



# **Green Star**

## **Construction & Demolition Waste Reporting Criteria**

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## VERSION CONTROL

Version	Release Date	Description of Changes
1.0	21 June 2013	First release

## Executive Summary

This document details the reporting criteria and auditor requirements which accompany the Construction and Demolition Waste credit in Green Star rating tools released in June 2013.

The Green Star Construction And Demolition Waste Reference Group, which was comprised of experts in the waste management industry from 47 organisations across the country, including 24 GBCA members, has contributed advice and expertise to the development of the construction and demolition waste management 'Reporting Criteria' and has helped to inform the functionality of the new 'Construction and Demolition Waste' credit.

All Green Star rating tools include a Construction and Demolition Waste credit which aims to encourage and reward management practices that minimise the amount of construction and demolition waste from base building and/or interior fitout works that is disposed to landfill. The credit requires the use of waste contractors and waste processing facilities that have been independently verified for compliance with minimum standards of reporting. The introduction of such compliance standards and checks aims to ensure contractors and facilities are operating with environmentally responsible due diligence on behalf of Green Star projects.

Verification of compliance with these reporting criteria would be carried out by 'Suitably Qualified Auditors' who are engaged directly by a Green Star project applicant's waste contractor/s and waste processing facilities. An auditor's report is to be provided to Green Star projects by the waste contractor as supporting evidence for the project's 'Construction and Demolition Waste' credit claim. Only waste reports that have been generated by waste contractors whose compliance has been verified will be accepted in a Green Star project's 'Construction and Demolition Waste' credit submission.

## About the Green Building Council of Australia and Green Star

The Green Building Council of Australia (GBCA) is the nation's authority on sustainable buildings and communities. Our mission is to accelerate the transformation of Australia's built environment into one that is healthy, liveable, productive, resilient and sustainable. We work together with industry and government to encourage policies and programs that support our mission. We educate thousands of people each year on how to design and deliver sustainable outcomes for our buildings and communities. And we operate Australia's only national, voluntary, holistic rating system for sustainable buildings and communities - Green Star.

Green Star was developed for the property industry in order to:

- Establish a common language;
- Set a standard of measurement for green buildings;
- Promote integrated, whole-building design;
- Recognise environmental leadership;
- Identify building life-cycle impacts; and
- Raise awareness of green building benefits.

## Definitions

The following definitions apply to the Green Star 'Construction and Demolition Waste' credit and the Green Star construction and demolition waste management 'Reporting Criteria' (this document):

### **Applicant**

Refers to the waste contractor and/or waste processing facility commissioning an evaluation by an auditor.

### **Construction and demolition waste**

The waste material produced during the construction, renovation, demolition or deconstruction of buildings and their infrastructure. Construction and demolition waste materials typically include concrete, wood, metals, plasterboard, cardboard, plastics, asphalt, and mixed site debris like soil and rocks and excludes spoil/fill and hazardous and prescribed materials.

### **Compliance Verification Summary**

A signed and dated document issued by a 'Suitably Qualified Auditor' that verifies and summarises the waste contractor's or waste processing facility's (auditee's) compliance with the Green Star 'Reporting Criteria'. A Compliance Verification Summary is valid for 12 months from the date of issue and must be current for the duration of the time that an auditee provides waste services and waste reports to a Green Star project.

### **Green Star Construction and Demolition (C&D) Waste Management Reporting Criteria**

Are criteria that establish the minimum acceptable standard of operations and reporting for waste contractors and waste processing facilities that provide services and reports to Green Star projects. Waste contractors and waste processing facilities that provide waste management and reporting services to Green Star projects must achieve independent verification of their compliance with the criteria. Such verification of compliance is a prerequisite for the recognition and acceptance of the waste reports that are provided within Green Star 'Construction and Demolition Waste' credit submissions. The Reporting criteria are detailed in sections three, four and five of this document.

### **Landfill**

Refers to a site where waste materials are disposed of by way of burial between layers of soil.

### **Residual Waste**

Refers to the material remaining after the resource recovery process has taken place. In accordance with waste hierarchy principles, this remaining material has no other viable fate than to be used as fuel for energy recovery or committed to landfill.

### **Suitably Qualified Auditor**

Refers to an auditor who has the relevant knowledge, skills and experience necessary to provide advice to applicants on the issues addressed in the Reporting Criteria. It does not refer to 'Appointed Auditors' as defined under various State Environment Protection Acts. Auditors must be independent with a particular focus on how they manage conflicts of interest with applicants (i.e. they must be an external, independent, third-party auditor). They must also provide evidence of their qualifications as defined in this document. See section seven of this document for further information.

### **Waste Contractor**

Refers to the company or person(s) engaged by a builder, developer or owner of a structure to manage the containerisation, collection and transportation of construction and demolition waste from a construction site to recyclers or waste processing facilities. Waste contractors must provide their customers with reports on the contents, dates, volumes or weights of construction and

demolition waste, as well as the waste processing facility destinations and registration numbers of the vehicles transporting waste from the site to processing facilities.

**Waste Processing Facility**

Is a lawfully operating facility that receives construction and demolition waste for processing. The facility recovers recyclable materials from the waste stream, including for energy, thereby minimising the amount of residual waste committed to landfill. Waste processing facilities include resource recovery facilities, transfer stations and waste-to-energy facilities where waste is sorted. Reprocessing facilities are also included in this definition. 'Reprocessing facility' refers to businesses that trade in specific waste material types for the purpose of transforming (recycling) it into new products. Examples include metal, concrete, paper and plastic recyclers. Any of the above listed facilities operating on the same site as a landfill are included under this definition, however landfill itself is not.

