AUSTRALIAN COUNCIL OF RECYCLING

Suite 111, 30 Denison Street
BONDI JUNCTION NSW 2022
admin@acor.org.au
www.acor.org.au
ABN: 60 574 301 921

6 May 2022

Dr Cathy Wilkinson
Independent Reviewer
NSW Environment Protection Authority
Locked Bag 5022
PARRAMATTA NSW 2124

via: resource.recovery@epa.nsw.gov.au

Dear Dr Wilkinson

NSW Resource Recovery Framework

On behalf of the Australian Council of Recycling (ACOR), we welcome the review of the NSW resource recovery framework in an effort to better protect community and environmental health and support a circular economy. We are pleased to be represented on the NSW EPA Waste Advisory Group and provide input to the NSW Government's efforts to reduce waste, maximise resource recovery and significantly increase the use of recycled content.

ACOR is the peak body for the recycling and resource recovery sector in Australia, with members including leading organisations in materials recovery facility operations, recovered glass, plastics and paper reprocessing and remanufacturing. Our mission is to lead Australia towards a circular economy through the resource recovery, remanufacturing and recycling value chain.

The *NSW Waste and Sustainable Materials Strategy 2041* aligns strongly with ACOR priorities to divert waste from landfill and increase recycling rates. The Strategy notes that a "circular built environment could save 3.6 million tonnes of CO_2 per year across Australia and deliver $29 billion in direct economic benefits to NSW per year by 2040".

An aligned and consistent regulatory environment is essential to delivering these outcomes. To this end, policies relating to resource recovery and recycling must be developed transparently and in collaboration with industry and broader stakeholders, supporting robust health and environmental outcomes, social license, and investment confidence.

The *Issues paper: NSW resource recovery framework* is a good overview of relevant challenges and opportunities. Outlined in our attached submission is our response to the four themes in the Issues Paper: environment and human health protection; resource recovery and circular economy outcomes; administration of the resource recovery framework; and enforcement of the resource recovery framework.

We strongly welcome the review of the Resource Recovery Framework; and would like to play a constructive role in helping to inform how we maximise recycling in NSW. Our members bring considerable real-world resource recovery and recycling expertise based on their operating in every jurisdiction in Australia and internationally, and we would be very pleased to facilitate further dialogue and consultation.

Your sincerely

Suzanne Toumbourou
Chief Executive Officer

ACOR Submission:
Review of NSW Resource Recovery Framework

1. ENVIRONMENT AND HUMAN HEALTH PROTECTION: MANAGING RISK AND ADDRESSING EMERGING CONTAMINANTS

1.1. Supporting ecologically sustainable development (ESD) and the circular economy

ACOR strongly supports the priority of the EPA to minimise pollution and waste, protect human health, and prevent degradation of the environment, and the EPA's strategic focus on ecologically sustainable development, waste reduction and circular economy.

Key targets in the *NSW Waste and Sustainable Materials Strategy 2041* include:

- an 80% average recovery rate from all waste streams by 2030
- significantly increase the use of recycled content by governments and industry
- phase out problematic and unnecessary plastics by 2025
- halve the amount of organic waste sent to landfill by 2030
- triple the plastics recycling rate by 2030

The Strategy notes that NSW has fallen short of the 2021 target of 75% diversion, and that municipal solid waste has plateaued.

Whilst further investment and technological progress in the resource recovery and recycling sector can support advancement towards these targets, the lack of alignment between environmental policies and circular economy principles in NSW hinders the sector's ability to maximise resource recovery.

In assessing and managing environmental and human health risks of resource recovery, a much better balance must be struck between risk mitigation and delivery of ecologically sustainable development. This approach should also be more strongly integrated with the NSW Government's own stated commitment to increase the use of recycled content – particularly given the complementarity between NSW Government's climate change priorities and the benefits of a circular economy approach. Achieving circular outcomes by balancing the costs and benefits of economic, social, and environmental factors is challenging and requires a highly developed multi-disciplinary and technical skill in the practice of risk analysis.

In accordance with its remit, the EPA places a stronger emphasis on environmental and human health factors than on social and economic factors. As such, the evidence base the EPA relies upon to inform its decisions is more developed in relation to environmental and human health risks, than other factors.

The EPA's approach to managing risks to environment and human health, in relation to waste regulation is based primarily on applying the 'precautionary' principle.

In order to support sustainable development and circular economy outcomes, the EPA's deliberative framework must shift its focus to an integrated prioritisation of holistic ESD and circular economy principles, underpinned by best practice risk analysis and supported by multi-disciplinary, transparent processes.

Case study: Governance of NSW Environmental Planning and Assessment

The *Environmental Planning and Assessment Act 1979* is the primary land use planning statute in NSW. It governs matters such as planning administration, planning instruments, development assessments, building certification, infrastructure finance, appeals and enforcement.

The objects of the Act include

- to promote the social and economic welfare of the community and a better environment via the proper management, development and conservation of the State's natural and other resources;
- to facilitate ecologically sustainable development by considering economic, environmental and social factors in planning decisions;
- to promote the best use of land;
- to protect threatened and other species of plants and animals, and habitats;
- to promote the good design and amenity of the built environment;
- to promote sharing of planning responsibility between different levels of government;
- to allow better community participation in environmental planning and assessment.

To facilitate independent and objective decisions on significant issues, an Independent Planning Commission has been formed under the Act, with the requirement that "each member is to have expertise in at least one area of planning, architecture, heritage, the environment, urban design, land economics, soil or agricultural science, hydro-geology, mining or petroleum development, traffic and transport, law, engineering, tourism or government and public administration."

There is broad scope to refine and improve NSW environmental legislation and regulation relating to resource recovery, as well as the EPA's ESD related risk analysis processes and capabilities – with lessons to be learned from governance processes of the NSW Department of Planning and Environment, local councils, and other determining authorities in relation to development as defined in the *Environmental Planning and Assessment Act 1979*.

