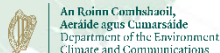


How can Ireland's End-of-Waste and By-Product Regulations best support a Circular Economy?

CIRCULÉIRE Thematic Working Group
Policy and Industry Briefing (2022)

Prepared by Re-Mine Limited



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Introduction

End-of-waste and by-product notifications play a key role in a circular economy. They do this by helping to establish a market for a wide range of secondary raw materials, improving resource management, encouraging symbiotic industrial practices, and preventing resources from being sent for disposal. By maintaining resource value within the economy, the successful application of end-of-waste and by-product status reduces the environmental impacts arising from waste disposal.

A circular economy will unlock significant socio-economic, environmental, and business benefits. A circular economy is restorative and regenerative by design, where the life cycle of a product has been modified from a linear take-make-dispose model to one where the product can serve a further economic purpose outside the requirements for further regulatory controls (in essence, waste is ultimately eliminated).

End of Waste and by-product status for secondary product and raw materials present an opportunity to enhance circularity principles through enabling reduced primary resource demand / use and extending the economic life of materials.

Run over the summer of 2022, CIRCULÉIRE's End of Waste, By-products and Waste Licensing

Pathfinders Thematic Working Group (TWG) was developed to increase Member's knowledge and understanding of the opportunities afforded by End of Waste and By-product status in delivering a circular economy in Ireland. Through a series of workshops and interactive meetings, a key aim of this working group was to devise clear recommendations aimed at advancing the economy's transition to a circular model. The intention is to assist in refining how circular thinking can be accommodated in a world where regulation remains predominantly linear. In addition to this report a number of outputs will be delivered throughout the project including a:

- Worksheet that assists in developing End of Waste and by-product decision making processes and in defining the necessary data and information needed to deliver a successful project
- Final report outlining the key findings of the entire process and describing the work that was undertaken throughout the process
- Single page Fact Sheet presenting the simplified outcomes from the project and highlighted tips for delivering successful projects.

Key Challenges identified

The challenges faced by the TWG Members ranged widely and highlighted the individual and waste and/or material-stream specific nature of End of Waste and By-product projects, citing regulatory, waste system and complexity as key barriers. The core challenges were identified through a series of workshops and targeted interviews with TWG Members to allow them to speak candidly about the challenges encountered. Some of the key TWG specific challenges included:

- **Regulatory Complexity:** The need for End of Waste and By-product related projects to fall within the same regulatory regime as waste management licensing for disposal was a key item that was highlighted by many of the TWG participants. Industry Members queried the current requirement to go through a full licensing process for low risk, small waste volume projects, and called for alternative protocols that maintain regulators' control but account for the lower risk nature of certain projects. Additional concerns were highlighted by companies about the requirement to have a full waste transport license for collecting leftover product or offcuts from customers. Waste transport licenses are

comparatively very expensive in Ireland, compared with the UK. This drives up cost and contributes to disposal of useable or recoverable materials and can make take-back schemes and closed loop recycling systems untenable for small, independent operators.

- **Lack of Consideration for Trials/Pilots:** The TWG Members were aware of the need to prove the processes, procedures and final quality of their products. At present there is no clear process in Ireland that allows for such pilots/trials to occur without either going through the full licensing process (which is commercially premature) or partnering with existing license holders who may not have strong interests in the outcome, or which drives up costs. This negates the necessary investment in circularity-led projects that are designed to utilise these materials.
- **Design of Existing Market Mechanisms:** Ireland has introduced the Extended Producer Responsibility (EPR) model for dealing with several key waste streams, based on the 'producer pays' principle where producers have responsibility to finance the collection and waste management of the products that they put onto the market at their end of life. Whilst this has been seen as a largely successful and positive step,

the structure can work against some, particularly smaller, Irish-based End of Waste and By-product companies as lowest cost (rather than local and more circular) options are better compensated for, with the most significant financial incentives found at the collection rather than recovery point. Our engagement highlighted that in certain EPR schemes, such as plastic packaging, smaller operators who do not meet the current threshold in terms of minimum volumes of packaging processed are excluded from membership from some schemes. This model may favour incumbent waste collectors over smaller recovery operators, and may also impact upon local feedstock availability.