## Reporting Criteria

The reporting criteria outlined in this document support the Green Star 'Construction and Demolition Waste' credit, and attempt to provide additional assurance to Green Star customers, by creating auditable pathways to ensure:

1. Waste Contractors (transport and handlers) servicing Green Star buildings:
  - Provide accurate reporting on waste collection and diversion from landfill; and
  - Take all of a project's construction and demolition waste to waste processing facilities that meet the Reporting Criteria.
2. Waste processing facilities that accept Green Star project construction and demolition waste:
  - Operate legally with approved Development Approvals (DAs), and the relevant environmental licenses, etc;
  - Have auditable systems in place to prepare accurate reports on inbound and outbound waste; and
  - Undertake annual reporting of the independently verified gross diversion rates of waste from landfill, and the percentage of residual waste committed to landfill from their operations.

The following table summarises the reporting criteria, referencing the page of the document these criteria can be found.

Criteria	Refer to Page
<b>Waste Contractors</b>	9
<b>Waste Processing Facilities</b>	
<b>Criterion One</b>	15
<b>Criterion Two</b>	16
<b>Criterion Three</b>	21

### INTRIM PERIOD

A 12 month interim period for establishing compliance with the Reporting Criteria commenced with the release of the Green revised Green Star 'Construction and Demolition Waste' credit and this Reporting Criteria. Allowances for interim measures are provided for some, but not all criteria. The Reporting Criteria list which components are subject to such allowances.

During the 12-month interim period, non-conformities and corrective actions issued by the auditor in relation to the compliance requirement of some criteria will be accepted on the basis of a signed 'Interim Measure Declaration' from the applicant containing the following:

- 1) Where reporting systems are insufficient or non-existent, but where equipment certification or enough historical data exist to carry out thorough evaluation of compliance with a criterion, the auditor may issue a corrective action to resolve the situation. The criterion will assume the status of 'Interim Period Pending Compliance' and be stated as such on the applicant's Compliance Verification Summary during the interim period. Interim Measure Declarations must be provided on official company letterhead, be signed by a company director and containing the following:
  - each non-conformance and corrective action, as issued by the auditor;
  - a statement that the non-conformances and corrective actions are understood by the applicant and that the corrective actions must be effected before the end of the interim period;
  - the steps the applicant commits to undertake in order to institute the corrective action(s);
  - the timeframe in which the corrective actions will be implemented and confirmed through a re-audit of the outstanding matter; and
  - a confirmation that the applicant understands that the consequences of not implementing all corrective actions, and the verification of such, by way of a re-audit before the end of the interim period, will be a ruling of non-compliance with the Reporting Criteria, meaning Green Star projects may no longer use their services.
- 2) During the interim period, and while corrective actions remain outstanding, the applicant's Interim Measure Declaration must be attached to the Compliance Verification Summary that they provide to Green Star customers.



# Waste Contractors

## CRITERION AIM

To ensure that the waste contractors that service Green Star building sites provide accurate reports on both the amount of construction and demolition waste removed from site and where such waste is disposed.

## COMPLIANCE REQUIREMENT

The waste contractor must provide accurate monthly and cumulative waste reports that detail both the total weight of waste removed from their customers' construction sites, as well as the waste processing facilities where all loads are disposed. Reporting accuracy must be within an average five per cent margin of error.

## AUDITOR VERIFICATION GUIDANCE

Auditors should verify compliance by sampling customer records for at least three medium to large size job sites (select Green Star projects if available). The two-part methodology set out below should be used to determine the accuracy of a waste contractor's reporting practices. Worked examples of the calculation methodology to determine reporting accuracy are provided for parts I and II. It is the Waste Contractor's responsibility to collate and present all inbound waste dockets forwarded by waste processing facilities.

In order to award compliance with the criterion, the average percentage variation findings for both Part I and Part II must be within a five per cent margin of error.

Collecting audit documentation:

1. Choose a three month sample operating period or 50 records covering a continuous period where less than 50 records have been generated in any continuous three months period, for each job site;
2. Obtain copies of waste contractor's waste reports to customer for sample periods;
3. Obtain waste contractor's disposal docket records for sample jobs over sample periods;
4. Obtain copies of the corresponding inbound waste dockets from the waste processing facilities for sample jobs over sample periods; and
5. Where the contractor waste report provides waste disposal figures in volume, but disposal dockets are reported in weight, the auditor must convert results to mass using the same volume-to-mass conversion factors applied by the contractor or receiving facility.

