30 pm
Masters Home Improvement – Carrum Downs	Sunday 14 <sup>th</sup> April; 11 am – 2 pm
Bunnings – Mill Park	Wednesday 16 <sup>th</sup> April; 10 am – 12:30 pm
Bunnings – Croydon	Wednesday 16 <sup>th</sup> April; 2 pm -4 pm

Paint customers were defined as people either purchasing or browsing paint products and paint related products (e.g. paint brushes). Paint customers were approached and it was explained to them that the surveys were being performed on behalf of the Australian Government and Australian Paint Manufacturers’ Federation to collect information about public support for the national scheme. The customer was then asked if they were willing to answer a few questions. In most cases the customers were happy to participate. The survey sheet containing the questions can be found in Appendix A of the report. During the surveys any additional comments by the respondents were noted down. The responses and additional comments from all respondents can be found in Appendix B of the report.

Due to the small sample size of the survey it is difficult to perform in-depth statistical analysis of the survey results. Where questions are open-ended (*Question 4 and Question 7*) the results have been broken down into ranges in order to clearly present the results. However, the complete data is provided in Appendix B of this report. Where averages are presented the standard error of the mean has been calculated. This gives an indication of the level of variation in the sample. The results of the survey may vary from the ‘true’ population figures because of the small sample size. Furthermore, all the surveys were taken within Melbourne and all but seven respondents gave Melbourne postcodes in their response to the final question. Therefore applying the results at a state-wide or nation-wide level may not be appropriate. If possible, it may be beneficial to repeat these surveys in regional towns or other states to gauge the spatial difference.

#### 4. Results

Question 1. Do you usually use all the paint you purchase?



*Figure 1. Current practice for paint use. Response to 'Do you usually use all the paint you purchase?'*

Eight of the customers surveyed stated that this was the first time they had bought paint and therefore they could not answer the question ('N/A'). Of the remaining customers just over half said they don't usually use all their paint, 50% compared with 42%.

Question 2. If you have left over paint, how do you dispose of it when you are finished?

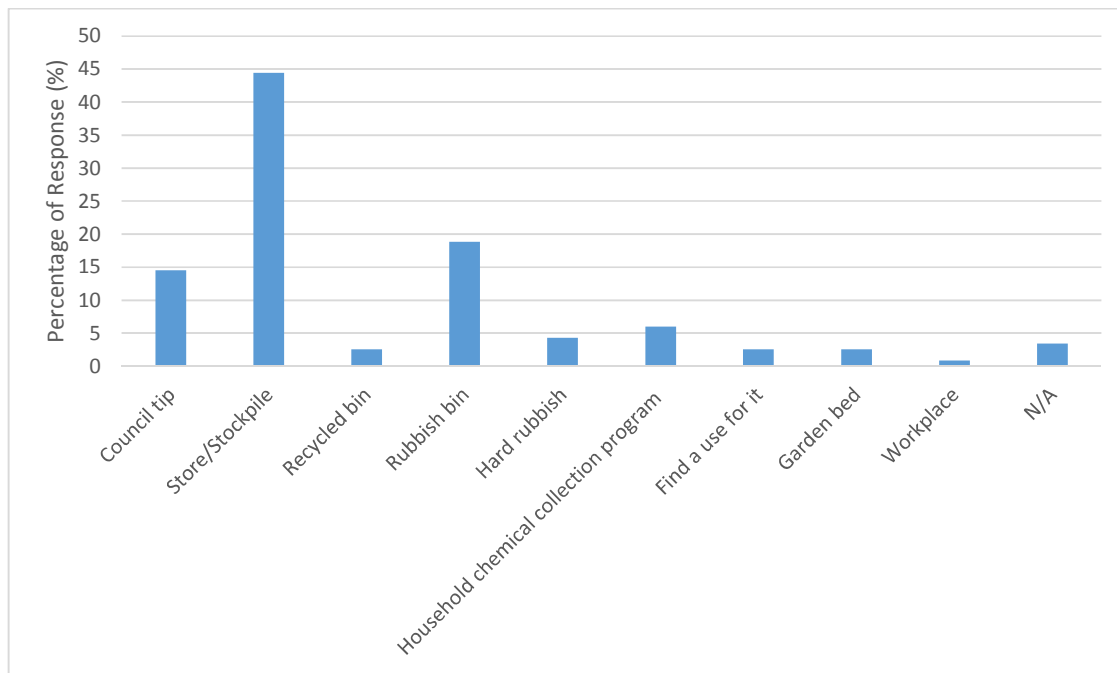


Figure 2. Current practice for waste paint disposal. Response to 'If you have left over paint, how do you dispose of it when you are finished?'