Links:

- *Environmental Planning and Assessment Act 1979: https://legislation.nsw.gov.au/view/html/inforce/current/act-1979-203*
- *NSW Independent Planning Commission: https://www.ipcn.nsw.gov.au/*

1.2. Managing risk in resource recovery

1.2.1. Precautionary principle

The precautionary principle is that it is better to avoid any new action that carries a hypothetical risk for human health or the environment, regardless of whether the hypothesis has been subjected to formal testing. Research by the Organisation of Economic Co-operation and development (OECD)[1] suggests that by its very nature the precautionary principle is subjective, and therefore to promote economic development it must be applied via robust and reliable risk assessment and risk management practices[1].

Taken to its extreme in the resource recovery context, the application of the precautionary principle could mean that no recycled waste products are permitted by the EPA to be recovered and reused in case unknown pollution risks to environment and human health manifest in the future. However, this would disincentivise industrial and economic innovation and thereby work against the objectives of a circular economy.

Ideally environmental regulation should support economic development by focussing on achieving the "no harm principle" first and foremost. Within this context – and consistent with the United Nations Sustainable Development Goals – the precautionary principle should be used as a means to an end (avoiding harm), rather than as an end in itself (caution for caution's sake).

The *Protection of the Environment Operations (Waste) Regulation 2014* (Waste regulation) is intended to balance the avoidance of harm with support for resource recovery. The Waste Regulation enables the EPA

[1]OECD, Environmental Principe's and Concepts, OCDE/GD(95)124, Paris 1995: https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=OCDE/GD%2895%29124&docLanguage=En

to issue Resource Recovery Orders and Exemptions (RROEs) to exempt recovered materials from some of the regulatory requirements for managing "waste" under the *Protection of the Environment Operations Act 1997*, thus allowing the benefits of resource recovery to be obtained.

Within the RROE framework which exists to intentionally permit resource recovery, the EPA appears to apply the precautionary principle. Accordingly, the capacity of the Waste Regulation to achieve the appropriate balance between resource recovery and doing no harm depends entirely on the robustness, objectivity, consistency, and transparency of the EPA's internal processes for managing 'precautionary' considerations.

It is understood that the Human Health and Environment Risk Assessments (HHERAs), used by the EPA to exercise precaution, encompass these characteristics. To assess the merits of granting an RROE, the EPA generally requires an RROE applicant to conduct a HHERA. This is consistent with the shift in the burden of proof that the precautionary principle is based on. Traditionally, the person claiming an activity could cause harm (e.g. the EPA) should produce proof to support that claim. However, the precautionary principle reverses the burden of proof, meaning that the person proposing the activity (e.g. an RROE applicant) must prove the activity is not harmful.

Again, the capacity of resource recovery proponents to rely on the Waste Regulation to achieve a reliable balance between the precautionary principle and support for resource recovery depends on how consistently the EPA applies and depends on the HHERA process to address the burden of proof.

Case study: Mixed Waste Organic Outputs (MWOO)

In 2018, NSW EPA revoked the Resource Recovery Orders and Exemptions for the application of MWOO to land. The revocation decision was abrupt, creating industry disruption and investment uncertainty.

To inform this decision, an independent Technical Advisory Committee (TAC) was formed by the EPA to assess relevant research findings and provide recommendations on policy and regulation relating to the land application of MWOO[2].

As part of the process, NSW EPA provided the TAC with a draft internal policy on beneficial re-use. This "draft internal policy" has never been publicly released and industry was never provided with the opportunity to appraise the decision-making process against the beneficial re-use policy.

Outcomes of this decision include diversion of almost half a million tonnes of previously productively recovered and reused material to landfill, increased greenhouse gases and the looming prospect of half a billion dollars' worth of stranded recycling infrastructure assets.

The position of the EPA is that this decision was underpinned by rigorous, independent scientific research on specific risks.

The perspective of industry is that this decision-making process:

- lacked transparency
- did not allow a sufficient opportunity for industry to engage proactively and constructively
- was underpinned by research rooted in theoretical, rather than applied, methodologies
- did not sufficiently balance a 'precautionary principle' approach with appropriate assessment of the benefits of MWOO or broader circular economy outcomes and impacts

There is no publicly available 'benefits test' that illustrates how concepts about benefits were assessed by the EPA, so it is not possible to gain an independent objective view about of the EPA process.

This illustrates crucial shortcoming in transparently and rigorously balancing economic and social benefits with potential environmental and human health risks.

A key learning from this experience is that there is a need for the development and publication by the EPA of how it intends to use the precautionary principle in future to ensure the most appropriate balance between resource recovery within a circular economy and the 'no harm principle'.

Link:

– *What happened to MWOO?: https://wastemanagementreview.com.au/what-happened-to-mwoo/*

[2] NSW EPA, Alternative Waste Treatment – Mixed Waste Derived Organics Technical Advisory Committee report to the NSW Environment Protection Authority, 2018: https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/recycling/mixed-waste-technical-committee-report.pdf

1.2.2. A holistic approach to managing risk

One alternative to the precautionary principle is the ALARP ("as low as reasonably possible") principle which is applied in the regulation and management of safety-critical and safety-involved systems. The ALARP principle was first developed in United Kingdom and forms the basis of its occupational health and safety (OHS) laws. It has been adopted in OHS legislation in Australia and New Zealand.

The ALARP principle is based on the concept of reducing *residual* risk. Thus, this assumes that some risks naturally occur, and it is the role of policy to keep risks as low as possible, but not at zero. To keep a risk ALARP it is necessary to undertake a cost benefit assessment to determine and compare the impacts of the residual risk to be avoided, the costs of taking measures to avoid that risk, and the improvement achieved by addressing the risk.