- **Limited in-house knowledge and understanding:** Many of the companies participating in the TWG, acknowledged that they have limited knowledge and experience of navigating the End of Waste and By-products regulatory regime, and that the costs of accessing professional expertise externally can be high. There was a call for greater training and guidance on the processes relating to End of Waste and By-products for both practitioners and the regulators (and supporting organisations, including local and national

government representatives and supply chain customers) to ensure that all parties were working from the same requirements and assumptions during the determination of a successful position. Training on both the basis of End of Waste and By-product status (including the definition of waste) alongside more targeted training on the detailed requirements of a successful submission document were highlighted as being sought after by participating companies during the project.

- **Fear of reproach and timelines pertaining to regulatory engagement:** While many companies noted that having access to sound technical advice from regulators would be helpful, some expressed concerns that engaging with the regulators too early in the process could negatively impact upon the overall success of their applications. Concerns were raised due to the high financial costs of engagement with respect to licensing and End of Waste/ By-product certification etc., and the associated economic costs that businesses seeking to be compliant with these regulations must shoulder. Linear businesses - who can access cheaper virgin materials and avoid the high costs of seeking to reach End-of-Waste /

By-product certification – can thus outcompete circular businesses and products in terms of their ability to offer lower prices. There was also a degree of concern over the timescales involved in receiving acknowledgement of submission receipt from the EPA, and also in the time it can take to reach a successful End of Waste or By-product conclusion with the EPA. Meanwhile, some companies acknowledged experiencing inconsistencies in the level of support and engagement received from Local Authorities around waste licensing applications for circular ventures, depending on which part of the country they are operating in – and the openness of a given Local Authority to understanding and supporting circular economy objectives. These issues impact upon the commercial reality for developing circular outcomes within the existing regulatory frameworks.

- **Customer perceptions of secondary/recovered materials or products:** Some industry members acknowledged the challenges associated with marketing secondary products, which could impact upon the perceived market value of the final products (especially prevalent during the submission process where demonstration of the market

sometimes necessitates commercial discussions with customers very early on in the process to evidence real commercial value). Companies acknowledged that former waste materials can be considered by prospective customers as lower quality than virgin products (whether by reality or for the purposes of commercial negotiations). This may dissuade some companies from advancing End-of-Waste and By-Product product opportunities. Consideration must be given to how companies can be better supported to effectively market and build consumer trust in these products (potentially including the public sector taking the lead as a market maker / launch customer where relevant), and to ensure consumers are made aware of the wider environmental benefits that they confer in terms of waste reduction, emissions reductions, biodiversity, etc., on the Irish economy.

Recommendations

Based on the Thematic Working Group Ideation Workshops, a number of potential proposals were identified by CIRCULÉIRE's multi-sectoral panel members which would play a critical role in advancing the national End-of-Waste and By-product regime for a circular economy in Ireland. These include:

Proposals for Irish Businesses

1. **Delivering Quality Products:** Set up full quality controlled procedures for EOW / BP process utilising factory control systems in the processing of the End of Waste and By-product products to demonstrate that the manufacturing process is analogous with virgin processes and finished products. Quality management systems such as ISO 14001 are commonly used to demonstrate processing is being done in adherence with circularity principles and best practices. Define a robust testing regime to demonstrate both physical performance and environmental/health compliance to allay regulators' concerns about how potential (or perceived) safety or environmental risks will be

handled. Clarify whether the new product will be compared against an existing (virgin or secondary) product already on the market by way of performance and environmental/ health impact, or develop a bespoke risk assessment that demonstrates that the product is compatible with market and regulatory requirements.

2. **Product Compliance:** Irish businesses can increase consumer and regulators' confidence and understanding of their final products by ensuring they are delivered in line with the necessary international, national or customer-specific product specifications and standards (such as [Environmental Product Declarations](#) and [National Standards Authority of Ireland's product standards](#)), highlighting the confirmed environmental and other benefits of circular products in comparison with virgin.
3. **Creating Brand Trust:** Consider how Life Cycle Assessments and circular end of life strategies (such as design for reuse or recyclability), can help you gain support/trust from customers and specifiers for the delivered products through presenting the additional benefits of the products in terms of circular economy impact and reduced waste/GHG emissions, including at your own product's end of use phase. Performance in line with

alternative virgin products must be taken as a given.