The large majority of respondents said they stored their left over paint (44%). A number of common reasons for keeping the paint were given. These included wanting to keep the paint for use in the future (e.g. in case touch ups were required to cover paint chips) but just as common was people weren't sure what to do with it so just left it in storage. A handful of the respondents did ask what the best way to dispose of their waste paint was; this showed a level of interest and concern.

The next most common response was the rubbish bin at 19%. Some respondents mentioned they did this after the paint had been allowed to dry out. Although some respondents acknowledged that they understood there were issues with placing paint in the rubbish bin they continued to do it as they did not know what else they could do to dispose of their paint. Other respondents were not aware that it was a problem to dispose of waste paint and packaging in this way. This may suggest that further education is required.

Some respondents used council tips (15%), hard rubbish services (4%) or household chemical collection programs (6%). Again some of the respondents acknowledged that using hard rubbish or council tips was not the ideal solution but they weren't aware of other options. The Sustainability Victoria program *Detox your Home* was cited as the disposal method a few times.

There were a few other options that had low levels of responses. A number said they would just find a use for the paint or that they always used all the paint up. Some respondents used hardener products before disposing of the hardened paint on the garden bed (for water based paint).

In general this question led respondents to acknowledge that they were either storing their waste paint or disposing of it improperly because they did not have access to an appropriate disposal method.

Question 3. Would you be supportive of the paint industry in partnership with the Australian Government developing a national scheme to safely collect and process waste paint and packaging?

Just two of the 102 respondents did not answer 'Yes' to this question. One of these respondents replied 'No' as they didn't want the price of paint to increase. The other replied 'Maybe' saying it would depend on costs. In general respondents had previously acknowledged that waste paint disposal was an issue in *Question 2* and were ready to agree to a national scheme. A number of respondents did mention at this point in the survey that they were supportive but were concerned about the cost involved, this pre-empted the subsequent question.

Question 4. There are costs associated with developing such a scheme, what do you think would be an appropriate fee added to the price of a 4 L tin of paint to cover the costs of such a program? [Open ended question]

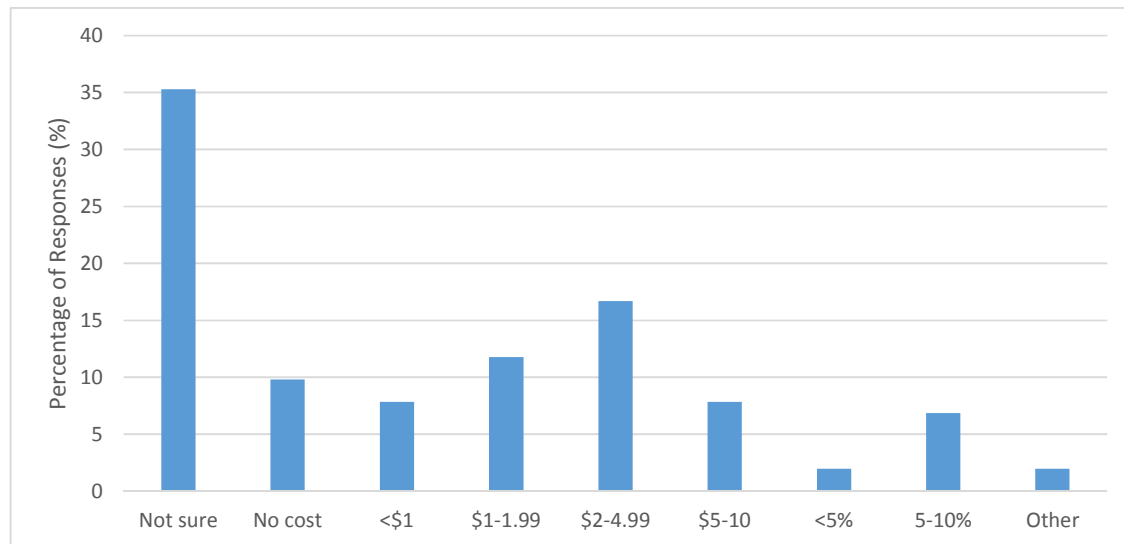


Figure 3. Willingness to pay for the scheme in terms of a 4 L tin of paint. Response to 'There are costs associated with develop such a scheme, what do you think would be an appropriate fee added to the price of a 4 L tin of paint to cover the costs of such a program?'