Factors that can be considered to assess and compare the extent to which it can be practically reduced include:

- Codes of practice
- Manufacturer's specifications and recommendations
- Industry practice
- International standards and laws
- Suggestions from advisory bodies
- Comparison with similar hazardous events in other industries

As an example of how ALARP could be applied to the waste sector compared to the precautionary principle, the EPA may believe that micro plastics represent a harm to the environment. If a precautionary principle is applied, it would seek to totally avoid micro plastics entering the environment including via resources recovered from the waste stream.

By comparison an ALARP approach would recognise that the risks associated with micro plastics already exist extensively in the environment because almost all manufactured items, textiles and consumables contain them, regardless of the waste stream. Thus, under ALARP the base line would be that humans are exposed to micro plastics all the time every day in countless ways.

Therefore, when faced with the risks of resources recovered via the waste stream the issues to be considered would include the extent to which recovered resources add to the risks associated with micro plastics, whether preventing the recovery of these resources would reduce the residual risk as far as practicable, the costs of measures to reduce the residual risk, and whether there were better options to prevent micro plastic pollution prior to their entry into the waste stream.

The ALARP can be a more sophisticated tool to assess the residual risk to human health and the environment posed by recovered resources within the context of overall existing risk. This is particularly because the risks of all items entering the waste stream exist before they are recovered from the waste stream. It is rare for recovered resources to create risks that didn't exist before. Thus, ALARP may be a more appropriate tool to support the practice of ESD when facilitating a circular economy.

Case study: WA Guideline for managing asbestos to support Roads to Reuse Program

The Western Australian Government's Roads to Reuse Program promotes the use of recycled construction and demolition (C&D) materials in road construction.

An underpinning obstacle to C&D resource recovery and recycling relates to perceived contamination. Whilst NSW EPA has 'zero tolerance' for the presence of asbestos, WA takes an approach that balances safety with practicality in their relevant guideline, by stipulating a threshold:

> *4.3.1 Product specification: To ensure the health of those using or coming into contact with recycled C&D products is protected, the asbestos content (in any form) of any recycled products must not exceed 0.001 per cent asbestos weight for weight (w/w).*

Links:

- *Roads to Reuse: https://www.wasteauthority.wa.gov.au/programs/view/roads-to-reuse*
- *Roads to Reuse Product Specification: https://www.wasteauthority.wa.gov.au/images/resources/files/2021/03/RtR_product_specification.pdf*
- *Guideline – Managing asbestos at construction and demolition waste recycling facilities: https://www.der.wa.gov.au/images/documents/our-services/approvals-and-licences/Guideline_Managing_asbestos_at_construction_and_demolition_waste_recycling_facilities.pdf*

1.2.3. Best practice risk analysis

The regulation of recovered resources requires a sophisticated approach based on the following realities:

- **Many materials expose the environment and humans to risks prior to their entry into the waste stream**. This is because these materials are used in the manufacture of almost all consumables' humans enjoy including furniture, textiles, white goods, and foods. For example, PFAS and related chemicals are prevalent in many everyday goods humans use. Accordingly, any regulation of resources recovered from the waste stream needs to recognise that risks of concern to the EPA are not necessarily created by the act of recovery and that recovered resources may play an insignificant role in cumulative impacts of legacy or emergent pollution risks.
- **In some cases, the reuse of recovered resources may create different exposure pathways for pre-existing risks to the environment and humans**. Regulation should be focussed on assessing whether these exposure pathways would actually increase risk beyond an acceptable threshold (the residual risk) and any cost-effective options for acceptably mitigating that increase.

The precautionary principle alone does not offer a framework sophisticated enough to respond to these realities because it is based on the preventing scenarios that may never happen, rather than addressing realities that could occur. The OECD considers that the notion of precaution can be abused and misused if regulators invoke it when there is no actual risk, negligible risk or where a perceived risk has no scientific basis. It considers that such misuse often leads to "*undesired consequences, such as imposing disproportionate costs on society and business, stifling technological innovation, or creating unjustified trade barriers*" [3].

Even where regulators use scientific assessments to examine a perceived risk, the very perception of a risk will influence research to conclude that it should be avoided.

The OCED suggests that the danger of the precautionary principle being misused by regulators can increase if their development and administration of policy and regulation is inefficient. Regulatory inefficiency occurs when regulators do not properly understand the market they wish to regulate. The risk of this significantly increases if regulators fail to apply the fundamental principles of administrative efficiency which include[4]:

- Consulting effectively with stakeholders.
- Recognising that domestic regulation can have wider market impacts in an increasingly globalised economy.
- Ensuring that regulation is fit for purpose in an era of rapid technological change.

To ensure administrative efficiency and avoid regulatory errors and their societal costs, the OECD recommends that decision making about issues that are uncertain should be based on a well-designed risk analysis framework. It suggests that a risk analysis framework consists of three inter-related components: risk assessment, risk management and risk communication[5].

In relation to risk assessment and management the OECD recommends the following[6]:

- **Risk assessment** should involve (1) analysing the initiating event and the pathways through which the effect occurs; (2) specifying the size and severity of the risk; and (3) estimating probabilities and expected values.
- **Risk management** occurs once risks have been identified and requires regulators to determine whether and how to manage such risks. These decisions may include the application of precaution in response to

[3] OECD, Joint working party of trade and the environment, Uncertainty and precaution: implications for trade and environment, COM/ENV/TD(2000)114/REV3, Paris July 2002: https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=COM/ENV/TD(2000)114/REV3&docLanguage=En

[4] Kleitz, Experience and best practices in achieving regulatory efficiency and open markets, OECD Trade Directorate, Paris 2001: https://www.oecd.org/gov/regulatory-policy/2724461.pdf

[5] OECD, Joint working party of trade and the environment, Uncertainty and precaution: implications for trade and environment, COM/ENV/TD(2000)114/REV3, Paris July 2002

[6] Ibid

potential risk. However, to provide more certainty and objectivity, "*Governments may determine the level of risk or damage that they are able or willing to accept, by setting standards beyond which an activity is not allowed. Standards help to ensure that an activity remains within the limits of known risks; thereby excluding, or at least limiting, the possibility of potentially dangerous uncontrolled situations*".

