

Waste Action Plan Consultation Waste Policy & Resource Efficiency Department of Communications, Climate Action & Environment Newtown Road Wexford Y35 AP90

Submission to Public Consultation for 'Waste Action Plan for a Circular Economy'

As the National Centre for the Circular Economy, the Rediscovery Centre is encouraged by the publication of the Waste Action Plan for a Circular Economy and welcomes the opportunity to input through this consultation.

It is clear there is much work ahead in the circular transition, but this policy represents a promising first step to establishing a circular economy strategy in Ireland. Whilst the waste sector is an important stakeholder in developing a circular economy, it is important to recognise its limitations. In order to truly effect change, a circular economy plan must be a broader and more inclusive examining all sectors and Irish consumption generally, including all stages of a product's life cycle - rather than concentrating on end-of-life solutions. The Rediscovery Centre's understanding of the Waste Action Plan for a Circular Economy is that this document will act as a precursor to a more comprehensive Irish circular economy plan and looks forward to working with and supporting the Department in the development of the cross-sectoral strategy.

Enclosed please find a detailed submission from the Rediscovery Centre to the public consultation. We hope that our comments will support the Department's work in the development of Circular Economy policy.

Furthermore, we appreciate our position on the Advisory Group on a Waste Action Plan for a Circular Economy and this collaborative approach taken in seeking to develop a robust circular economy in Ireland.

Please do not hesitate to contact us further for clarification on any information provided in the submission.

Boiler House,

The Rediscovery Centre

Ballymun Road,

Ballymun,

Dublin 9,

D09 HK58

Tel: 00 353 1 8933801

Directors:

Ciaran Murray

Sheena McCambley

Lisa O'Brien

Anna Davies

Jessica Dailey

Robert Murphy

Enda O'Dowd

Registered in Ireland

No. 474950

Sept 2009

Charity Number:

18331



The Rediscovery Centre The National Centre for the Circular Economy

The Boiler House, Ballymun, Dublin 9, D09 HK58, Ireland

Web: www.rediscoveryceNtre.ie

Facebook | Twitter | LinkedIn | YouTube | Instagram

Submission to the Public Consultation of the 'Waste Action Plan for a Circular Economy'

Contents

A. The Rediscovery Centre – About us	3
B. The Circular Economy	4
Job creation	4
Competitiveness & resource independence	5
Climate mitigation	5
B1. EU Circular Economy Policy	6
B2. National Circular Economy action across the EU	6
C. The Waste Action Plan for a Circular Economy	8
C1.Timeline and Roadmap	8
C2. Institutional Arrangements	9
C3. Municipal (Household and Commercial) Waste	9
C4. Food Waste	11
C5. Plastic and Packaging Waste	12
C6. Single Use Plastic	13
C7. Circular Economy	13
C8. Citizen Engagement – Awareness & Education	15
C9. Construction & Demolition Waste	16
C10. Textiles – Waste and Recycling	16
C11. Waste Management Infrastructure	17
C12. By-products	17
C13. End of Waste	18
C14. Exemptions	18
C15. Extended Producer Responsibility (EPR)	18
C16. Waste Enforcement	19
C17. Waste Data & Waste Flows	19
C18. Research & Innovation	19
C19. Consumer Protection & Market Monitoring	20
C20. Green Public Procurement (GPP)	20
C21. Household Bulky Waste	21
C22. Bioeconomy	21

A. The Rediscovery Centre – About us

The Rediscovery Centre is Ireland's National Centre for the Circular Economy connecting people, ideas and resources to support low carbon living. The Centre mobilises the skills and expertise of artists, scientists, designers and craftsmen to demonstrate sustainability through resource efficiency and reuse. As a leader in the drive for sustainability in Ireland, the Rediscovery Centre supports the development of a circular economy and advocates for a more resilient and equitable society.

Established in 2005, the Rediscovery Centre is located in the Ballymun Boiler House, a demonstration ecofacility. Supported through the European LIFE+ fund, Dublin City Council and the Government of Ireland, the centre was built as a centre of excellence in sustainable living, incorporating renewable and efficient energy systems, sustainable building materials, rainwater harvesting, grey water recycling, composting toilets, educational exhibits and gardens designed for biodiversity enhancement and environmental education. The Rediscovery Centre serves as an educational tool to inspire, inform and lead positive behavioural change with respect to resource management and efficiency. The Centre is open to the public Monday to Saturday 9-5pm and includes an Ecostore (supporting Irish producers and designers), a café, workshops and meeting spaces to host gatherings and events. The Rediscovery Centre delivers a wide array of educational activities. Lifelong learning for sustainable development and STEAM (Science, Technology, Engineering, Arts and Maths) is provided to students of all ages and varying needs. The Centre runs sustainable skills and lifestyle workshops for the general public and often hosts events and conferences centred on important climate and environmental issues. Research programmes investigate reuse and circular economy opportunities in Ireland and policy work aims to promote sustainable consumption, climate action and the SDGSs.

