

Department of Environment, Science and Innovation response: Independent review of the End of Waste (EOW) framework

Background

The EOW framework was introduced into the *Waste Reduction and Recycling Act 2011* (WRR Act) on 8 November 2016 to replace the Beneficial Use Approval (BUA) framework, which had been in place since 2001.

Under the WRR Act, waste may be approved as an EOW resource if it meets a range of specific criteria and is used for an approved use in accordance with the conditions of an EOW code. Under these circumstances, a waste is no longer classified as such under the WRR Act. As of the date of publication of this report, the Department of Environment, Science and Innovation (the Department) has released 35 codes for approved resources, with a further two under development. The primary aim of EOW approvals is to identify the feasibility of a specific waste to be used as a resource. If a resource under an EOW approval is found to have a market, no adverse environmental or health impacts from the processes involved, and meets other detailed criteria, then an EOW code may be granted.

An independent review of the EOW framework as it is currently legislated and operated was undertaken in 2023 and a final report provided to the Department. The review was initiated with the aim to determine the EOW framework's efficacy in driving the circular economy outcomes referenced in Queensland's Waste Management and Resource Recovery Strategy. As Queensland accelerates the transition to circularity, the EOW framework has a role to play by promoting resource recovery opportunities and transforming the perception of waste as a resource. The review was conducted by SLR consulting who are a private consulting firm specialising in sustainability. The key objectives identified during the project planning phase were as follows:

- Review existing operation of the EOW regulatory framework including identification of interactions and operational conflicts with existing legislation and regulation.
- Assess the extent to which the framework is meeting its original intent and objectives.
- Assessment of the extent to which the EOW framework supports Queensland's transition to a circular economy.
- Review and critically compare the EOW framework in comparison with waste to resource frameworks in other Australian jurisdictions and internationally.
- Engage and consult with a series of stakeholders on the focus areas of the review.
- Identify potential EOW codes that could be developed to support significant resource recovery, including quantification of the potential resource recovery benefit of each potential code.
- Identify recommendations on how the framework could be improved.

The review consisted of three main components: a desktop review in collaboration with the Department to develop a baseline understanding of the current policy and regulatory environment and processes and resources associated with the EOW framework; a review of other jurisdictions approaches to managing waste to resource frameworks and the collection of further information through detailed stakeholder engagement including a broad range of government and industry stakeholders and users within the framework; and the submission of a final report that presents the feedback and findings of the review and a series of recommendations to address issues and improve the performance of the EOW framework.



Findings

The review reporting summarised the key findings as follows:

- There is a high degree of uncertainty across the Queensland Government, Local Government, and Industry stakeholders in relation to the application of the definition of waste, and the various pathways that may create a resource from waste. The recently updated Waste Reduction and Recycling (WRR) Act has introduced a new prospective pathway for defining a waste as not a waste, which requires further clarification.
- There are elements of the current process for nominating and creating codes that could be improved. This includes the potential for registration and participation fees, as well as providing greater clarity around where a code can be developed and the information requirements. There are also areas where the Department could improve clarity of explanation of processes to support industry.
- Stakeholders would welcome further support and training on the applicability, and use of EOW Codes to improve take up and application. This is provided by the Department at present; however resources are finite. In some cases, stakeholder engagement could be improved, and training enhanced for regulatory staff to ensure clarity and consistency in application.
- Timeframes for delivery of an EOW Code or Approval vary depending on the levels of complexity, as well as information requirements. This has led to an inconsistent delivery of codes. Issues have also arisen from loopholes allowing stockpiling of some wastes that would otherwise be considered an illegal activity.
- There would be considerable benefit in a strategic Queensland Government-led approach to identifying potential resources that would support the State to meet the targets in the Queensland Waste Management and Resource Recovery Strategy. The current approach by contrast is reactive, and industry led. A proactive approach led by the Office of Circular Economy of the Department, and aligned to strategic policy documents and action plans, might see better uptake and impact.
- The waste types considered by the EOW framework can be highly complex and the Department does not always have access internally to the right technical resources. The use of Technical Advisory Panels under the EOW Framework has in certain circumstances caused delay or challenges in developing codes.
- There are a series of other specific issues identified associated with individual codes or alignment. In many cases issues raised by stakeholders would benefit from further engagement with the Department, where there is a solid knowledge base and willingness to support where resources allow.

Recommendations

The review report identified a total of 37 recommendations. These are stated as: providing certainty and clarity on where EOW applies, the definition of waste, how EOW fits within the circular economy, as well as a series of operational and stakeholder engagement opportunities.