## PART I: COMPARING CUSTOMERS' WASTE REPORTS WITH WASTE CONTRACTOR'S DISPOSAL DOCKETS:

1. Compare the waste disposal weight totals stated in the waste reports issued to customers against the waste contractor's disposal docket weight totals for each sample job;
2. Check that the waste processing facilities stated in the waste reports correspond with the waste processing facilities used by the waste contractor(s), as evidenced by the disposal dockets. Also check that the amounts disposed correspond with the amounts stated in the customer's waste report;

3. Record variations in the respective totals for each sampled job as a percentage of the difference to the total reported to the customer. Average the percentages and state if the variation in reporting for each sample job complies with the five per cent margin of error allowance. Where major discrepancies in the reporting arise (for example where docket records show waste disposed at facilities not reported to customer or no disposal dockets are provided to support figures in customer waste reports) then the discrepant amount should be carried forward as a whole and added to the totals component of the 'Kg Variation in Comparison of Records' column. This figure will be used in the percentage variation calculation for that sample job (see example below for clarification); and

Sample Job 1	Sample Period Reported Total Waste disposed	Sample Period Disposal Dockets totals	kg Variation in comparison of records	Percentage Variation in total reported to docket records
Waste Processing Facility 1	2500 kg	1800 kg	-700 kg	-38.89%
Concrete & Brick Recycler	4000 kg	2950 kg	-1050 kg	-35.60%
Waste Processing Facility 2	3166 kg	2800 kg	-366 kg	-13.1%
Back Yard Boys Waste Disposal	not reported	2616 kg	2616 kg	100%
Plasterboard Recycler	2500 kg	2000 kg	-500 kg	-25%
<b>TOTAL DISPOSED</b>	<b>12166 kg</b>	<b>12166 kg</b>	<b>0 kg</b> <b>2616 kg</b>	<b>0%</b> <b>-27.39%</b>
<b>Percentage variation between reported totals and disposal records of corresponding totals</b>				<b>0%</b> <b>-27.39%</b>

Non-Compliant reporting issue! See guidance item Part I (c) for protocol

Non-Compliant reporting accuracy margin of error

Sample Job 2	Sample Period Reported Total Waste disposed	Sample Period Disposal Dockets totals	kg Variation in comparison of records	Percentage Variation in total reported to docket records
Waste Processing Facility 1	3000 kg	2900 kg	-100 kg	-3.45%
Concrete Recycler	3000 kg	3000 kg	0 kg	0%
Waste Processing Facility 2	3000 kg	2850 kg	-150 kg	-5.26%
Metal Recycler	1000 kg	900 kg	-100 kg	-11%
<b>TOTAL DISPOSED</b>	<b>10000 kg</b>	<b>9650 kg</b>	<b>-350 kg</b>	<b>-3.63</b>
<b>Percentage variation between reported totals and disposal records of corresponding totals</b>				<b>-3.63%</b>

Compliant reporting accuracy margin of error

Sample Job 3	Sample Period Reported Total Waste disposed	Sample Period Disposal Dockets totals	kg Variation in comparison of records	Percentage Variation in total reported to docket records
Waste Processing Facility 1	2122 kg	2000 kg	-122 kg	-6.1%
Concrete Recycler	500 kg	600 kg	100 kg	16.67%
Waste Processing Facility 2	3500 kg	2900 kg	-600 kg	-23.1%
<b>TOTAL DISPOSED</b>	<b>6122 kg</b>	<b>5500 kg</b>	<b>-622 kg</b>	<b>-11.31%</b>
<b>Percentage variation between reported totals and disposal records of corresponding totals</b>				<b>-11.31%</b>

Non-Compliant reporting accuracy margin of error

4. Take the average percentage variations in reporting from each sample job and state whether or not the average variation of all sampled jobs complies with the five per cent margin of error allowance. This figure determines the applicant’s compliance with part II of the criterion.

	Sample Period Reported Total Waste disposed	Sample Period Disposal Dockets totals	kg Variation in comparison of records	Percentage Variation in total reported to docket records
Sample Job 1	12166 kg	9550 kg	-2616 kg	-27.39%
Sample Job 2	10000 kg	9650 kg	-350 kg	-3.63%
Sample Job 3	6122 kg	5500 kg	-622 kg	-11.31%
<b>Average percentage variation between reported totals and disposal records of corresponding totals</b>				<b>-14.11%</b>

Non-Compliant reporting accuracy margin of error

**PART II: COMPARING WASTE CONTRACTOR’S DISPOSAL DOCKETS WITH WASTE PROCESSING FACILITY RECORDS:**

1. Compare the waste contractor’s disposal docket weight totals for each sample job against the corresponding inbound waste dockets from the waste processing facilities for the sample jobs over the sample periods;
2. Record variations in the respective totals for each sampled job as a percentage of the difference to the total waste received as reported in the waste processing facilities records.

Average the percentages and state if the variation complies with the five per cent margin of error allowance. Where major discrepancies in the reporting arise (for example where waste processing facility records do not exist or cannot be obtained to support a waste contractor's docket) then the discrepant amount shall be carried forward as a whole and added to the totals component of the 'Kg variation in WC Dockets and WPF Records' column. This figure will be used in the percentage variation calculation for that sample job (see the example calculation for Sample Job 1 below for clarification); and

Sample Job 1	Sample Period WC Disposal Dockets totals	Sample Period WPF Receiving Dockets totals	kg Variation in WC Dockets & WPF records	Percentage Variation in total WC docket to WPF records
Waste Processing Facility 1	1800 kg	1800 kg	0 kg	0%
Concrete & Brick Recycler	2950 kg	2950 kg	0 kg	0%
Waste Processing Facility 2	2800 kg	2800 kg	0 kg	0%
Back Yard Boys Waste Disposal	2616 kg	no record	-2616 kg	100%
Plasterboard Recycler	2000 kg	2000 kg	0 kg	0%
<b>TOTAL DISPOSED</b>	<b>12166 kg</b>	<b>9550</b>	<b>-2616 kg</b>	<b>-27.39%</b>
<b>Percentage variation between reported totals and disposal records of corresponding totals</b>				<b>-27.39%</b>