The *OECD 2012 Recommendation on Regulatory Policy and Governance*[7] encourages jurisdictions to ensure that regulation reflects administrative and regulatory efficiency principles, as outlined below in Table 1.

Table 1: Key regulatory and administrative efficiency principles recommended by the OECD

OECD recommendations on regulatory policy and governance[8]		OECD recommended actions to ensure administrative and regulatory efficiency[9]
2	Adhere to principles of open government, including transparency and participation in the regulatory process to ensure that regulation serves the public interest and is informed by the legitimate needs of those interested in and affected by regulation. This includes providing meaningful opportunities (including online) for the public to contribute to the process of preparing draft regulatory proposals and to the quality of the supporting analysis	• Effective stakeholder consultation
4	Integrate Regulatory Impact Assessment (RIA) into the early stages of the policy process for the formulation of new regulatory proposals	• Acknowledge that domestic regulation can have wider market impacts in an increasingly globalised economy • Avoid unnecessary trade restrictiveness • Ensure that regulation is fit for purpose in an era of rapid technological change • Apply competition principles
9	As appropriate apply risk assessment, risk management, and risk communication strategies to the design and implementation of regulations to ensure that regulation is targeted and effective. Regulators should assess how regulations will be given effect and should design responsive implementation and enforcement strategies	
10	Where appropriate promote regulatory coherence through co-ordination mechanisms between the supranational, the national and sub-national levels of government	• Use international standards as a basis for regulations • Consider whether any equivalent foreign measures are in place
12	In developing regulatory measures, consider all relevant international standards and frameworks for co-operation in the same field and, where appropriate, their likely effects on parties outside the jurisdiction	

The NSW Government has adopted the *OECD 2012 Recommendation on Regulatory Policy and Governance* recommendations – consistent with the Australian Government Office of Best Practice Regulation – in its *Guide to Better Regulation* which states[10]:

- Good regulation is essential to enabling effective competition, and enhanced choice, quality, innovation, flexibility, and responsiveness.
- The term regulatory proposal is used in the Guide in the broadest possible sense, to cover any scheme or requirement imposed by Acts of Parliament, regulations made under, or administrative requirements imposed by virtue of a power specified in those Acts, or by Statutory Instruments.
- A Better Regulation Statement is required for significant new and amending regulatory proposals and must be published online.

The *NSW Guide to Better Regulation* offers the following principles for regulatory decision making.

Principle 1: The need for government action should be established. Government action should only occur where it is in the public interest, that is, where the benefits outweigh the costs.

Principle 2: The objective of government action should be clear.

[7] OECD, Recommendation of the Council on Regulatory Policy and Governance, 2012: https://www.oecd.org/governance/regulatory-policy/2012-recommendation.htm

[8] Ibid

[9] Kleitz, Experience and best practices in achieving regulatory efficiency and open markets, OECD Trade Directorate, Paris 2001

[10] NSW Treasury, NSW Government Guide to Better Regulation, January 2019: https://www.treasury.nsw.gov.au/sites/default/files/2019-01/TPP19-01%20-%20Guide%20to%20Better%20Regulation.pdf

Principle 3: The impact of government action should be properly understood, by considering the costs and benefits (using all available data) of a range of options, including non-regulatory options.

Principle 4: Government action should be effective and proportional.

Principle 5: Consultation with business, and the community, should inform regulatory development.

Principle 6: The simplification, repeal, reform, modernisation, or consolidation of existing regulation should be considered.

Principle 7: Regulation should be periodically reviewed, and if necessary reformed, to ensure its continued efficiency and effectiveness.

To support consistency between the approach to resource recovery in NSW and best practice regulation recommended by the OECD and adopted by the Australian and NSW Governments, we outline the following issues and recommendations in Table 2, below.

Table 2: Issues and recommendations to support best practice regulation of resource recovery

Issue	Recommendation
The Waste Regulation does not incorporate best practice regulation principles.	Update regulation to commit the EPA to applying the *NSW Government Better Regulation Guidelines* in the determination, review, or revocation of RROEs.
The variability of contaminants in the waste stream demands a more robust risk analysis. The EPA is understandably concerned about the variability in the waste stream and emerging contaminants, and this clearly underpins its reliance on precaution when considering RROEs. However, the creation of risks by materials prior to their entry into the waste stream, the contribution made by recovered resources to these risks, and the emergence of new risks from new manufacturing materials need to be managed consistently and reliably for the benefit of the environment, consumers, and industry and are precisely why the Waste Regulation should require the EPA to practice best regulation via a robust risk analysis. In the absence of best practice regulation, the reliance on precaution alone increases the likelihood that the EPA will terminate resource recovery markets thereby shifting entire costs of regulation to waste operators who cannot control waste stream variability. This is the experience of the MWOO (recovered organics) and construction and industry (recovered fines) sectors most recently.	A robust risk analysis, as suggested by the OECD, should be applied to avoid this kind of disproportionate cost shifting.
The HHERA process used by the EPA to inform its RROE decisions is not best practice regulation or a substitute for a robust risk analysis. The HHERA process is focussed primarily on environment and human health risk research for the purposes of exercising precaution. The MWOO experience demonstrates that even where scientific research under a HHERA is inconclusive, the EPA's preference for precaution can lead it to choose revocation instead of conducting a full risk analysis. By comparison when best practice risk analysis is pursued, research on environment and human health risks are one input to be considered alongside the actuality and context of those risks, ways to manage risks within acceptable thresholds, and the wider costs and benefits of decisions. The environment and human health risks created by other sectors, such as mining, chemical manufacturing, and transport, are regulated via the setting and enforcement of thresholds or acceptable standards. This is consistent with the OECD recommendations for regulatory governance.	The EPA should work together with the resource recovery sector to shape a best practice solution for recovered resources, informed by other sectors that are regulated via the setting and enforcement of thresholds or acceptable standards.