4. **Develop Circular Delivery Models and Strategies:**

Some circular business models will, in certain circumstances, negate the need for End of Waste/By-product altogether and these routes must be explored to negate any 'grey areas' in interpretation. Key examples include leasing models/product-service models and circular procurement. For example, a scenario exists where supply chain agreements can be re-negotiated to allow product offcuts to be returned to producers by customers (before they are deemed waste), which could negate the classification of the material as waste. Alternatively, these offcuts could be classified as 'by-product' under clear circumstances again enabling them to negate their classification as waste at this point. Such models would support easier resource re-utilisation and prevent the product/material from becoming waste in the first place, by explicitly supporting the producers' intention to reuse components or products and allowing them to maintain control over the product through to end of use – extending the parameters over when the material would actually be classified as waste. However, the

existence of such circular design routes will need to be codified to ensure wider industry uptake.

5. **Regulatory Engagement:** There is value in proactively engaging with the EPA and other relevant bodies (Local Authorities, etc.) to clarify the circular outcomes expected through the development of an End of Waste or By-product project. Industry should work together in enabling the development of focused fora (e.g., the Bio Composters groups and even CIRCULÉIRE) to identify common sectoral challenges and ensure that regulators and key decision makers understand the circularity objectives and regulatory and/or other challenges facing particular industries are addressed.

6. **Change the Narrative:** develop new language around circular economy enabling projects which plays on the positive aspects (reduced GHG emissions; resource recovery, demonstrated through Life Cycle Assessments or similar processes) and negates the focus on the raw material inputs as former wastes. This will assist in mainstreaming the use of such products and enable greater customer recognition and trust in such products.

Proposals for Government and key Regulators

1. **Incentivise Circular Outcomes:**

More must be done to ensure waste regulations incentivise safe and responsible circular innovation outcomes, while ensuring the linear risks associated with virgin products/materials are factored into decisions to grant End-of-Waste and By-product

notifications (and as reinforced in the [Climate Action Plan 2021](#)).

Meanwhile, efforts should be made to incentivise projects that are focused on delivering circular outcomes higher up the waste hierarchy, and which aim to circularise the local and national economy, promoting reuse and recycling locally over disposal or export. This may require a review of the focus of some existing EPR schemes with a need to determine how these can be used to maximise the management of locally sourced feedstocks for End of Waste and By-product related projects and enable appropriate cascade of funding to projects that deliver demonstrable circular outcomes for the Irish economy using End of Waste and By-product processes. This could be done through establishing a link with the waste hierarchy as a mechanism for delivering circular

outcomes in Ireland. In addition, consideration needs to be given to how simplified and proportionate regulatory processes can be introduced for low risk circular-based projects and material streams, to reduce overall implementation costs and enable greater innovation in developing new products and secondary raw materials from former waste streams,

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3. **Business/Regulator Working Groups:**

Business and regulators to work together on nationally significant waste streams (whether by volume, positive impact or potential material value) to define national resource protocols that level the industrial playing field and allow operators to work towards nationally recognised End of Waste or By-product standards where products are delivered from the specific identified waste streams. This has been demonstrated as a route elsewhere and will greatly reduce time demand upon regulatory resources.

4. **Develop Resource Protocols:**

Following the precedent established in the UK and Sweden (expected in the near future), develop national standards for certain low-risk high-volume waste streams that have demonstrable

ability to meet End of Waste requirements when dealt with under clear processing requirements to nationally recognised specifications and standards (e.g., plastics, construction materials, composts, end of life tyres, etc.). This will provide for a level playing field throughout the relevant industries and also reduce the day-to-day burden on the EPA in dealing with End of Waste and By-product submissions – if the companies can demonstrate compliance with the given standard, then they can deliver product without further EPA involvement. Compliance can be demonstrated through audit of the commercial process either by the regulator (or appointed representative) on an agreed basis (e.g., annually) or through existing quality control systems audits (e.g., EN ISO 9001, EN ISO 14001). These protocols should be linked with national accreditation bodies who manage the compliance of the industry as a whole, thereby maintaining high delivery standards with negligible potential for significant environmental or health impact.