Non-Compliant reporting issue! See guidance item Part II (b) for protocol

Non-Compliant reporting accuracy margin of error

Sample Job 2	Sample Period WC Disposal Dockets totals	Sample Period WPF Receiving Dockets totals	kg Variation in comparison of records	Percentage Variation in total WC docket to WPF records
Waste Processing Facility 1	2900 kg	2900 kg	0 kg	0%
Concrete Recycler	3000 kg	3000 kg	0 kg	0%
Waste Processing Facility 2	2850 kg	2500 kg	-350 kg	-14%
Metal Recycler	900 kg	900 kg	0 kg	0%
<b>TOTAL DISPOSED</b>	<b>9650 kg</b>	<b>9300 kg</b>	<b>-350 kg</b>	<b>-3.76%</b>
<b>Percentage variation between reported totals and disposal records of corresponding totals</b>				<b>-3.76%</b>

Compliant reporting accuracy margin of error

Sample Job 3	Sample Period WC Disposal Dockets totals	Sample Period WPF Receiving Dockets totals	kg Variation in comparison of records	Percentage Variation in total WC docket to WPF records
Waste Processing Facility 1	2000 kg	2000 kg	0 kg	0%
Concrete Recycler	600 kg	600 kg	0 kg	0%
Waste Processing Facility 2	2900 kg	2900 kg	0 kg	0%
<b>TOTAL DISPOSED</b>	<b>5500 kg</b>	<b>5500 kg</b>	<b>0 kg</b>	<b>0%</b>
<b>Percentage variation between reported totals and disposal records of corresponding totals</b>				<b>0%</b>

Compliant reporting accuracy margin of error

- Take the average percentage variations in reporting from each sample job and state whether or not the average variation of all sampled jobs complies with the five per cent margin of error allowance. This figure below determines the applicant’s compliance with Part II of the criterion.

	Sample Period WC Disposal Dockets totals	Sample Period WPF Receiving Dockets totals	kg Variation in comparison of records	Percentage Variation in total WC docket to WPF records
Sample Job 1	12166 kg	9550 kg	-2616 kg	-27.39%
Sample Job 2	10000 kg	9650 kg	-350 kg	-3.76%
Sample Job 3	5500 kg	5500 kg	0 kg	0%
<b>Average percentage variation between reported totals and disposal records of corresponding totals</b>				<b>-10.38%</b>

Non-Compliant reporting accuracy margin of error

**SUMMARISING FINDINGS FROM REPORTING ACCURACY AUDIT AND AWARDING CRITERION COMPLIANCE:**

In order to award compliance with the criterion, the average percentage variation findings for both Part I and Part II must be within the five per cent margin of error allowance.

In the example calculation, the applicant’s records for the audited sample jobs and periods were found to exceed the five per cent error margin allowance. Therefore, in this example, the applicant is non-compliant with the criterion.

<b>Part I</b> Average Percentage Variation in Reporting Accuracy between Customers' Waste Reports and Waste Contractor's Disposal Dockets	<b>Part II</b> Average Percentage Variation in Reporting Waste Contractor's Disposal Dockets and Waste Processing Facility Receiving Records
<b>-14.11%</b>	<b>-10.38%</b>

### INTERIM MEASURE

There are no interim measures available for this criterion.

## Waste Processing Facilities: Criterion One

### CRITERION AIM

To ensure that waste processing facilities servicing Green Star building sites are legitimately operating businesses that are recognised by the relevant regulatory authorities.

### COMPLIANCE REQUIREMENT

The waste processing facility must hold current licenses or development consent for the activities it undertakes (for example storage, handling, transfer or processing of construction and demolition waste) by the appropriate regulatory authorities. This may include approved Development Applications (DAs) and Environment Protection Agency licenses.

### AUDITOR VERIFICATION GUIDANCE

Compliance should be verified by undertaking the following steps:

1. Sight the facility's licenses or development consent approvals; and
2. Confirm the development consent approval is current and conditions are complied with to the extent relevant to resource recovery.

Non-conformances for this criterion are not permitted. Corrective actions may be issued by the auditor but shall result in criterion non-compliance until the corrective action has been verified by the auditor.

In some areas specific licensing for the storage, handling, transfer and processing of construction and demolition waste may not be required. The auditor should seek independent confirmation that such licensing requirements do not exist.

### INTERIM MEASURE

There are no interim measures available for this criterion.

## Waste Processing Facilities: Criterion Two

### CRITERION AIM

To ensure that waste processing facilities servicing Green Star building sites have the capacity to prepare accurate reports on the source and fate of all inbound waste received as well as all outbound waste diverted from and to landfill.

### COMPLIANCE REQUIREMENTS

All of the following requirements to support auditable and accurate reporting systems must be met to comply with this criterion:

#### **Requirement 1 - Clear separation of waste processing facility from landfill:**

Waste processing facilities must operate as a separate facility to landfill. Where the waste processing facility is located on the same site as a landfill then access between the waste processing facility and landfill must be clearly separated (for example by controlled road access, fences or weighbridges). This separation ensures all waste input, as well as recyclables and residual waste outputs, are clearly traceable to and from the waste processing facility and reported separately from general solid waste landfill inputs not passing through the waste processing facility's resource recovery process.

#### **Requirement 2 - Clear tracking system to separate residual waste from recyclables (weighbridge):**

The waste processing facility must have at least one weighbridge to quantify and provide an auditable trail for weights of inbound waste as well as weights of outbound recyclables and residuals. If the waste processing facility is located on the same site as a landfill then it must have separate weighbridge receipts. If the auditor cannot verify to their satisfaction that there is clear separation of recycling from residual, compliance with this criterion cannot be awarded.