Issue	Recommendation
It is likely that the inputs in those sectors alter risk profiles from time to time as technology, use and applications evolve.	
The EPA determines the merits of granting an RROE for a recovered resource based on the beneficial use of that recovery. However, the EPA's beneficial use policy remains in unpublished draft form and RROEs are not published. This disables industry learning, investment certainty and innovation, as a key criterion for approved resource recovery is not publicly shared. It also can increase the risk of the precautionary principle being subjectively applied.	The EPA should work with industry to agree the beneficial use of all existing emerging recoverable resources and publish these standards, so they are transparent for industry. This would drive consumer demand and business innovation. Additionally, the transparent nature of these benefits should be one input in the EPA's risk analysis when considering RROEs, as this would foster certainty for business and consistency in EPA decision making.

1.3. Transparency, consistency and industry partnership

The resource recovery and recycling industry is an essential partner in advancing priorities relating to ecologically sustainable development, waste reduction and circular economy – and a vital investor in waste and recycling infrastructure.

Industry is committed to working collaboratively with regulators to improve outcomes for the environment and recovered materials. Our sector has invested significantly in the quality and consistency of recovered material and avoiding risks to health, safety and the environment.

The expertise and practical experience of industry should be proactively harnessed by the EPA, in seeking to manage risks and address emerging resource recovery issues.

We strongly encourage better collaboration and engagement with industry, higher levels of transparency, more robust consideration of investment and infrastructure implications in regulatory decisions, and consistent alignment with existing national frameworks and standards.

Case study: NSW EPA Revocation of Recovered Fines Orders and Exemptions

On 27 August 2021 the NSW EPA flagged an intention to revoke the Batch Process and Continuous Process Recovered Fines Orders and Exemptions, with an original consultation period of one month; eventually extended to two months.

Such a rapid timeframe did not allow for an adequate consultation process, nor did the investigation leading up to this decision adequately involve industry experts. Additionally, an adequate transition plan for the resource recovery sector was not sufficiently outlined.

Analysis undertaken by the Centre for International Economics, on behalf of the Waste Contractors and Recyclers Association of NSW (WCRA] and the Waste Management and Resource Recovery Association of Australia (WMRR) showed the impact of this proposed decision, including diversion of up to 1.3 million tonnes of material to landfills annually; a reduction of the construction and demolition recovery rate from 76% to 66%; and reduction of the overall state-wide recovery rate from 64% to 58%; along with a net economic loss of over a billion dollars over the next decade.

This change of regulation is also projected to increase the construction costs of an average residential building by $2,400.

The CIE found that the proposed revocation was "not proportional in the sense that the costs of doing so far outweigh the expected benefits".

Links:

- *WMRR & WCRA submission to NSW EPA on proposed revocation of recovered fines order and exemption: http://wcra.com.au/files/NSW%20recovered%20fines%20submission-WCRA%20WMRR-29%20Oct%202021.pdf*

There must also be better alignment with existing national frameworks and standards, to support industry confidence and consistent delivery of circular economy outcomes.

In this context, the distinction between specific and general RROEs is not fit for purpose for large-scale product applications that require significant capital investment and extensive trials. This approach is designed for the niche or one-off application of specific products and low risk recovered products. The EPA's adoption of 'trial RROEs' does not address this gap, as there are no published rules and processes to provide industry with certainty about how trial RROEs can lead to project approval.

Case study: Chemical Attributes – NSW EPA and NEPM

In 2021, the NSW EPA drafted a new proposed Recovered Soil Order and Exemption in an effort to establish clear requirements to ensure the safe reuse of excavated soil.

There is no alignment between the criteria for 'Chemical and other attributes' in the proposed Orders and the National Environment Protection Measure (NEPM) and PFAS National Environment Management Plan (NEMP), with the EPA Orders applying significantly higher levels of stringency comparative criteria in national guidelines.

The NEPM also takes an integrated approach to contaminated land management, taking into account land use risk factors and thus allowing for different volumes of contamination depending on land use – in contrast to the NSW Orders.

Links:

- *PFAS National Environmental Management Plan - https://www.awe.gov.au/sites/default/files/documents/pfas-nemp-2.pdf*
- *Schedule B1 Investigation Levels For Soil and Groundwater – National Environment Protection (Assessment of Site Contamination) Measure April 2011: http://www.nepc.gov.au/system/files/resources/93ae0e77-e697-e494-656f-afaaf9fb4277/files/schedule-b1-guideline-investigation-levels-soil-and-groundwater-sep10.pdf*

1.4. Proposed new regulatory framework for resource recovery

A new framework for regulating resource recovery should include the following best practice elements.

(a) Demystifying the variability of contaminants entering the resource recovery stream

The EPA should:

- Work with manufacturers to identify the inputs in goods that pose a risk to environment and human health and also affect circular economy and also affect recyclability. This should be regularly updated to include new consumables. This information should be published.
- Audit the presence of existing contaminants in the general environment and daily human exposure pathways to develop a 'base case of exposure'. This information should be published.
- Using this base case of exposure, develop acceptable standards of environmental and human exposure to develop the 'thresholds of exposure'. These should be based using the ALARP ("as low as reasonably possible") principle. This information should be published.
- All proposals for recovered resources should be assessed on whether they contain known contaminants that have already been considered in the 'base case of exposure', and the residual risk they represent compared to the 'thresholds of exposure'.

