

AS 5377:2022



STANDARDS
Australia



Management of electrical and electronic equipment for re-use or recycling

Currently in preview, click buy full version

AS 5377:2022

This Australian Standard® was prepared by EV-019, E-waste. It was approved on behalf of the Council of Standards Australia on 07 January 2022.

This Standard was published on 21 January 2022.

The following are represented on Committee EV-019:

Association of Accredited Certification Bodies
Australia and New Zealand Recycling Platform (ANZRP)
Australian Battery Recycling Initiative
Australian Council of Recycling
Australian Industry Group
Australian Information Industry Association
Australian Mobile Telecommunications Association
Better Regulation Division (Fair Trading, Safework NSW, TestSafe)
Clean Energy Council
Consumers Federation of Australia
Department of Environment and Science, Qld
Electronic Product Stewardship Australia
EPA South Australia
Joint Accreditation System of Australia and New Zealand
Lighting Council Australia
Local Government Professionals Australia
NSW Environment Protection Authority
Sustainability Victoria
Waste Contractors and Recyclers Association of NSW

This Standard was issued in draft form for comment as **AS 5377:2021**.

Keeping Standards up-to-date

Ensure you have the latest versions of our publications and keep up-to-date about Amendments, Rulings, Withdrawals, and new projects by visiting:

www.standards.org.au

ISBN 978 1 76113 641 2

Management of electrical and electronic equipment for re-use or recycling

Originates as AS/NZS 5377:2013.
Revised and redesignated as AS 5377:2022.

© Standards Australia Limited 2022

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher, unless otherwise permitted under the Copyright Act 1968 (Cth).

Preface

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee EV-019, E-waste, to supersede AS/NZS 5377:2013, *Collection, storage, transport and treatment of end-of-life electrical and electronic equipment*.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this document as an Australian Standard rather than an Australian/New Zealand Standard.

The objectives of this document are to —

- (a) prioritize the diversion of electrical and electronic equipment from landfill and maximize resource recovery in accordance with the waste management hierarchy;
- (b) provide guidance and minimum requirements for the collection, storage, preparation for re-use, treatment and transport of discarded electrical and electronic equipment for developing, implementing and maintaining management processes;
- (c) provide the means for responsible, safe, environmentally sound, transparent and traceable management of electrical and electronic equipment; and
- (d) facilitate the efficient use of resources in a circular economy.

This document is designed with the principles of circular economy and ecological sustainable development in mind, including lifecycle assessment, the precautionary principle and the principle of due diligence. Operations involved in the collection, storage, transport and treatment of electrical and electronic equipment, whether it be for re-use or recycling purposes, need to understand all requirements and take all reasonable and practicable steps to ensure that these products are managed in a manner that will protect human health and the environment against the adverse effects that may result from such discarded electrical and electronic equipment. Lack of full scientific certainty should not be used as a reason for postponing feasible measures to prevent environmental degradation or adverse health and safety effects. Rather, a precautionary approach should be taken to consider the implementation of appropriate controls.

This document notes that there are general laws in place regulating how to comply with work health and safety regulations and environment protection requirements. This document also notes that Australia is a signatory to transboundary agreements regarding the environmentally sound management of hazardous and other wastes, and elimination of pollutants.

The main differences between this and the previous edition are as follows:

- (i) Inclusion of traceability requirements for substances of concern ([Section 6](#)).
- (ii) Additional requirements for performing a mass balance and calculating the landfill diversion rate (previously called “recycling rate”) and recovery rate.
- (iii) Additional requirements for data security.
- (iv) Inclusion of an informative appendix on the hazards associated with handling electrical and electronic equipment ([Appendix B](#)).

Standards Australia thanks the Department of Agriculture, Water and the Environment for permission to reproduce a definition from *National Waste Policy Action Plan 2019*. The definition is copyright of the Commonwealth of Australia. All rights reserved.

Standards Australia thanks the International Electrotechnical Commission (IEC) for permission to reproduce definitions from IEC 62542:2013 and its Electropedia (IEV). The definitions are copyright of IEC, Geneva, Switzerland. All rights reserved.

Standards Australia thanks the United Nations for permission to reproduce definitions from United Nations Environment Programme (2019), *Technical Guidelines*, UNEP/CHW.14/7/Add.6/Rev.1. The definitions are copyright of the United Nations. All rights reserved.

Standards Australia thanks Safe Work Australia for permission to reproduce a figure from *Model Code of Practice: How to manage work health and safety risks* under the Creative Commons Attribution 4.0 International Licence. The figure is copyright of the Commonwealth of Australia.

The terms “normative” and “informative” are used in Standards to define the application of the appendix to which they apply. A “normative” appendix is an integral part of a Standard, whereas an “informative” appendix is only for information and guidance.