#### **Requirement 3 - Certified weighbridge and operational procedures:**

The waste processing facility must hold a current weighbridge maintenance certificate (certified annually) for the use of an appropriate weighbridge ensuring the weighbridge is fit for purpose and regularly maintained. The facility must also have weighbridge operational procedures in place to create and maintain weighbridge records on the following information for waste materials received, outgoing recyclables and residual waste:

- vehicle registration and date and time received;
- weight of vehicle and material incoming;
- source of material incoming (for example customer numbers);
- weight of vehicle and material outgoing;
- fate of material outgoing (by product type, including residual waste to energy recovery or landfill and the entity/customer removing it); and
- any rejected loads.



**Requirement 4 -Source and fate of inbound and outbound waste:**

The waste processing facilities must be able to account for the source of all inbound waste and fate of all outbound recyclables and residual waste.

**GUIDANCE**

The key issue that this criterion attempts to address is assurance of a clear and quantifiable percentage of diversion of waste from landfill back to productive reuse. Paramount to this outcome is clear separation and accountability for the weights of outbound recyclables and residuals. The transparency of reports generated by a single weighbridge that is shared between a waste processing facility and landfill operation is questionable and difficult to audit thereby potentially compromising the accuracy of a waste processing facility's waste diversion rate claims.

Where a waste processing facility is located on a landfill site, best practice operation includes the separation of weighbridges and access points for the respective landfill and recycling facilities. However, there are operational protocols and computer systems that can be implemented to better control separation and produce separable weighbridge receipts from a single weighbridge that is shared between landfill and waste processing facilities.

*Figure 1.* below provides an illustrated example of best practice operation of a waste processing facility which operates on a landfill site, as well as the intent of this criterion's guidance on the source and fate of waste inputs and recycled/residual outputs described in the compliance requirements.

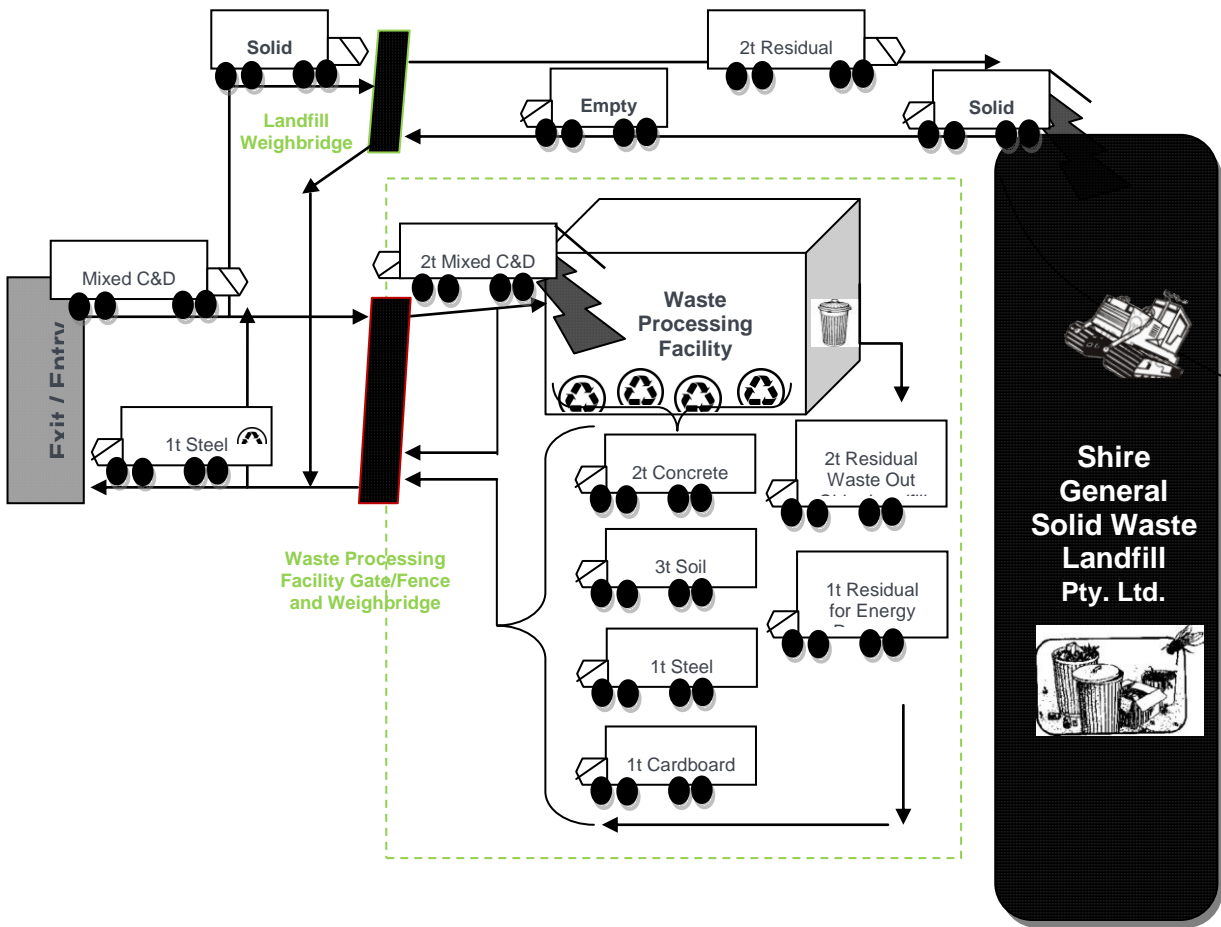


Figure 1. Separately operating waste processing facility on a shared landfill site with clear tracking of waste inputs and recycled / residual outputs by source and fate.