The Centre operates four reuse social enterprises: Rediscover Fashion; Rediscover Furniture; Rediscover Paint and Rediscover Cycling. All programmes reuse materials to make new products resulting in significant environmental benefits. In addition to the prevention of waste, thus reducing the impacts of waste management, greater benefits are realised through abated CO2 emissions and reduced pollution as a result of material extraction, production & distribution avoided. Circular economy principles such as repair and reuse negate the need for the production of new products and retain the value within existing products for longer by keeping them in circulation and extending the value chain. All products created in the Rediscovery Centre's social enterprises are sold to generate funds which are is reinvested to support training and labour activation initiatives.

In 2018, The Rediscovery Centre launched its Circular Economy Academy an initiative designed to support individuals or social enterprises seeking to establish new circular economy projects or replicate one of the Rediscovery Centre's material reuse projects in their own community. The Academy currently supports 10 members across the country ranging from established social enterprises to business start-ups. The work is showcasing the opportunities presented by the Circular Economy and demonstrating how community-based projects and ideas can scale when developed in a collaborative environment.

The Rediscovery centre partners with several organisations, institutions and governmental departments in the delivery of its work and aims to be a collaborative force, bringing together people at all levels to encourage behaviour and policy change. Key strategic partners include the EPA, Dublin City Council and the Government of Ireland.

B. The Circular Economy

Our current economic system is not circular but linear. This *take-make-dispose* economy not only causes environmental and social problems but is also unsustainable. If every human used as many resources as the Irish population, we would need 3 planet earths to support our population. Since we now realise the limits of our planet's resources, a new system is needed: the circular economy.

The circular economy is a disruptive economic concept, based on shifting the entire focus of the economy from a linear to a more sustainable long-term solutions. While definitions around the circular economy vary, common elements include "a focus on improving material and resource efficiency (including reducing pollution and waste through material reuse and recycling); broader resource efficiency and industrial ecology approaches; renewable energy; increased energy efficiency; and elements of the shared economy". While the circular economy promotes value creation through reuse, repair and recycling, it demands more fundamental changes to the economic system. The circular economy is based on the realisation of the planet's limited ability to provide resources and accept waste and negative externalities². Therefore, the system is based on the principles of designing out waste, keeping products and materials in use, and regenerating natural system³.

The circular economy promotes the decoupling of resource use from economic growth. Transforming the Irish economy to circularity can bring about a sustained level of economic wealth and high levels of well-being for the public without driving the depletion of natural resources, biodiversity loss, environmental pollution, and climate change. This transformation requires far-reaching changes along the product value chain, from resource access and extraction, to sustainable design, new business models, value retention and cycling of resources, to new modes of consumption, new social practices, norms and lifestyles, as well as finance and education⁴. As the European Commission's Green Deal and circular economy strategies from countries such as Denmark, Finland, the Netherlands and Slovenia demonstrate, a circular economy requires transformative actions across all sectors, to push a rethinking from waste to resource. A circular economy strives for a world without waste. If Ireland wants to be seen as a leader in the circular economy it is essential to base its future policies on an ambitious plan for Ireland as a driver and showcase of circular innovation, moving beyond EU legislative requirements.

While requiring an economy-wide transformation, the circular transition also presents large opportunities, including increased competitiveness, job creation, resource supply independence and climate change mitigation potential.

Job creation

Research suggests that a circular economy could result in large net job creation, particularly across different skill levels and with a geographic spread that could tackle current unemployment trends. A job impact estimate for the United Kingdom produced by WRAP and the Green Alliance in 2015 suggests the circular economy could create between 200,000 and 500,000 new jobs, depending on policy intervention⁵. If put into the context of jobs potentially lost through the transition, that translates to an overall reduction in unemployment of

¹ Jensen-Cormier, S., Smith, R. & Vaughan, S. (2018). *Estimating Employment Effects of the Circular Economy*. Background Note. International Institute for Sustainable Development, p. 1.

²European Environmental Agency (2019). Paving the way for a circular economy: insights on status and potentials. No 11/2019.

³ Ellen MacArthur Foundation (2015). Towards a Circular Economy: Business Rationale for an Accelerated Transition.