(b) Declaring benefits of recovered resources

One of the key considerations of the EPA when considering RROEs is the 'beneficial use' of the recovered resource. The EPA would work with industry to agree the beneficial use of all existing emerging recoverable resources and publish these standards, so they are transparent for industry. This would drive consumer demand and business innovation.

Equally the transparent nature of these benefits would be one input in the EPA's risk analysis when considering RROEs, as this would foster certainty for business and consistency in EPA decision making.

(c) Pathways for considering proposals for recovered resources

Proposals that comply with the 'base case of exposure' and 'thresholds of exposure' should be fast tracked for approval.

Proposals that do not initially comply with the 'base case of exposure' and 'thresholds of exposure' should be subject to further assessment.

This two-track process would increase business certainty for investment and risk taking necessary for innovation, without compromising environment and human health safety.

(d) The definition of waste

A circular economy cannot advance if recovered resources are perpetually defined as waste after they have been approved for reuse in other markets: the 'once waste, forever waste' outlook is a relic of a linear economy approach.

Currently, the Waste Regulation focusses the EPA on being an 'end-of-pipe' pollution regulator. This means that waste is simply another pollutant that must be regulated, rather than a resource from which social, economic, and environmental benefits can be derived. This is not a regulatory starting point from which a circular economy can be effectively encouraged.

As an alternative approach, the Queensland and South Australian Governments have shown the foresight to amend definitions of waste to end once a recovered resource is approved for reuse. This thinking aligns recovered resources with the purpose of a circular economy and more importantly with the expectations of consumers and industry.

For example, consumers of recycled paper do not think they are putting waste into their printers, they consider it to be paper. On the other side of the equation, manufacturers of furniture, textiles, white goods, and all other consumables do not invest in or go to work each day thinking they are making waste, even though eventually their products will enter the waste stream.

Once a business has invested in developing and manufacturing a recovered resource that has found acceptance with consumers the safety of that product should be regulated by general consumer and product liability law along with relevant industry standards and other legislation. That is not the case at present because the Waste Regulation gives the EPA cradle to grave control over all recovered resources. It is outdated and redundant from a regulatory perspective for recycled paper to be continually subject to an RROE.

To reflect the nature of recovered resource markets, the use of RROEs should be amended as follows:

- **Recovered resources that have been approved for reuse under the existing RROE regime should no longer be designated as waste unless the EPA can clearly establish according to strict criteria why their further control under the Waste Regulation is needed, and over what timeframe.**
- **Recovered resources that are approved for reuse under the new RROE regime proposed here should not be designated as waste unless the EPA can clearly establish according to strict criteria why their further control under the Waste regulation is needed, and over what timeframe.**

(e) Waste Regulation should commit to NSW Better Regulation Guidelines

The Waste Regulation should be amended to specifically commit the EPA to applying the NSW Government's *Better Regulation Guidelines* when administering recovered resources. This would support the other proposals here and boost industry confidence in the reliability of the regulatory system, which can otherwise appear arbitrary.

Table 3, below, provides an example of how the better regulation principles contained in the Guidelines could be applied by the EPA.

There must also be a provision for flexibility to the application of these guidelines, to accommodate innovation and advances in technology, in the form of published rules and processes to provide industry with certainty about how trial RROEs can lead to project approval.

Table 3: Example of application of better regulation guidelines to resource recovery

Government Better Regulation Principles	Recommended application by the EPA when considering RROE applications and conducting RROE reviews
Principle 1: The need for government action should be established. Government action should only occur where it is in the public interest, that is, where the benefits outweigh the costs.	• Assess regulatory impact including an assessment of all costs and benefits – environmental, social, economic.
Principle 2: The objective of government action should be clear.	• Draft Regulatory Impact Statement (RIS) released for public input. • Consideration of circular economy principles – assess full supply chain to determine best form of intervention to minimise risk of contaminants of concern.
Principle 3: The impact of government action should be properly understood, by considering the costs and benefits (using all available data) of a range of options, including non-regulatory options.	• Final RIS prepared incorporating Cost Benefit Assessment. • Options developed and assessed to manage any risks.
Principle 4: Government action should be effective and proportional.	• Minimum intervention in market necessary to deliver public benefit (including protection from harm to human health and environment).
Principle 5: Consultation with business, and the community, should inform regulatory development.	• Formal consultation via RIS. • Publication of RROEs. • Publication of beneficial use policy and register. • Publication of contaminant registers and base case and threshold exposure registers.
Principle 6: The simplification, repeal, reform, modernisation, or consolidation of existing regulation should be considered.	• Formal audits of regulatory effectiveness via stakeholder consultation in supply chains.
Principle 7: Regulation should be periodically reviewed, and if necessary reformed, to ensure its continued efficiency and effectiveness.	• Formal review of Waste Regulation every 5 years.

(f) Risk analysis to support assessment of recovered resources

The risk analysis used by the EPA to assess the initial (and where required, continued) reuse of recovered resources should address the following four best practice principles. These go beyond the current HHERA process and are consistent with the recommendations of the OECD Australian Government and NSW Government.

Table 4: Application of best practice risk analysis

Best practice principle	Explanation	Examples of application
1. Identify the negative externality	The need to identify the problem with an activity that needs fixing including the costs of the problem to third parties.	• Use base case exposures to assess the extent of risk additionality. • Use threshold exposures to assess the impact of risk additionality. • Examine all options to manage risks.
2. Identify the positive externality	The need to identify the benefits of an activity to third parties.	• Identify via stakeholder consultation all potential benefits and risks to benefits of regulation. • Consider positive externalities such as greenhouse gas emission reduction.
3. Promote efficient and competitive markets	The need to ensure regulation is not creating barriers to entry and reducing consumer choice.	• Ensure all products of a similar type are assessed against a consistent standard of risk and benefit. • Take a neutral approach to destination markets. • Do not pick product winners as that is the role of the market.
4. Ensure public and environment safety	The need to use regulation to secure human health and environment values and objectives.	• Ensure that standards respond to actual risks where possible and use a full risk analysis to ensure that precaution is objectively applied. • Co-design risk management with stakeholders.