**AUDITOR VERIFICATION GUIDANCE**

Compliance should be verified by undertaking the following steps (see notes on non-conformance allowances in ‘Interim Measures’ section):

1. **Ensure there is clear separation of waste processing facility from landfill:**  
 Verify that the applicant waste processing facility operates as a ‘separate facility’ from adjacent landfill operations in accordance with the intent of Requirement 1 of Criterion Two.

## 2. Ensure there is a clear tracking system to separate residual waste from recyclables (weighbridge):

To award compliance with this component of the criterion, the auditor must verify that there is clear separation of recycling from residual as follows:

- a) Verify that the applicant has at least one weighbridge; and
- b) Verify that the applicant is able to quantify and provide an auditable trail for weights of waste into as well as recyclables and residuals out of the waste processing facility.

If the site includes a landfill, in addition to the above, the auditor must verify that the applicant has the capability to:

- a) Produce separate weighbridge receipts for landfill and recycling operations by having separate weighbridges in place and in operation; or
- b) Effectively control the separation of recyclables and residual waste through existing operational protocols and technologies which enable the production of separate weighbridge receipts where a single weighbridge is shared between the waste processing facility and landfill.

## 3. Verify the certification of weighbridge and operational procedures:

- a) Sight the applicant's weighbridge maintenance certificate(s);
- b) Ensure that the certificate is current and valid and that there is evidence of annual maintenance certification; and
- c) Verify that the applicant has weighbridge operational procedure(s) in place that address, at a minimum, the weighbridge operational procedures listed in Requirement 2 of Criterion Two.

## 4. Verify the Source and Fate of Inbound and Outbound Waste

- a) Where applicants are awarded compliance with requirement of Requirement 3 of Criterion Two, then compliance with Requirement 4 of Criterion Two can be fulfilled on a deemed-to-satisfy basis at the auditors discretion; and
- b) Deemed-to-satisfy compliance shall be awarded on the basis that the weighbridge operational procedures outlined in Requirement 3 of Criterion Two establish sufficient record keeping protocols to facilitate the production of detailed reporting on the source and fate of the waste processing facilities' inbound and outbound waste. Where the auditor deems that this is not the case they may issue corrective actions as they see fit to ensure that the intent of the criterion is satisfied.

## INTERIM MEASURE ALLOWANCES

Interim measure allowances are provided for Requirements 2 and 3 of Criterion Two, on the basis that they are major infrastructure and system requirements upon which all other subsequent reporting and performance measures associated with the reporting criteria rely.

Facilities that comply with Requirements 1 and 2, but not with Requirements 3 and 4 of Criteria Two could still provide services to Green Star projects during the interim period. Waste processing facilities failing to comply with Requirements 1 and 2 may implement corrective actions and undergo re-audits during the interim.

Please refer to the 'Interim Measure' section of this document for full details of what is required of the applicant and auditor to claim interim measure allowances.

# Waste Processing Facilities: Criterion Three

## Rates of Waste Diversion and Residual Waste Committed to Landfill

### CRITERION AIM:

To encourage waste processing facilities that service Green Star building sites to provide independently-verified publicly available reports on the percentages of gross waste diversion from landfill and residual waste committed to landfill on an annual basis.

### COMPLIANCE REQUIREMENTS:

**Requirement 1** -The waste processing facility must undergo an independent annual facility-wide audit to establish and verify its:

- a) Gross diversion rates of input waste from landfill; and
- b) Percentage of residual waste output that is committed to landfill.

**Requirement 2** - The waste processing facility must make these performance figures publicly available or, at a minimum, make them easily available upon request from Green Star customers or waste contractors acting on behalf of Green Star projects.

### GUIDANCE

**General Note:** This criterion directly supports Green Star 'Construction and Demolition Waste' credit submission claims by providing builders, head contractors and Green Star Accredited Professionals (GSAPs) with publicly available and independently verified data regarding the diversion rates and residual waste contributions to landfill from specific waste processing facilities.

**Waste-to-Energy:** Residual waste diverted from landfill for the purposes of energy recovery is a valid recycling pathway. However, for the purposes of these Reporting Criteria, a waste processing facility's diversion of waste for energy recovery is limited to 50 percent of the facility's total input.

This 50 percent cap is based on the GBCA's position that energy recovery from construction and demolition waste streams is not an acceptable substitution for recycling in its own right, but rather a complementary management solution for wastes that would otherwise go to landfill. As a consequence, waste processing facilities that divert waste streams for the production of non-standard fuels for waste-to-energy purposes should not rely on this waste diversion pathway for the majority of their recycling output.

*Figure 2.* provides an example of residual waste diversion from landfill to illustrate the 30 per cent limit for waste-to-energy purposes described above.