A considerable proportion of respondents (35%) were not sure about what an appropriate cost would be when given this open ended question. 10% of the respondents did not want a fee added to the price of the paint, with the reasons for not wanting to pay varied. Some recommended that it should be up to the paint manufacturer (3 respondents) or government (1 respondent) to cover the costs. Some did not want to pay anymore because they believed paint was already too expensive. One respondent said they always used all their paint so didn't want to pay for a service they would not use. Another respondent remarked that they weren't aware waste paint was an environmental issue and suggested that more information needed to be available to the general public before they would consider paying for the scheme.

Of the monetary ranges suggested the \$2-4.99 range was the most popular (17%) followed by \$1-1.99 (12%). 8% of the respondents were happy to pay \$5 or more, although the upper limit was \$10. A small proportion of respondents gave answers in a percentage rather than a monetary figure with between 5 and 10% being most popular (7%). This range equates to \$3-6 (based on an average 4 L tin of paint costing approximately \$60). This suggests that whether respondents gave a monetary value or a percentage fee the cost was similar. Of the customers that did respond with a monetary value to this answer (including \$0), the average answer was \$2.06 (with a standard error of \$0.32). Of the respondents that gave a monetary value as an answer, 67% were willing to pay \$1 or more per paint product.

Question 5. Do you think a fee that is less than 1% of the price of the paint product is appropriate?

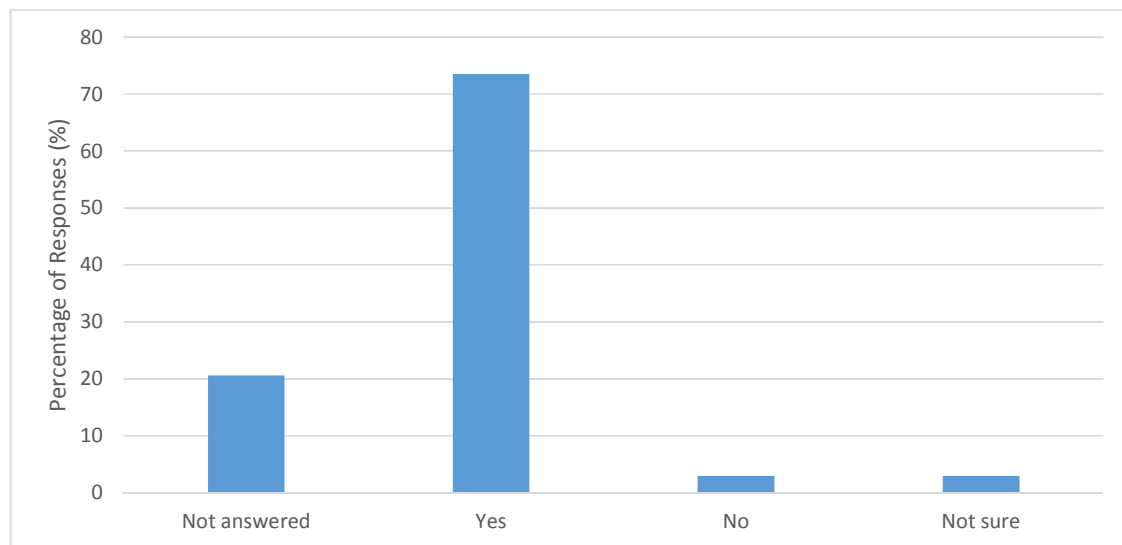


Figure 4. Willingness to pay for scheme in terms of a percentage of the price. Response to 'Do you think a fee that is less than 1% of the price of the paint product is appropriate?'

Most paint customers that were surveyed responded to this question (80%). Those that did not respond had generally responded to the previous open ended question, although there were some that did not feel they understood enough about the potential scheme to comment on whether 1% was appropriate or not ('Not sure' was 3% of responses).

The vast majority of respondents responded 'Yes' to this question (74%). Of the respondents that gave an answer of 'No' (3%), all had previously stated they were not willing to pay anything in the previous question. Although a greater number of respondents that were previously against paying anything responded 'Yes' to this question (4%). This result, although small, may suggest that although initially hesitant about paying extra for the scheme once aware of the minimal costs involved they changed their mind.