Currently in preview, click buy full version

Contents

Preface	ii
Section 1 Scope, application and general requirements	1
1.1 Scope.....	1
1.2 Application.....	1
1.3 Normative references.....	2
1.4 Terms and definitions.....	2
1.5 Abbreviations.....	7
1.6 Identifying legal and other requirements.....	8
1.7 Health, safety and environmental management.....	8
1.7.1 General.....	8
1.7.2 Risk assessment and management.....	8
1.7.3 Workplace monitoring.....	9
1.7.4 Products accepted.....	10
1.8 Emergency response and business continuity.....	10
1.9 Business closure plan.....	11
1.10 Competency.....	11
1.11 Task-related information.....	11
1.12 Documented information.....	12
1.13 Data security.....	12
1.13.1 General.....	12
1.13.2 Public collection information.....	12
1.13.3 Customer agreements.....	12
1.13.4 Security measures.....	13
1.13.5 Data destruction.....	13
1.14 Waste management hierarchy.....	13
1.15 Management system.....	14
Section 2 Collection and storage	15
2.1 Aim of section.....	15
2.2 Signage and information.....	15
2.3 Areas accessible by the public.....	16
2.4 Storage and handling.....	16
2.4.1 General.....	16
2.4.2 Storage infrastructure.....	16
2.4.3 Consolidation.....	16
2.4.4 Maintain system integrity.....	16
2.4.5 Storage and handling requirements.....	17
2.5 Broken, dumped and residual material.....	17
2.6 Traceability records.....	17
Section 3 Preparation for re-use	18
3.1 Aim of section.....	18
3.2 Quality management system.....	20
3.3 Procedures for an EEE re-use program.....	20
3.3.1 General.....	20
3.3.2 Direct re-use.....	21
3.3.3 Repair and refurbishment.....	22
3.3.4 Harvesting of assemblies, components and parts.....	22
3.3.5 Failed, defective or discarded assets.....	22
3.4 Data security.....	23
3.5 Packaging and labelling.....	23
3.6 Transboundary transport records.....	23
3.6.1 Transport for direct re-use.....	23
3.6.2 Transport for functionality testing or repair or refurbishment.....	24
3.7 Traceability records.....	24
3.8 Provision of information to customers.....	24

Section 4	Treatment	26
4.1	Aim of section	26
4.2	General	27
4.3	Inbound assessment and receipt	27
4.4	Storage and handling	28
4.4.1	General	28
4.4.2	Substances of concern	28
4.5	Treatment procedures	28
4.5.1	Removal of components	28
4.5.2	Processing	29
4.5.3	Management of substances of concern	30
4.5.4	Downstream processing and disposal	30
4.6	Traceability records	36
4.7	Landfill diversion and recovery rates	36
Section 5	Transport	37
5.1	Aim of section	37
5.2	Transport procedures	38
5.2.1	Establish processes for safe transport	38
5.2.2	Documentation review	38
5.2.3	Preserving chain of custody	38
5.2.4	Health and safety requirements	38
5.2.5	Emergency response	39
5.2.6	Environmental management	39
5.3	Transporting EEE destined for re-use	39
5.4	Documented information	39
5.5	Transport records	40
Section 6	Traceability and due diligence for substances of concern	41
6.1	Aim of section	41
6.2	Evaluation, selection and monitoring of downstream processors	42
6.2.1	Procedure for selecting downstream processors	42
6.2.2	Criteria for selecting downstream processors	42
6.3	Evaluation of downstream processors	43
6.4	Traceability controls and monitoring	43
6.4.1	Tracking controls	43
6.4.2	Shipment labelling for substances of concern	44
6.5	Traceability documentation and records	45
6.6	Value chain for movement of substances of concern	47
6.7	Facilitate transparency and traceability	49
Appendix A	(informative) Items designated as EEE	50
Appendix B	(informative) Hazards associated with handling EEE	53
Appendix C	(informative) General guidance on recovery for re-use of EEE	61
Appendix D	(normative) Processing methods for recovery and final disposition of substances of concern	63
Appendix E	(normative) Determination of landfill diversion and recovery rates	71
Bibliography		77

NOTES

Currently in preview, click buy full version

Australian Standard®

Management of electrical and electronic equipment for re-use or recycling

Section 1 Scope, application and general requirements

1.1 Scope

This document sets out principles and minimum requirements for the safe and environmentally sound collection and storage, preparation for re-use, treatment and transport of electrical and electronic equipment (EEE), including components, consumables and parts thereof. Maximizing material recovery, data security, traceability for substances of concern, risk management and quality management are also covered.

This document covers EEE designed for a supply voltage not exceeding 1 000 V for alternating current and 1 500 V for direct current.

NOTE See [Appendix A](#) for categories and examples of EEE.

1.2 Application

This document is intended to be used by parties involved in the collection, storage, preparation for re-use, treatment and transport of EEE and shall be as set out in [Table 1.1](#).

Table 1.1 — Application according to value chain participant

Section/Clause	Value chain participants				
	Collection	Storage	Preparation for re-use	Treatment	Transport
1.6 Identifying legal and other requirements	x	x	x	x	x
1.7 Health, safety and environmental management	x	x	x	x	x
1.8 Emergency response and business continuity		x	x	x	x
1.9 Business closure plan	x	x	x	x	x
1.10 Competency	x	x	x	x	x
1.11 Task related information	x	x	x	x	x
1.12 Documented information	x	x	x	x	x
1.13 Data security	x	x	x	x	x
1.14 Waste management hierarchy	x	x	x	x	x
Section 2 Collection and storage	x	x	x ^a	x ^a	
Section 3 Preparation for re-use	x	x	x		
Section 4 Treatment	x ^c	x ^c		x	