The review suggests that while the EOW Framework is reasonably functional in its current state, it could be used to facilitate significantly more reuse and recovery through a more proactive approach. This should be aligned with a broader system-based approach under Queensland's Waste Management and Resource Recovery Strategy.

Due to the large number of recommendations, the Department has consolidated interrelated recommendations so they can be implemented simultaneously as follows (in priority order):

- **Group 1:** Clarification of the definitions of 'waste' and 'resource' and how to better facilitate pathways for reuse (1-6, 9, 17, 18, 21, 34)
- **Group 2:** Facilitate connections between resource producers and users and consider adding a timeframe for storing a resource (10, 15, 16, 24, 25, 28)
- **Group 3:** Consultation about impacts to resource producers of PFAS NEMP 3.0 (35, 36)
- **Group 4:** Registration requirements for resource users and compliance improvements (7, 12)
- **Group 5:** Increase departmental technical expertise in reviewing and developing codes (30, 31, 32)
- **Group 6:** Periodic review and consolidation of codes to avoid duplication and ensure reuse is being facilitated adequately (14, 37)
- **Group 7:** Implement administrative fees for EOW Codes and improve stakeholder engagement (8, 13, 22,

23, 26, 27, 33)

The remaining recommendations are either standalone (11, 29) or are not supported by the Department (19, 20). The full list of recommendations is available in the final review report and below in Table 1.

Department response

The Department welcomes the findings and recommendations of the review. Implementation of the recommendations will ensure that the Queensland Government has the appropriate tools and strategies in place to better facilitate reuse of waste as a resource resulting in improved circular economy outcomes.

The Department supports 35 of 37 recommendations in principle. The remaining two actions are not supported. This is because they either relate to matters not under the control of the Department or the Department has not found practical examples of these issues occurring.

It has been identified by the Department that the highest priority recommendations relate to clarifying the definitions of 'waste' and a 'resource' and how to better facilitate pathways for reuse (Group 1). Further development of detailed proposals, stakeholder consultation and regulatory impact assessment to address these priority recommendations will be required.

It is expected that by prioritising these actions there will be corresponding benefits in relation to the remaining recommendations. As a result, following implementation of these priority actions, further review will be required to identify any outstanding priorities moving forward.

Detailed Department response to recommendations

Table 1: Department response to recommendations

#	Recommendation	Department response and grouping	Comments
Theme: Definition of Waste and Resources			
1	<p>Review the definition of waste and its role in the End of Waste Framework, including consideration and clarification of:</p> <ul style="list-style-type: none"> – Whether under a circular economy the first question should be whether or not something generated by an industrial process should be classed as a material before it is defined as a waste – Whether there are specific resources that can be considered to be of sufficiently low risk that their use can be regulated against general environmental duty rather than requiring a specific End of Waste Code – Where a resource ceases to fall under the End of Waste framework as it passes through a product supply chain 	<p>Supported in principle Group 1</p>	<p>As part of legislative amendments in June 2023, the meaning of waste was moved from the <i>Environmental Protection Act 1994</i> to the WRR Act. The WRR Act was also amended to introduce the circular economy principle as a policy principle to promote and facilitate Queensland’s transition to a circular economy. These amendments were developed to provide greater clarity and certainty around waste and the circular economy.</p> <p>The Department will seek to review the interactions between the waste regulatory frameworks including EOW, environmental authorities for environmentally relevant activities (ERAs), the general environmental duty (GED) and the circular economy principle and ensure that language and interpretations seek to support a transition to a circular economy. This Recommendation aligns with the departmental considerations in response to Recommendation 3.</p>
2	<p>Publish guidance to allow proponents to further understand the terms “left over”, “unwanted by-products”, “surplus” and “activity” alongside the definition of waste</p>	<p>Supported in principle Group 1</p>	<p>The Department will investigate ways to provide stakeholders with greater clarity around the terms used in the meaning of waste in the WRR Act. Clarification of terms such as waste, resource, recycling, recycled product and re-used will require consideration.</p>
3	<p>Review use of simplified codes or “declaration” or other for low-risk materials that allow their deployment as “not a waste” including consideration of use of general environmental duty as the environmental control</p> <p>It is noted that the UK Environment Agency charge an initial assessment fee to consider whether something is a waste or not, before considering the next steps.</p>	<p>Supported in principle Group 1</p>	<p>The Department has already committed to providing a process for declaring materials to be considered as “not a waste”. Through recent amendments to the WRR Act a formal process has now been established including the matters to be considered to prescribe a material to no longer be waste. This will provide a clearer pathway to support and incentivise remanufacturing or repurposing certain materials and provide security for investment in circular economy industries.</p> <p>In alignment with Recommendation 1 the Department will consider providing greater clarity and information around the use of the general environmental duty as a regulatory approach for waste or the use of simplified codes where appropriate.</p>