Some of the 'Yes' respondents added that they thought 1% was too low to cover the costs of the scheme. This suggests that these respondents place a high value on the scheme and on environmentally sound processing of waste paint.

Question 6. Given a price scale of the following, what do you think is the most appropriate fee for a 4 L tin of paint?

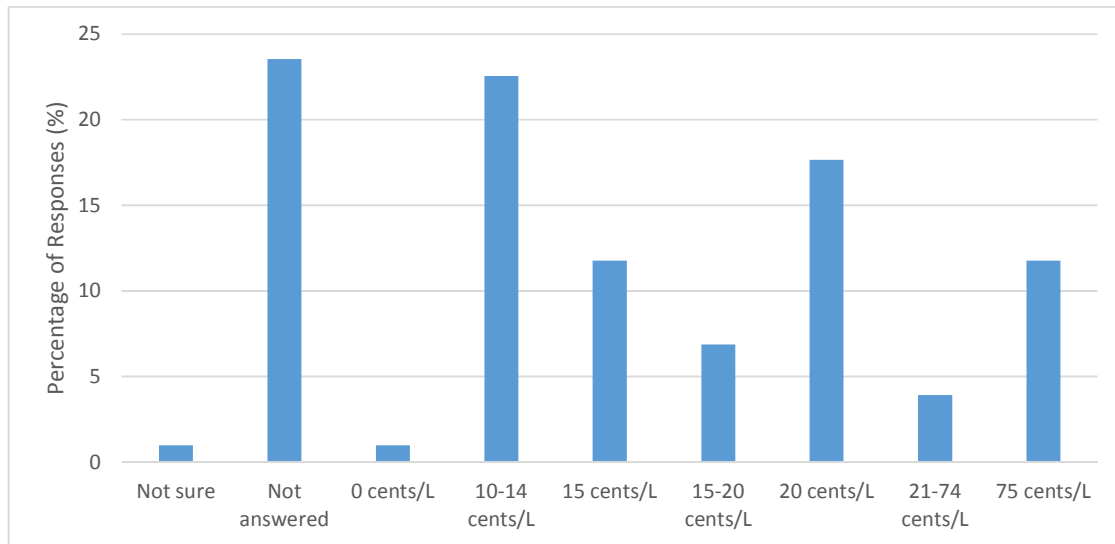


Figure 5. Willingness to pay for scheme in terms of a price scale per litre of paint. Response to 'Given a price scale of the following, what do you think is the most appropriate fee for a 4 L tin of paint?'

Again the majority of paint customers responded to this question (76%). Most of these people had already responded to either *Question 4* and/or *Question 5*. There were some that did not agree there should be any cost that again did not reply to this question. Just one respondent was still not sure about the price scale and didn't believe they could judge the correct fee.

Many of the respondents that had replied to *Question 4* used those answers to calculate the response to this question (e.g. they chose the option closest to what they had already said). In some cases they chose a lower cost in this example. This may be a result of now having a general gauge of the correct cost.

In general the cheaper options were the ones most preferred. A number of respondents did remark that they were choosing that simply because it was the cheapest option, not necessarily because they had considered the question and what costs would be involved. Therefore, the answers to this question may be skewed.

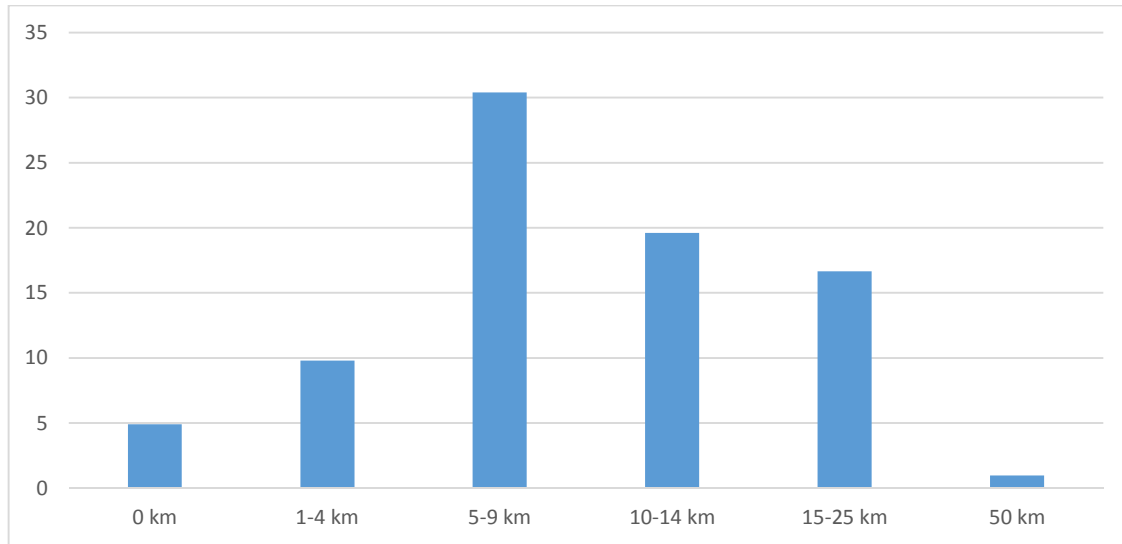
Some respondents did not follow the price scale given and instead gave a response between two of the choices. These responses were recorded and are presented within Figure 5.