5. Accredited and undertake Impact Reporting on Real Environmental Improvements: When making

assessments of End of Waste and By-product applications take greater account of the broader LCA benefits that are deliverable through an End of Waste product when compared against a virgin product. Whilst a comparison on potential contamination levels is important, when compared against a virgin comparator, the wider environmental benefits including reduced waste disposal, lower GHG emissions and reduced primary resource use impacts should also be taken into account and given greater weighting in the decision process. There would also be benefit in providing evidence of accountability in driving Ireland towards a Circular Economy and the EPA could play their part through the provision of Impact Reports on Circular Economy and End of Waste/By-product outcomes in terms of volumes of waste recovered/GHGs saved, and the number of circular economy projects with economic value to Ireland PLC unlocked per annum.

6. Positive Procurement: Building on the Government's commitment to implement green public procurement (GPP, subject to an updated policy to be published later in 2022¹) in all tenders using public funds by 2023, the public

¹ <https://www.gov.ie/en/publication/69c0b-green-public-procurement/>

sector is in an ideal position to specify circular economy products in their projects as a market enabler to assist the growth of the industry and ensure that the benefits of End of Waste and By-product-led products are accounted for in benefiting Ireland PLC. This opens up product markets and also demonstrates commitment to the stated aims of driving a circular economy and enabling consideration of GHG savings and reduced primary resource use as being equivalent to cost in public procurement contracts. These circular value factors must be taken into account alongside cost when determining the overall benefits of a public tender, with End of Waste and By-product led products demonstrating clear positive benefits in this regard and presenting the opportunity for the public sector acting as a positive “market maker” or “launch customer”.

7. **Regulatory Modifications:**

Consideration should be given to how End of Waste and by-product projects can be regulated to maximise the circular economy opportunity. Options could include developing a:

- Clarification of the roles played by both the EPA and County Councils in driving End of Waste, By-product and Waste Licensing decisions; offering mandatory training to Local Authorities to ensure they understand the strategic role they play in realising a circular economy;
- Regulatory “Sandbox” such as that used by the UK Financial Conduct Authority (FCA)² to enable trials and pilot process experiments to be undertaken and feasibility to be established prior to requiring full waste licensing;
- Simplified regulatory regime that takes account of low-risk waste streams being used to deliver products (exemptions);
- Regulatory Position Statement (RPS) type route for low-risk waste streams to simplify the process, or undertake trial work, where a written agreement is established between the producer and the EPA for the use and processing of the original waste into a delivered product via an identified process, but a full licence would not be required. A good

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<https://www.fca.org.uk/firms/innovation/regulatory-sandbox>

example is provided by the English Environment Agency's regulation of innovative waste processing trials which could work in Ireland in line with the findings of this project³

8. **Reassess the Waste**

Transportation Licensing System:

The current need for a waste transport licence for all waste collections irrespective of size or circularity of process is a significant burden on developing End of Waste and By-product related projects, especially where the opportunity exists for take back of unused product or offcuts from customers. Under the current regime producers can collect small amounts of their former product on a reverse logistics basis – however, this must then go to a licensed facility and not back to their site if not licensed to accept the materials when defined as waste. Alternative fee structures should be considered for low-risk projects that can demonstrate circularity. In Northern Ireland the fees for a national waste carrier's licence are circa £155 for the first year; £77 per annum thereafter; in Ireland it would cost €5000 under a waste collection permit that allows full national collection (valid for 5 years - €1000 per annum,

irrespective of company size). This is considered a significant barrier to circularity for some commercial operators.

9. **Supporting Pilots and Research:**

Efforts should be made to reduce the regulatory burden on pilot and research projects as they define the processing and systems needed to deliver an End of Waste or By-product outcome using Irish wastes and materials. In addition to the proposal for regulatory sandboxes above to support safe circular experimentation, this could be done through defining a specific R&D based control regime (such as that highlighted above in the RPS for Innovative Trials in England) that is time bound, utilises low waste tonnage and with a clearly defined proposal to enable the necessary work to be done outside the existing waste licensing regime. Additional financial support should also be considered for such projects given the stated aim to transition to a Circular Economy in Ireland. This could be enabled through a "Greenstart Plus" type Innovation voucher to pay for feasibility work and to acquire End-of-Waste / By-Product professional support advisers where necessary.