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Theme: Interaction between EOW and other regulations			
4	Clearly define at what point these terms and the definition of waste is applied within the waste generation and material management product cycle (including cyclical or entry/re-entry points).	Supported in principle Group 1	The Department is committed to ensuring all products and materials are kept in the economy for as long as they have value or remain useful. The transition from a take, make, dispose linear waste model to a circular economy presents challenges for the current waste regulatory framework including the EOW. The Department will seek to better define and clarify definitions of waste and recycling and how these apply in a circular economy. This may be actioned through improved guidance or updates to legislation.
5	Provide a clear position in published guidance to identify the pathways available to reuse resources whether via the ERA framework, the EOW framework, a direct mechanism, or other approaches, including clarity over application process, information required, cost and timeframes for consideration	Supported in principle Group 1	The Department will investigate opportunities for increased guidance and clarity for stakeholders about the interaction of the waste regulatory frameworks and waste to resource pathways including EOW, environmentally relevant activities, and other mechanisms including the general environmental duty.
Theme: Improving the EOW process			
6	The Queensland Government should develop and publish clear criteria for: <ul style="list-style-type: none"> – Where a code could be developed. – Specific detailed requirements for the submission of supporting information for code development and evaluation criteria. 	Supported in principle Group 1	The Department currently releases a public notice inviting submissions about potential EOW codes on a yearly basis. The Department will investigate opportunities for improvements to the information available for the EOW framework including any criteria used in deciding how codes are selected for development, and more clarity on the supporting information required for the submission process.
7	Investigate formal requirement for resource users to register	Supported in principle Group 4	The WRR Act currently requires that a person formally register to become a registered resource producer for an EOW code. There are currently no requirements for resource users to register. As per the recommendation the Department will investigate a formal requirement for resource users to register. Any review must consider the intent of the EOW framework to reduce regulation for the reuse of waste to encourage reuse and reduce the volumes of waste going to landfill.
8	Investigate the risks and benefits of implementing a fee for resource producers and resource users beyond the existing fees for EOW approvals under the EOW framework. Fee will contribute towards administrative costs and deter people from registering without proper intent to use code.	Supported in principle Group 7	The WRR Act currently sets a fee for an application, amendment, or transfer for an EOW approval. There are currently no fees prescribed for registered resource producers or resource users. As per the recommendation the Department will investigate the risks and benefits of implementing fees for operators within the EOW framework. As per Recommendation 7 any review must consider the intent of the EOW framework to reduce regulation for the reuse of waste to encourage reuse and reduce the volumes of waste

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			going to landfill.
9	Provide greater clarity on codes under development, review or under assessment online so there is transparency over what may change for industry and local government	Supported in principle Group 1	The Department is supportive of reviewing and updating information currently available on the website for clearer communication and to improve information available to stakeholders on code development.
10	Consider publishing registered resource producers on the DES Website to provide certainty for potential resource users as to registration	Supported in principle Group 2	The Department will consider this recommendation and consult with stakeholders regarding the publishing of registered resource producers information in consideration of the confidential information requirements of the WRR Act s173F.
11	Consider implementing an option for 'specific approvals' under the EOW framework which are beyond the End of Waste Approval process but protect intellectual property and commercially sensitive information	Supported in principle	The Department supports the implementation of a specific approval type code in principle subject to detailed consideration and resourcing implications.
12	Investigate and close loopholes for the legislative enforcement of EOW codes and improve internal compliance reporting systems and processes.	Supported in principle Group 4	The Department will review the WRR Act and the current intent for the legislative enforcement of the EOW codes. Changes may be implemented through improved guidance or modification of legislation. The Department will also investigate and review the internal compliance reporting systems and processes that support the EOW framework. Any improvements to internal management systems that support that EOW framework would be supported.
Theme: Improving internal processes			
13	The Department should develop a process for internal review of nominations for end of waste codes that includes both the regulatory function and the strategy/policy function. This should be sponsored by Senior Officers to ensure alignment with State Strategy and Regulatory Strategy and commitment of resource needs.	Supported in principle Group 7	The Department is committed to improving resource recovery through the EOW framework. The Department recognises its role in identifying resources that align with strategic priorities and targets in the Queensland Government Waste Management and Resource Recovery Strategy and in waste specific strategies and action plans. This recommendation may be actioned through improved business processes.
14	Undertake periodic review and consolidation of existing codes to harmonise conditions and avoid duplication	Supported in principle Group 6	The Department already incorporates conditions from other EOW codes where relevant and harmonises conditions where appropriate.
15	Share and ensure awareness of operational register to allow for clear tracking of EOW codes and approvals	Supported in principle Group 2	The Department will review the internal register of codes and approvals and EOW information with the intent to ensure that there is easy access for wider awareness and understanding within the Department.