Of the customers that did respond with a monetary value to this answer (including \$0/L) the average answer was 25.99 cents/litre (with a standard error of 2.66 cents/litre). This works out to a fee of \$1.04 on a 4 L tin of paint. This is just over half of the average response to *Question 4*, the open-

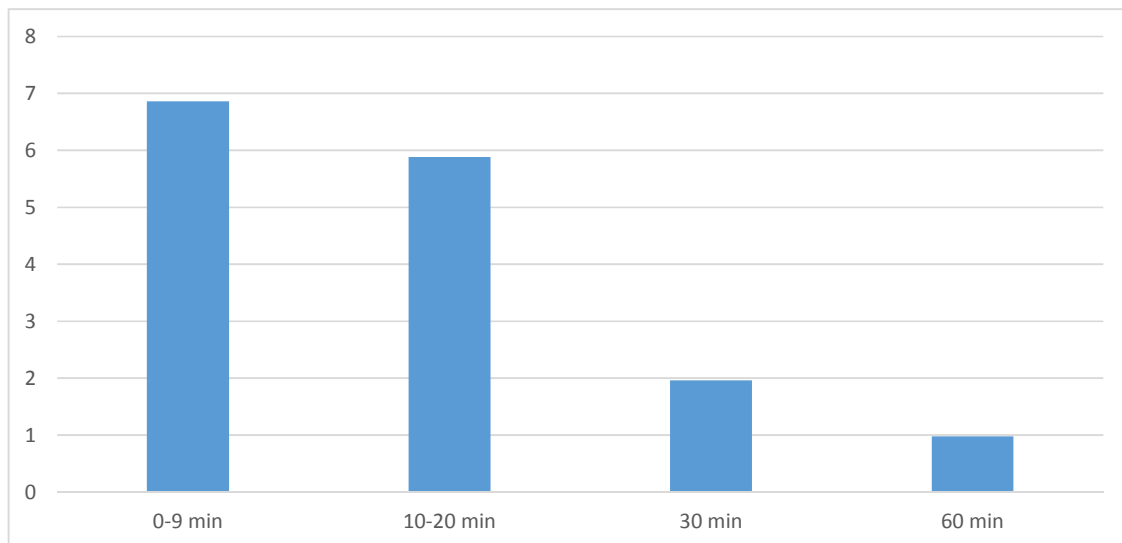


ended question. Compared to *Question 4* where 67% of respondents were willing to pay \$1 or more in this question just 21% were willing to pay more than \$1. These lower prices may be due to a better understanding of the expected costs.

Question 7. How far would you travel to properly dispose of your waste paint if you knew it would be processed safely and in an environmentally-sound manner? Time or km



*Figure 6. Willingness to travel (distance) to deposit waste paint. Response to 'How far would you travel to properly dispose of your waste paint if you knew it would be processed safely and in an environmentally sound manner?'*



*Figure 7. Willingness to travel (time) to deposit waste paint. Response to 'How far would you travel to properly dispose of your waste paint if you knew it would be processed safely and in an environmentally sound manner?'*

All respondents answered this question. Most gave their answer in terms of distance (82%) while the remaining gave it in terms of time. One respondent said that they would travel anywhere.

In terms of distance the most popular range was 5-9 km with 30% of the responses. The ranges of 10-14 km and 15-25 km also received high response rates (20% and 17% respectively). Five percent of respondents did not want to travel anywhere and commented they would like to see the scheme incorporated into hard rubbish collection or similar. The average distance was 9.07 km (with a standard error of 0.78 km).