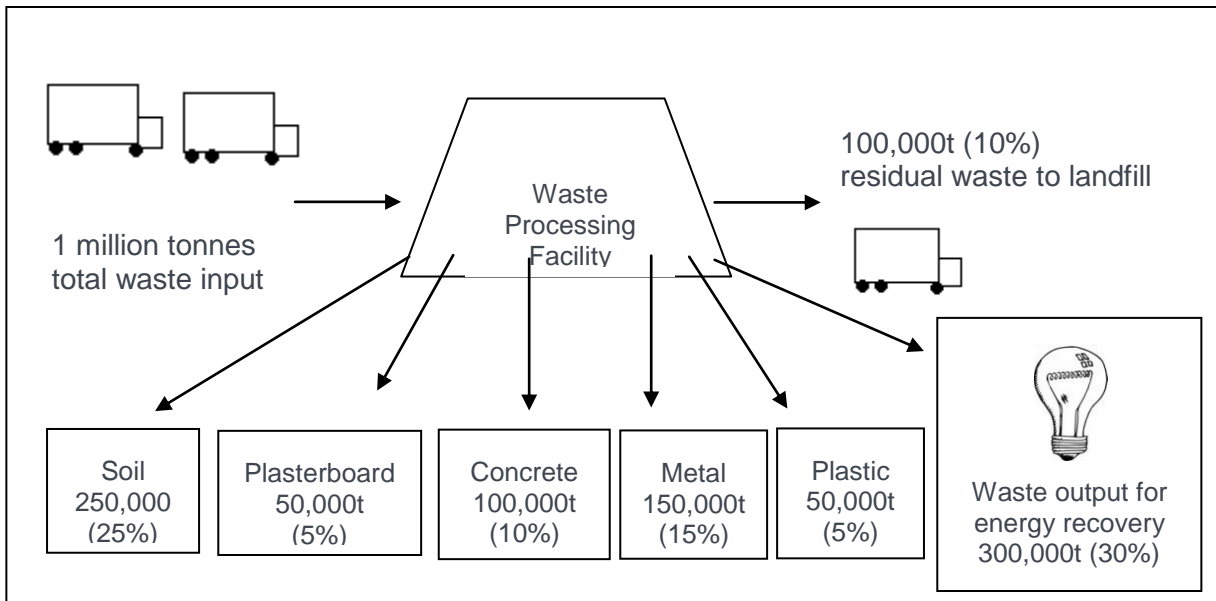


Figure 2: Example meeting the 50% Limit on Residual Waste Diversion for Waste to Energy Purposes

## AUDITOR VERIFICATION GUIDANCE

Auditors must determine a facility's annual gross diversion rate of input waste from landfill and annual percentage of residual waste output committed to landfill by examining the applicant's cumulative waste balance reports. Assess these reports by cross checking:

- the quantities of inbound material;
- the quantities of recovered/reprocessed/recycled materials diverted from landfill; and
- the quantities of outbound residual waste sent to landfill.

Compliance with this criterion cannot be awarded where insufficient data or reporting procedures exist to determine the facility's annual gross diversion rates of input waste from landfill and annual percentage of residual waste output committed to landfill.

## INTERIM MEASURE

An interim measure allowance is available for compliance Requirement 1 in this criterion, but only for reprocessing facility applicants (for example metal, concrete, paper and plastic recyclers). This interim measure is provided on the basis that some of these operators may not have sufficient systems in place to produce reliable waste balance reports because they have never before been required to generate such reports on a regular basis.

Where data or reporting procedures are insufficient to determine a reprocessing facility's annual percentage of residual waste output committed to landfill, then a default value of 50 per cent waste diversion to landfill may be awarded until the end of the interim period, or until the applicant can provide at least six months of operational waste balance data to the auditor for a re-audit of the criterion.

Please refer to the 'Interim Measures' section for full details of what is required of the applicant and auditor to claim this interim measure allowance.

## Scheduled Review of Reporting Criteria

The GBCA aims to review policy initiatives like the reporting criteria that support Green Star rating tools every 18-24 months. Such reviews typically take into consideration the uptake of the initiatives by the affected industries and seek to measure the benefits and costs to participating industries, GBCA members and Green Star users. These reviews aim to update criteria to improve their applicability towards best practice and usually involve the adjustment of criteria benchmarks.

### Notice of Intent to Introduce ISO 14001 Certified Environmental Management Systems in Future Revision:

Future versions of these reporting criteria may include a requirement for waste processing facilities to hold current ISO 14001 certification for their environmental management system (EMS).

In the initial development of the reporting criteria the GBCA agreed to postpone the introduction of this criterion based on feedback from industry stakeholders asserting that this measure would prove too restrictive in the short term.

It is the intent of the GBCA to introduce ISO 14001 certification as a criterion in the reporting criteria when the criteria are next reviewed and updated. Waste processing facilities are therefore encouraged to plan for and implement ISO 14001 certified EMS in their operations as soon as possible.

# Auditor Competencies and Responsibilities

## AUDITOR QUALIFICATIONS

Verification of compliance with the Reporting Criteria must be carried out by Suitably Qualified Auditors who are engaged directly by the waste contractors and waste processing facilities (Applicants).

**Suitably Qualified Auditor** – refers to an auditor who has the relevant knowledge, skills and experience to provide advice to applicants on the issues addressed in these Reporting Criteria. It does not refer to ‘Appointed Auditors’ as defined under various State Environment Protection Acts. Auditors must be independent from and have no conflicts of interest with applicants (i.e. they must be an external, independent, third-party auditor). They must also provide evidence of their qualifications in one of the following ways:

### Certification

- The auditor must be a RABQSA Certified Environmental Auditor with ‘Auditor Grade’ status or above and hold current valid certification at the time of audit;
- The auditor must be able to demonstrate a minimum of three years experience in the waste management sector in a brief CV, or have the ‘Scope of Waste Management’ included in their Certification with RABQSA.