3

<https://assets.publishing.service.gov.uk/government>

ent/uploads/system/uploads/attachment_data/file/488868/LIT_9926.pdf

10. **Improve Engagement and**

Communication: The current EPA resource constraints mean that industry panel members noted considerable delays receiving acknowledgement of End of Waste submissions and also in getting to the end point (by-product applications are dealt with in a different way due to the volume of submissions and new online portal). The overall system could be improved to be more user-centred by developing systems that provide greater clarity to industry on what the expectations are related to the regulatory requirements for End of Waste or By-product projects and also to provide updates on where a particular submission is in the process. This could include the use of a 'progress bar' linked to the EPA application number to communicate status. Further provision of a help-desk contact who can provide progress updates would also be beneficial to provide reassurances to industry on how ongoing applications are progressing.

11. **Regulatory Training and**

Development: Develop tailored circular economy training materials/resources for regulatory and key personnel related to End of Waste and By-products so that all potentially relevant staff

understand the process, and role in achieving a circular economy and are able to guide/work with industry in implementing circular economy projects. This could include web enabled training tools alongside bespoke training focussed on developing knowledge and understanding around this area of the law, and which increases awareness of the role End of Waste and By-products can play in waste prevention and supporting strategic circular outcomes.

12. **Industry Training and Helpdesk**

Function: Additional training should be developed to inform industry on the opportunities and requirements for delivering End of Waste and By-product outcomes, and could be linked with existing waste legislation training initiatives. This should be supported by a number of searchable FAQs on the EPA website that cover commonly asked queries together with a Help desk function (which could be designed in line with that currently provided for the Irish Biocidal Product Compliance system). This should act as first port of call to assist queries and guide customers to ensure there is appropriate engagement throughout the relevant End of Waste or By-product process.

13. **Improve Guidance Resources and**

Tools: Develop further tools that enable a simplification of the End of Waste submission process as this has proven to be challenging for some TWG industry members. This could include web enabled tools to support End of Waste and By-product decision processes and the development of the submission documentation to the standards necessary for a successful project with some pre-population for standard wording and information. This could also include a video tutorial/application walk through to explain the application process in detail and provide assistance on where to look for relevant support documentation with respect to environmental assessments, product specifications and relevant product comparators.

14. **Supply Chain Traceability:** Digital tracking systems could be developed and deployed nationwide on many single source materials that could be subject to circular recovery systems enabling greater traceability and transparency over resource use and supply chain management. Policy making stakeholders, local authorities, regulatory bodies and company representatives should take a lead on this to provide data availability and visibility to enable

the creation of secondary raw material markets in Ireland. This would provide greater clarity on the materials themselves on a mass balance basis and allow an understanding of what is being recovered versus being lost to the Irish economy. Publicly available data and information on materials will also provide an avenue to increase market knowledge on the recoverable materials in circulation within Ireland and, in turn, incentivise their recovery as further material value is created. Digital systems are already on the market today that could enable this.

Appendix 1 – Other EoW Regimes

Whilst the legal basis for End of Waste and By-product determination for all EU Member States (and currently the UK) is enshrined within the root law of the Waste Framework Directive⁴, under Articles 5 and 6, the implementation of these requirements has differed (note: even in the UK alone there are subtle (and

* However, the regulator may take retrospective action if unhappy with the outcome – less security?
 ** Partial self-certify – operator responsible but decision will be examined by EPA

Some countries such as Germany and to a lesser extent Sweden have taken an approach which relies more heavily on the producer making their own decision on whether a material is waste or not (via a self-certification

EoW/BP	UK	Germany	Sweden	France	Ireland
WFD Implementation	Yes	Yes	Yes	Yes	Yes
National EoWs	Yes	No	Developing	Yes	No
Quality Protocols	Yes	No	Developing	No	No
Regulator Permission	Yes	No*	Yes	Yes	Yes
Case by Case	Yes	Self-certify*	Yes**	Yes	Yes
Other Implementation outside Main Regulatory Controls	Yes – exemptions that allow waste use outside EoW	No	Yes – waste use allowed in certain occasions – e.g. digestate	No	No

some not so subtle) differences in how the regulations have been implemented by the four devolved administrations).