Best practice regulation suggests that the most appropriate way to apply these four principles is via the following methods.

- **Asking the right questions.** For example, important questions to ask include:
  - Is there sufficient evidence that a problem exists?
  - Does the problem exist at present or is it merely anticipated?
  - Is the problem a minor irritant that can be solved by better management or is it a significant hazard that requires a totally new regulatory approach?
- **Undertaking a risk analysis and risk assessment.** For example:
  - A risk analysis should show the relative importance of the various contributors to the overall risk and show where the work is needed to reduce that risk; and
  - A risk assessment should consider the wider effects of introducing a regulatory change and ensure that the regulatory response is proportional to the risk.

2. Resource recovery and the circular economy outcomes

2.1. A whole-of-system approach to circular economy

Alongside environmental outcomes, a circular economy is equally connected with innovation, technology and manufacturing.

Whilst resource recovery and recycling are essential components of a circular economy, a whole-of-system approach is required to support and deliver strong circular economy outcomes. This entails a move away from the current 'end of pipe' focus on the 'waste sector'; instead, a whole-of-government alignment is required between all relevant portfolios, including investment, innovation, planning, health and environment.

A key consideration must also be the prioritisation of levelling the playing field between 'virgin' and recovered/recycled products/materials. The 'cradle to grave' control of the EPA over the resource recovery sector exceeds the extent of government regulatory control in any other sector, placing an uneven regulatory burden on recovered materials.

This also creates significant risk to industry, particularly as the EPA is a pollution regulator, without sufficient remit or capacity to assess social, environmental, and economic risks and benefits.

A key risk is that because it views waste as pollution, the EPA is in a position to intervene in resource recovery markets by 'picking winners', insofar as it can use its regulatory role to expressly favour some resource derived products over others based on their pollution risk. It can also use grant programs under its control to support the winners it has picked via the regulatory process.

Arguably there is a conflict of interest in the EPA's combined roles of regulating the waste market, administrating the waste levy and determining funding for circular economy outcomes.

2.2. Addressing emerging issues through a holistic approach to supply chain

In essence the current focus of the EPA and its HHERA process is on environment and human health safety. The changes we propose would introduce a more appropriate balance between the need to assess environment and human health issues and wider economic and social issues relevant to promoting a circular economy.

Genuinely circular outcomes can only be delivered if 'contaminants' are addressed in the production phase of products and materials, rather than the point at which they enter the 'waste' stream.

Whilst it is sensible to address legacy contaminants that have been banned in the market (e.g. asbestos), it is untenable to regulate the presence of contaminants in recovered resources when the application of these contaminants is not regulated in new products (e.g. PFAS).

To support a circular economy and a thriving resource recovery and recycling sector, a holistic supply-chain-wide approach must be taken – with a strong focus on the beginning of the production cycle (e.g. product design, manufacture and distribution), in order to manage impacts and contaminants at the end-of-use phase. This should entail a shift from the current EPA focus on 'waste supply chain participants', to a whole-of-system approach.

2.3. Waste definition and benefits of 'end of waste' provision

As noted in Section 1.4, the current definition of waste, as outlined in the POEO Act is not fit for purpose in supporting a circular economy. It is counterproductively broad; capturing resources identified as 'surplus' and also specifically noting that "A substance is not precluded from being waste … merely because it is or may be processed, recycled, re-used or recovered."

Theoretically speaking, the category of waste should be applied as a last resort in a circular economy context, after all resource recovery avenues have been exhausted – rather than as an initial classification.

In particular, materials that have undergone processing should be given the same designation as manufacturing outputs.

Case study: SA – When waste ceases to be waste

In addition to a definition of waste, the South Australian Environment Protection Waste to Resources Policy 2010 also specifies the conditions under which waste-derived material ceases to be a waste:

- it constitutes a product that meets an EPA published standard or
- if there is no specification or standard applies, it constitutes a product that is ready and intended for imminent use without the need for further treatment to prevent any environmental harm.

Links:

- *South Australia Environment Protection (Waste to Resources) Policy 2010 under the Environment Protection Act 1993: https://www.legislation.sa.gov.au/__legislation/lz/c/pol/environment%20protection%20(waste%20to%20resources)%20policy%202010/current/2010.-.auth.pdf (Ref Clause 4—Certain material declared not to be waste)*

There should also be better differentiation between different types of recoverable resources, to address and distinguish between a diversity of risk profiles and facilitate more practical approaches to issues of storage and stockpiling.

3. Administration of the resource recovery framework

3.1. Clear EPA performance standards to improve stakeholder engagement and investment certainty

The EPA's *Regulatory Strategy 2021* commits to:

- addressing the whole system, from minimising waste generation through to helping create sustainable markets for recycled materials
- working with all levels of government, industry, the community, research and science sectors to drive future waste management and resource recovery.

We propose that the EPA more clearly align with the Australian Government's principles of regulator performance which Commonwealth regulators are subject to. These principles are contained in the Australian Government's Regulator Performance Guide (RPG) and are as follows[11]:

- **Continuous improvement and building trust:** Regulators should adopt a whole-of-system perspective, continuously improving their performance, capability, and culture to build trust and confidence in Australia's regulatory settings.
- **Risk based and data driven:** Regulators should manage risks proportionately and maintain essential safeguards while minimising regulatory burden, and leveraging data and digital technology to support those they regulate to comply and grow.
- **Collaboration and engagement:** Regulators should be transparent and responsive communicators, implementing regulations in a modern and collaborative way

These principles are consistent with the proposed new regulatory framework we have suggested.