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Theme: Stakeholder consultation, engagement, training, and guidance			
16	Implement internal training for Department officers to ensure clarity and consistency in the application of the framework	Supported in principle Group 2	This may be actioned through improved business processes and training.
17	Department to consider technical guidance or support function for codes as a formal service offering to promote use and encourage greater resource recovery	Supported in principle Group 1	The Department considers that this may be actioned through training and awareness for potential users of EOW codes and may include targeted stakeholder engagement or engagement through peak industry representatives following the development of an EOW code.
18	The Queensland Government should offer industry or code sessions to ensure correct and consistent application of the codes to give confidence in potential users of the codes and encourage resource recovery	Supported in principle Group 1	Aligns with Recommendation 17.
19	Introduce a verification process including consultation with relevant stakeholders to ensure that approved uses are fit for purpose and aligned with product specification or standards	Not supported	EOW conditions cover off on environmental specifications only. The Department does not have a role in ensuring quality of products beyond environmental impacts. In the absence of Australian Standards or published technical specifications for the product, it is required that the final product meets any other appropriate industry standards (e.g., Registered Professional Engineer of Queensland certified technical specifications).
20	Consult with stakeholders, particularly resource users, to realign restrictions on the end use of resources with the potential harm associated with the beneficial reuse of the material.	Not supported	The Department is not aware of specific examples of where EOW restrictions are beyond what is required to manage environmental harm.
21	Consult with stakeholders, including regional and remote councils, to review and simplify procedures associated with EOW approvals.	Supported in principle Group 1	The Department considers that this recommendation relates to EOW codes rather than EOW approvals. It is recognised that some regional and remote local governments may have difficulty in resourcing for the implementation of the EOW framework. The Department will investigate if technical guidance, support function, and industry or code sessions as per Recommendations 17 and 18 may assist local governments.
22	When developing codes, broader stakeholder engagement should be undertaken to maximise input and to avoid the development of inappropriate codes or advice	Supported in principle Group 7	The Department currently undertakes broad consultation during development of EOW codes. The Department will investigate how to better engage with stakeholders to ensure stakeholder engagement provides maximum value to the code development process.
23	Provide stakeholders and industry with commentary or briefing on changes in code between draft and Final	Supported in principle Group 7	The Department currently provides ongoing feedback to submitters in the development of EOW codes. The Department considers this recommendation aligns with Recommendations 9 and 22 and actions will be considered in alignment with these recommendations.

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Theme: Timeframes			
24	Consider the introduction of a statutory timeframe for the development of codes, or publish targeted guideline timeframes	Supported in principle Group 2	The Department considers that the implementation of statutory timeframes is not practical as timeframes must be flexible to allow for stakeholder engagement including technical input from key stakeholders, and technical advisory panel input where required. The Department does consider that indicative timeframes could be included in published guidance and the Department will investigate the inclusion in published information.
25	Consider the introduction of a reasonable timeframe within which a resource user must use a resource (and associated offence) once received to a specific site.	Supported in principle Group 2	The Department will investigate the risks and benefits associated with this recommendation and consider opportunities to strengthen guidance and or regulatory requirements to ensure resources are used appropriately.
Theme: Strategic approach to application of EOW			
26	Develop strategic approach to identifying key resources for which End of Waste may be applied to seek increased resource recovery and reduced barriers to market entry for products, through: <ul style="list-style-type: none"> – Undertake strategic forward-looking consultation with stakeholders including peak bodies to identify barriers to resource recovery that could be removed using End of Waste – Undertake inter and intra-agency consultation around the use of the EOW framework and opportunities for use – Identify potential codes that support Queensland's transition to a circular economy 	Supported in principle Group 7	The Department is committed to improving resource recovery through the EOW framework. The Department recognises the need for a more strategic approach to identify waste suitable for EOW codes that will improve resource recovery and support Queensland's transition to a circular economy. The Department will consider options for inclusion of a more strategic approach in business processes for the EOW framework.
27	Strengthen link between industry proponents supported by the Queensland Government (e.g., via the Department of State Development, Manufacturing, Infrastructure, Local Government and Planning) and potential to support market establishment through the EOW process	Supported in principle Group 7	The Department considers that this recommendation aligns with Recommendation 26 and strengthening links between industry proponents and Queensland Government will be considered in options for more strategic approach in business processes for the EOW framework.
28	Investigate options to better connect resource producers with potential resource users through consultation with stakeholders currently operating under an EOW code.	Supported in principle Group 2	The Department recognises the value for improved resource recovery through better connections between registered resource producers and resource users within the EOW framework. In similar considerations to Recommendation 10, the Department will consider options to improve connections between operators within the EOW Framework. However, the Department must consider that some stakeholders have previously expressed concerns around privacy considerations regarding the sharing of this type of information. The