OR

### Qualifications Statement

- The auditor must demonstrate their professional skills, knowledge and experience in waste management in a ‘Qualifications Statement’ that provides affirmative responses to all of the questions listed below.
- The auditors’ responses to the following questions shall be used by the applicant and, in some cases Green Star Certified Assessors, to determine the suitability of their qualifications for the purposes of carrying out audits against the Reporting Criteria:
  1. Knowledge: Can the person demonstrate they have relevant knowledge in waste management or environmental compliance auditing in a related field through the completion of a qualification? If no formal qualifications exist, can the person, through alternate means, establish that they understand the current state of knowledge on the criteria, best practice waste management principles and legislation?
  2. Industry experience: Has the person worked in the waste management industry, with waste processing facilities of like size and structure or dealt with similar issues as those addressed in the criteria?
  3. Professional activity: Can the person demonstrate recent professional activity in the field of waste management in which they intend to provide advice? How long has the person been professionally active?
  4. Reputation: Is the person reputable and able to provide referees who can attest to the quality and utility of their work?



5. Professional association: Is the person a member of a professional association that relates to environmental or waste management, that requires the attainment and continuing development of knowledge, skills and experience?
6. Communication skills: Is the person able to explain to clients what they need to do to achieve compliance with the criteria and write reports that are easy to understand?
7. Legislative understanding: Is the person familiar with local waste legislation?

(Adapted from WorkSafe Victoria 2008)

Several items of feedback from the Construction and Demolition Waste Reference Group indicated concern over accepting non-RABQSA certified auditors, even those with significant demonstrated industry experience, to undertake audits for applicants. These concerns centre around the lack of accountability (to a professional body like RABQSA) of uncertified auditors in the instance of unethical behaviour, and the greater potential for fraudulent outcomes that might result.

### CONFLICTS OF INTEREST

The auditor must have no conflicts of interest with applicant companies. Any issues that may be construed as a potential conflict of interest must be disclosed in the audit report and Compliance Verification Summary. An explanation must also be provided that clearly demonstrates the independence of the services provided by the auditor for the compliance verification job.

Previous and existing independent external auditing business relationships (i.e. ISO 14001 auditing and certification services) are not regarded as a conflict of interest, however, the auditor must disclose all such auditing relationships in the Compliance Verification Summary.

### COMPLIANCE VERIFICATION SUMMARY

The Compliance Verification Summary is the auditor's primary deliverable to the applicant. This document is issued by a Suitably Qualified Auditor and verifies and summarises the applicant waste contractor or waste processing facility's compliance with these Reporting Criteria. It is valid for 12 months from the date of issue and must be current for the duration of the time that the applicant provides waste services and waste reports to a Green Star project. Compliance Verification Summaries must:

- state the applicant's compliance or non-conformance with each of the criteria;
- provide a summary of the corrective action(s) required of the applicant in cases where non-conformance is identified;
- be signed and dated by the auditor; and
- include a copy of the auditor's RABQSA Certification and CV or Qualification Statement.

## Applicant's Responsibilities

### APPOINTING AN AUDITOR

It is the responsibility of the applicant to ensure that the auditor they appoint complies with the definition of Suitably Qualified Auditor, as provided in the 'Auditor Qualifications' section above.

Prior to appointing an auditor, the applicant should obtain a copy of the auditor's certification and brief CV demonstrating that individual's experience in the waste sector, or Qualification Statement, and make an assessment of the auditor's qualifications against the Auditor Competency and Responsibilities requirements.

Auditors must be given access to any records, facilities and staff that they deem necessary to carry out the audit and audits must be conducted at every 12 months as a minimum.

It is appropriate to ensure relevant auditor competencies via clauses in waste contracts.

### WASTE CONTRACTOR RESPONSIBILITY

Waste contractors hired to provide waste management and reporting services to a Green Star project must provide the head contractor or Green Star consultant with a copy of their Compliance Verification Summary. They must also ensure that the waste processing facilities they plan to use for disposal of the construction and demolition waste from the Green Star building's construction site hold current valid Compliance Verification Summaries.

The GBCA recommends that waste contractors keep a record of all Compliance Verification Summaries from all waste processing facilities used for the Green Star project they are engaged to service and that these records are provided to the head contractor or Green Star consultant as early as possible after engagement by the project.

Compliance Verification Summaries will be used by Green Star project teams, along with regular waste reports from the waste contractor, as supporting evidence for the project's 'Construction and Demolition Waste' credit claim. Only waste reports generated by compliant waste contractors and waste processing facilities will be accepted.

### NO DIRECT GBCA INVOLVEMENT WITH AUDITOR SELECTION OR AUDIT PROCESS:

In order to maintain transparency the GBCA will not provide confirmation that an auditor is suitably qualified. The GBCA must have no direct involvement in the application of the reporting criteria.

### RESPONSIBILITY OF APPLICANT AND GREEN STAR BUILDING CONTRACTOR / GREEN STAR CONSULTANT

During the assessment of a Green Star building's 'Construction and Demolition Waste' credit, Green Star Certified Assessors will review the auditors' qualifications as attached to the applicants' Compliance Verification Summaries in order to confirm that they meet the definition of Suitably Qualified Auditor.