For example, in relation to continuously improving and building trust, the RPG recommends that regulators:

- Have well-defined, communicated, and embedded organisational values and culture that articulate the type of regulator and regulatory posture they seek to adopt—such as through the development of cultural or values statements.
- Actively build staff capability, including ensuring staff have relevant knowledge of the regulatory craft and the industry they regulate, and have the capacity and are empowered to identify and implement improved practices.
- Have in place transparent external accountability processes encouraging procedural fairness, accessibility and responsiveness that builds public trust and confidence in the performance of their regulatory functions—such as easy to access and transparent complaints and feedback handling procedures, and, where appropriate, publishing processing times.
- Hold themselves to account through internal accountability processes that foster a culture of continuous improvement and reflection—such as holding rigorous ex-post reviews of regulatory actions to identify learnings and explore opportunities for improvement, and regular reviews of operating procedures.
- Undertake regular and independent performance reviews and take ownership of and respond to recommendations of external reviews of their performance.
- Provide clear information about the rationale for compliance costs and actively engage with stakeholders to identify solutions to avoid or reduce unnecessary costs.
- Take a broad perspective of the regulatory environment, including conducting environmental scans and considering best practice examples from other jurisdictions and regulatory systems.
- Identify and minimise duplication, and harmonise activities with other regulators to achieve better regulatory outcomes, including establishing clear operational scopes, sharing intelligence, and producing common guidance where appropriate, providing clarity, and reducing the overlapping compliance burden on business and individuals.
- Actively share learnings and insights by participating in communities of practice, engaging with other regulators and stakeholders to reflect on best practice and lessons learned, including failures.

[11] Australian Government PM&C Regulator Performance Guide, July 2021: https://deregulation.pmc.gov.au/sites/default/files/regulator-performance-guide.pdf

With respect to being risk based and data driven, the RPG recommends that regulators:

- Consider the risks, cost effectiveness and impact of regulatory action, both before and after the regulatory action has commenced.
- Build staff and organisational data capability and digital literacy, drawing on expertise to support effective use, including regulatory technology solutions.
- Use intelligence and data, including data points such as enterprise size, to inform a risk-based approach to compliance and enforcement.
- Maintain a compliance and enforcement strategy that articulates the regulator's approach to risk and how this informs decision-making, publishing where appropriate.
- Actively monitor and plan for risks of market changes and new business models that may have flow-on effects for operations, including those on the edge of, or just outside, a regulator's legal objectives, functions, and role.
- Modify their regulatory approach to encourage voluntary compliance where appropriate and focus compliance and enforcement activity where risks and impact of harm are greatest.
- Commit to publish the data they hold and share data across regulators where permitted and appropriate.
- Take into account the cumulative burden of regulations, including the impact on smaller businesses and sole traders, when establishing and implementing processes.
- Seek to achieve their objectives while ensuring that economic outcomes, such as impacts on competition, innovation, and growth, are explicitly considered in implementation.
- Are receptive to diverse views about implementation of regulation, while ensuring the integrity of the regulatory system.

3.2. Alternative administration of resource recovery proposals

An alternative to improving the performance of the EPA, is to create a new entity with the responsibility of determining resource recovery applications. In this scenario the EPA's advice on environment and human health risks (the pollution regulator advice) would be one input that a new approval body would need to consider alongside other economic and social costs and benefits within a full risk analysis.

This approach has been very constructively applied in Victoria, through the establishment of Sustainability Victoria, and South Australia, through the establishment of Green Industries SA.

Advantages of this approach include:

- The EPA would no longer be perceived to have a conflict of interest created by its sole approval role of resource recovery proposals and providing grants for resource recovery projects; and also remove the perceived conflict of interest between approving/revoking resource recovery orders and administrating the waste levy.
- The EPA would be able to focus the environment and human health aspects of its 'end of pipe' regulation and another entity could have a wider technical remit to consider the full economic and social costs and benefits of expanding the resource recovery industry, having regard to the EPA advice about pollution.
- It would recognise the real distinction between waste and the other pollution issues regulated by the EPA, such as air, water, and noise.

  For example, when other industries, such as chemical, energy and other industrial production, create air, water and noise pollution, there are no major reuse or circular economy options available. Instead, the role of the EPA is to correctly minimise pollution impacts.

  However, in relation to 'waste', there are significant reuse and circular economy options available, as prioritised in NSW Government policy. In this context the expansion of resource recovery options requires more than a focus on minimising pollution.

3.3. Processes to determine whether existing orders and exemptions should be amended or revoked

In addition to our recommendations in Section 1, we suggest that decisions to amend or revoke RROEs should be part of a formal process subject to judicial review. This includes for example:

- The publication of specific criteria the EPA can use to trigger an amendment or revocation.
- Formal notice periods for amendment or revocation.
- A declared process for consultation on any amendment or revocation including the publication of a draft determination with reasons to which a RROE holder can respond within specified timeframes.
- Judicial review of the reasons for the amendment or revocation.

To avoid the risks of RROE amendment or revocation the EPA should be required to conduct a regular compliance and audit program of RROEs. This should occur in consultation with RROE holders and give them the opportunity to address any issues needing rectification.

4. Enforcing the resource recovery framework

4.1. A level playing field for licensed operators

A key priority is for the EPA to support a well-regulated industry, with the capacity and capability to ensure a level playing field for licensed operators.

Enforcement of regulation, with a stronger focus on unlicensed operators and environmental crime, is vital; whilst licensed operators should be better supported in addressing minor breaches.

To this end, ACOR is working to establish an audited Australian Recyclers Accreditation Program, to deliver a standardised process for assessing a recycling operator's performance and providing assurance around the legitimacy of recycling operations.