Table 1 below illustrates some of the different implementation routes that have been established in the EU and UK.

Table 1: End of Waste and By-Product Implementation in Different Countries

process). However, others including Ireland and the UK have taken a more regulator led approach requiring sign off by the regulators before a formal decision on product status (whether as End of Waste or By-product) has been established.

There are pros and cons for both routes. Those countries adopting a more self-certified route may still require regulators to review or audit the process and procedures. This can prove to be a higher risk strategy as without formal sign off at the beginning future commercial impacts

⁴ DIRECTIVE 2008/98/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 November 2008 - <https://eur-lex.europa.eu/legal->

[content/EN/TXT/PDF/?uri=CELEX:32008L0098&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008L0098&from=EN)

could occur where the regulator decides at a later date that they are unhappy with the self-certified outcome and require changes to be made or close the operation as non-compliant.

On the other hand, the need for formal sign off, as set out within Ireland and the UK, means that certainty can be achieved on the decision process but there can be long delays and high costs in attaining End of Waste or By-product status. This can have a major impact upon industry's appetite for developing such projects making the benefits that they deliver difficult to achieve.

Developing National Criteria for Key Waste Streams

One tool in the box to assist in reducing the overall burden of individual End of Waste submissions on the EPA resource constraints is for the development of national criteria that can be used by all, on a level playing field basis, to deliver products from specifically defined waste streams. This opportunity could work well in an Irish context especially given the potential afforded through all-Ireland waste recovery opportunities.

National criteria were first established in the UK with the development of the Quality Protocols (QP) developed and adopted for a range of different nationally significant waste streams.

UK Quality Protocols

Whilst the QP programme stopped in terms of new project developments in 2016 (primarily due to funding constraints and competing regulatory resourcing priorities) these have delivered clear benefits for these material streams in the UK as opposed to other regions. A review process is currently underway to confirm that

the QPs remain fit for purpose or where modifications may be required.

The QPs currently in existence include the following:

- Aggregates from inert waste
- Non-packaging Plastics
- Gypsum from waste plasterboard
- Biodiesel
- Aggregate from waste steel slag
- Flat glass
- Tyre derived rubber materials
- Anaerobic Digestate
- Compost
- Processed Fuel Oil
- Biomethane from waste
- Poultry litter ash (as fertilizer)
- PFA and FBA (from coal combustion).

The Positives of the UK QPs

- Development of level playing fields for the processing and utilisation of specific national waste streams
- Reduced regulatory burden – no requirement for regulators to complete individual assessments of End of Waste submissions
- Clear requirements that apply to all relevant producers with specifications for product outputs included – unambiguous and relatively simple to follow and implement.

The Negatives of the UK QPs

- The documentation (for most QPs) is very prescriptive – in some cases companies cannot meet the requirements outright without modifying their processes significantly
- QPs are based on limiting the input feedstocks (via EWC codes) that are allowed into the process rather than on the quality of the output product – this reduces opportunity
- Attaining a national standard that takes all stakeholder's



requirements into account is a complex process requiring significant input.

Overall, the QPs have proven successful in the UK and enabled significant volumes of material to be recovered back to product status and used within the UK economy as opposed to primary materials, thereby significantly reducing the environmental impacts of waste disposal and primary resource extraction. They have set the standard for national criteria development and provided a template for future development in other jurisdictions enabling improvements to be made to new systems that may be developed.

Swedish National End of Waste Criteria

Currently End of Waste and By-product status is dealt with in Sweden on a case by case basis with an element of self-certification allowed for the producers. However, Sweden is now working towards national criteria for certain waste streams as they believe that national criteria will deliver greater legal certainty and predictability and deliver a level playing field for operators.