In terms of time the most popular range was 0-9 min (6.9%) with the next most popular being 10-20 min (5.9%). The average time was 17.3 min (with a standard error of 3.6 min). If you take an average driving speed of 50 km/hour then those that responded in time were generally willing to travel further (14.4 km) compared with those responding in terms of distance (9.07 km).

Six of the respondents commented that they thought the deposit point should be set up at the point of sale (hardware store) and another 9 respondents suggested the deposit point should be set up at the council tips or there should be pick up services through the council hard rubbish. The council tip was preferred by some because it meant they could drop off other waste items at the same time rather than having to make trips to multiple deposit points.

As a general note, respondents seemed more hesitant about the travel time to deposit the waste than they did about the additional fee. Many respondents also found it difficult to assign a time or distance figure to this answer preferring to say 'not too far' or similar until pressed for a quantitative answer. It was also noticed that respondents surveyed at stores further from the CBD had a different concept of what 'not too far' was and were willing to travel further than those closer to the city. This most likely represents a general trend of inner city versus outer suburbs living.

#### Effect of demographics on responses

The respondents' gender and approximate age range were recorded for each survey. Slightly more of the respondents were male (59% versus 41%). The most common age range was 45 – 55 (30%). The other age ranges all had between 17% and 18% of respondents (25-35, 35-45, 55-65 and 65-75). This suggests the respondents are a quite good representation of the general public in terms of demographics. No trends can be seen between a certain demographics response to the questions. This may be due to a number of reasons: the sample size doesn't allow for this level of analysis or age and gender do not affect the results.

## Conclusion

The results from this *Willingness to Pay* report shows the majority of paint customers are supportive and willing to contribute financially to a national scheme to collect and process waste paint and packaging. A considerable amount of respondents were not just willing to pay but were genuinely interested in the scheme and thought it was an important service. It was clear some of these respondents had already considered the issue prior to being surveyed.

Although the majority of respondents were positive about the potential scheme there was some negativity. Some of this disapproval surrounded the fee, some respondents wanted to see a monetary contribution from the manufacturers and government. It may therefore be beneficial during the development of this scheme to demonstrate to the general public that both of these stakeholders are committed to and supportive of this scheme.

Somewhat surprisingly the majority of concern for the scheme came from the travel time rather than the cost involved with the scheme. This may be attributed to people placing a higher level of value on their free time than on relatively small amounts of money for a fee. This finding should be well considered during the development of this scheme. The deposit points should be easily accessible and if possible close to other points of interest. For example, a number of respondents suggested the deposit point should be at the pre-existing council tips or at the point of sale.

Overall, there was support for this scheme to be developed. Further education may be needed during the start-up of this scheme to increase the general understanding of environmental and financial issues relating to waste paint and running a scheme. Education may also be required to explain the new scheme and make it relatively easy for the general public to access it.

## Appendix

### Appendix A: Survey Sheet

Date:                      Time:                      Location:                      Age/Gender:                      Demographic:

- *Do you usually use all the paint you purchase? **Yes / no***
  - *If you have left over paint, how do you dispose of it when you are finished?*
    - *Rubbish bin*
    - *Recycle bin*
    - *Household chemical collection program*
    - *Store/stockpile*
    - *Other \_\_\_\_\_*
- *Would you be supportive of the paint industry in partnership with the Australian Government developing a national scheme to safely collect and process waste paint and packaging?*  
**Yes / no**
  - *If not, why? \_\_\_\_\_*
- *There are costs associated with developing such a scheme, what do you think would be an appropriate fee added to the price of a 4 L tin of paint to cover the costs of such a program?*  
*[Open ended question]*
- *Do you think a fee that is less than 1% of the price of the paint product is appropriate?*  
**Yes / no**
- *Given a price scale of the following, what do you think is the most appropriate fee for a 4 L tin of paint sold?*
  - *\$3/4L tin (75 cents/litre)*
  - *\$1.80/4L tin (20 cents/litre)*
  - *60 cents/4L tin (15 cents/litre)*
  - *40 cents/4L tin (10 cents/litre)*
- *How far would you travel to properly dispose of your waste paint if you knew it would be processed safely and in an environmentally-sound manner? Time or km*
- *What is your postcode? \_\_\_\_\_*

Appendix B: Complete Survey Results