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			confidentiality requirements of the WRR Act s173F must also be considered.
29	The Department should continue to liaise and seek to harmonise identified resources and resource uses with other Australian jurisdictions through national steering groups or collaboration	Supported in principle	The Department is supportive of national collaboration and engagement and will seek to ensure closer alignment with other jurisdictions including at a national level.
Theme: Technical Knowledge			
30	The Department should consider technical requirements as part of the consideration of need for a code to be developed, including consideration of funding for specialist expertise or industry engagement where expertise cannot be found within the Department	Supported in principle Group 5	The WRR Act currently allows the chief executive to establish a technical advisory panel to prepare a draft EOW code. This recommendation aligns with Recommendations 31 and 32 relating to improvements to technical input through the code development process and the role of the technical advisory panel. The Department will consider options for improvements in technical input to the development of EOW codes including external expertise, broader stakeholder engagement and the technical advisory panel process.
31	The Department to identify how it may develop or access greater technical knowledge to support code development, including broader engagement with stakeholders and industry	Supported in principle Group 5	Linked to Recommendation 30
32	The Department to review the role of technical advisory panels and criteria for use	Supported in principle Group 5	Linked to Recommendation 30
Theme: Code development, review and update, and specific recommendations			
33	For new Codes, the Department should undertake a holistic review of other potential resource use opportunities (or resource producers) and consult broadly before defining the scope of a code.	Supported in principle Group 7	The Department considers this recommendation aligns with Recommendation 22 and the Department will investigate how to better engage with stakeholders to ensure stakeholder engagement provides maximum value to the code development process.
34	Review and consult on inequalities in application of EOW compared to required license conditions and seek to find consistency in approach.	Supported in principle Group 1	The Department considers that this recommendation aligns with Recommendations 4 and 5 and this will be considered through investigating opportunities for increased guidance and clarity for stakeholders about the interaction of the waste regulatory frameworks and waste to resource pathways including EOW and environmentally relevant activities.
35	The Department should consult widely on prospective or required changes to EOW codes affected by the release and finalisation of the PFAS NEMP 3.0 including an impact assessment on	Supported in principle Group 3	The Department is aware of the pending finalisation of the PFAS NEMP 3.0. In The Department considers that broad stakeholder engagement is appropriate for any amendments to EOW codes and this is supported through the WRR Act where there is a defined procedure for amending EOW codes including the requirement to give notice to all

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	resource producers and users		registered resource producers and to publish notice of any proposed amendments. This procedure includes a submission period and submissions must be considered in any proposed action.
36	<p>The Department should review the Biosolids code with a view to considering:</p> <ul style="list-style-type: none"> - Compliance requirements for the Biosolids code and remove unnecessary monitoring constraints. - Opportunities to reduce ambiguity and ensure consistency in the code. - The relationship between the NSW Biosolids Guidelines and the EOW Code including the release of updated guidelines and relevance to Queensland operations. 	<p>Supported in principle Group 3</p>	<p>The Department acknowledges that a review of the biosolids code is necessary. However, as this is large body of work, further consideration of the appropriate timing will be required.</p>
37	<p>Revise the EOW code for Oyster Shells to allow for more inclusive input of waste material, to maximise potential community participation in circular economy objectives</p>	<p>Supported in principle Group 6</p>	<p>The Department welcomes the opportunity to discuss the oyster shell EOW code and can work to amend it following receipt of the proposal from the applicant.</p>

Next Steps

The Department is committed to transitioning to a circular economy where products and materials are kept in the economy for as long as they have value and remain useful. An effective EOW framework can support this by increasing resource recovery, diverting material from landfill, and growing the resource recovery and recycling sector.

The Department has considered the recommendations from the independent review and this response is the first step to implementing actions that will improve the EOW framework and increase opportunities for waste generators, waste processors, and businesses receiving recovered materials. The Department is committed to engaging with stakeholders to deliver improvements to the EOW framework through actions to implement the review recommendations.