In 2021, the Swedish Environmental Protection Agency (EPA) was commissioned by the Swedish government to investigate the possibilities of introducing national end-of-waste criteria for several waste streams in Sweden. The EPA presented the results of its investigation at the end of 2021 in a public report called "Waste as a resource"⁵ where it concluded that due to the complex nature for operators to undertake their own assessments based on, as they

perceived it, vague and onerous criteria, the introduction of national criteria would be beneficial.

The EPA recognised that the transition point between 'waste' and 'product' can be difficult to assess for some materials. This uncertainty element means that operators could come to different conclusions than regulators should they review the process. The criteria adopted by Sweden to determine whether national criteria should be adopted for a specific 'waste to product' project are set out below (subject to further research by the relevant industry bodies responsible for these waste streams as to what streams will benefit the most from national criteria):

- There are many recyclers of the waste stream in Sweden
- There is a large geographical spread of the recyclers
- The volume of the waste stream is large
- The waste stream contributes to high environmental impact
- There is no ongoing work at EU level regarding joint EU criteria regarding the waste stream
- The recycled material is not covered by the existing product legislation or chemical legislation
- The implementation of national criteria regarding the waste stream will increase the amount recycled.

The report recommendations have been presented to the Swedish government and are currently under consideration. At this time there is no timeline or official statement as to when or whether this will go ahead⁶.

Whilst the positive benefits have been acknowledged there is also

⁵ Swedish Environmental Protection Agency; Avfall som Resurs; 25 November 2021

⁶ <https://www.lindahl.se/en/latest-news/knowledge/2022/waste-as-a-resource-is-there-a-need-for-national-end-of-waste-criteria-in-sweden/>



acknowledgement of some fundamental negatives through implementation of a system such as that described. Key amongst these is the impact that implementation could have upon those already operating with their own bespoke End of Waste position, especially if the national criteria turned out to be stricter than the individual agreement.

Appendix 2 – TWG Panel Members

Industry Members

Nuria	Moreno	Johnson & Johnson Vision Care
Neil	Skeffington	Novelplast
Cynthia	Dempsey	Novelplast
Pauric	Kavanagh	KORE Insulation
Paulina	Moskalewicz	KORE Insulation
Kevin	Cronin	Freefoam Plastics Ltd
Patricia	Hegarty	Freefoam Plastics Ltd
Sharon	Barrington	IFF Plastics Ltd
John	Byrne	Digital Array Control Systems Ltd
Feargal	Murray	ERP Ireland
Rick	Earley	Cirtex Ltd
Nicky	Holmes	Brockley Group Ltd
Paddy	Kane	Brockley Group Ltd
Gary	Nugent	DECOTEK Automotive
Fergus	O'Sullivan	Aryzta
John	Carr	Offerre

External Members

Joanne	Rourke	Eastern-Midlands Regional Waste Management Plan Office
Sinead	Ni Mhainnin	Connacht Ulster Regional Waste Office
Andrew	Caldicott	DECC
Catriona	Power	MTU
Caitriona	Collins	EPA

About CIRCULÉIRE

CIRCULÉIRE, the National Platform for Circular Manufacturing seeks to accelerate Ireland's transition towards a net-zero carbon circular economy.

A key objective of the programme is to demystify, de-risk and deliver circular business model innovation for Irish industry.

An End of Waste, By-products and Waste Licensing Pathfinders Thematic Working Group was established with expert panel representing industry and research in Ireland. The objectives of the working group were to devise clear recommendations aimed at advancing the economy's transition to a circular model. The intention is to assist in refining how circular thinking can be accommodated in a world where regulation remains linear.

Want to learn more about CIRCULÉIRE? Look at www.Circuléire.ie or contact Circuléire@imr.ie



About RE-MINE Ltd

Re-Mine works in partnership with both waste producers and the waste management industry to deliver products from waste.

We are a project development and delivery company with a background in delivering value recovery from waste for industry and the waste management sector.

Our mission is to eliminate waste at its point of production and deliver real economic, social and environmental value through the creation of products from recovered resources.

Want to learn more about RE-MINE Ltd? See <https://www.re-mine.co.uk/> or contact karl.hylands@re-mine.co.uk