⁴ European Environmental Agency (2019). Paving the way for a circular economy: insights on status and potentials. No 11/2019.

⁵ WRAP & Green Alliance. (2015). *Employment and the circular economy: job creation in a more resource efficient Britain*. Retrieved from http://www.wrap.org.uk/sites/files/wrap/Employment%20and%20the%20circular%20economy%20 summary.pdf

between 54,000 and 102,000. The study found that circular job opportunities could play a large part in reducing regional unemployment disparities due to the wide geographical spread of reuse and repair activities. Additionally, they may reduce occupational mismatch by creating work across different skill levels (in e.g. reuse, repair, recycling, research, and bioeconomy). For Ireland, this means that the Circular Economy holds large potential to address the just transition for the Midlands that is part of the government's climate policies. On a European scale, the circular economy has an estimated potential of adding up to 700,000 new jobs through repair and recycling activities. Worldwide, ILO projections suggest that employment might grow by 0.1% until 2030 under a circular economy. New employment would be primarily in the services (approx. 50 million new jobs) and waste management (approx. 45 million new jobs) sectors.

Competitiveness & resource independence

Several EU countries also emphasize the potential of increasing their economy's competitiveness through circular products and business models. The Finnish Roadmap and Action Plan point to the CE as the new "cornerstone for the Finnish Economy". Businesses and producers gain from circularity through getting more value out of fewer resource inputs. They also gain a competitive edge by providing products with a low environmental impact. Most national CE strategies provide funding for business innovation and research and push for circular public procurement to future-proof their economy and facilitate a progressive growth platform that is favourable for the domestic market". In addition, a circular economy increases national competitiveness by securing material supplies. Retaining valuable resources in the economy through circular activities, diversifies the material supply and makes the national economy more resilient to external economic impacts. Ireland, as an island nation, would not only benefit from a more secure resource supply but also from lower transport costs associated with the import of materials.

Climate mitigation

Recirculating materials reduces greenhouse gas emissions as it negates the need for new products. Likewise circular business models, such as sharing or product-as-a-service also reduce carbon emissions again by keeping materials in use for longer. Consequently, the circular economy holds a large potential for climate change mitigation. As pointed out by the European Commission in its new Green Deal, while the EU has already started to move towards climate neutrality and to reduce emissions, "current policies will only reduce greenhouse gas emissions by 60% by 2050. Much remains to be done, starting with more ambitious climate action in the coming decade" 12. The Ellen MacArthur Foundation's report *Completing the Picture* points to the potential of the circular economy to reduce global CO₂ emissions, closing the gap of necessary climate action that cannot be tackled by renewable energy and energy efficiency measures. 13 As around half of global

International Labour Organization. (2018b). World employment and social outlook 2018: Greening with jobs. Retrieved from https://www.ilo.org/weso-greening/documents/WESO_Greening_EN_web2.pdf

⁶ Cambridge Econometrics, Trinomics, & ICF. (2018, May). *Impacts of circular economy policies on the labour market*. Retrieved from https://publications.europa.eu/en/publication-detail/-/publication/fc373862-704d-11e8-9483- 01aa75ed71a1/language-en.

⁷ International Labour Organization. (2018b). *World employment and social outlook 2018: Greening with jobs*. Retrieved from

⁸ Sitra (2016). Leading the cycle – Finnish road map to a circular economy 2016-2025. Sitra Studies 121, p. 11.

⁹ Sitra (2016). Leading the cycle – Finnish road map to a circular economy 2016-2025. Sitra Studies 121, p. 4.

¹⁰ European Commission (2019). *The European Green Deal*. Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee, and the Committee of the Regions.COM(2019) 640 final.

¹¹ European Environmental Agency (2019). Resource efficiency and circular economy in Europe – even more from less. An overview of policies, approaches and targets of Ireland in 2018. Eionet Report ETC/WMGE 2019/4 – Ireland.

¹² European Commission (2019). *The European Green Deal*. Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee, and the Committee of the Regions.COM(2019) 640 final, p. 4.

¹³ Ellen MacArthur Foundation & Material Economics (2019). *Completing the Picture: How the Circular Economy tackles Climate Change*.

emissions are linked to resource extraction and processing¹⁴, circular approaches such as recirculation, new business models and product materials efficiency can vastly cut those emissions. Particularly in industry, such as steel, plastics, aluminium and cement, circular approaches are estimated to cut between 45% and 56% of CO₂ emissions from material production.^{15,16} Therefore, the CE should be considered as a key tool for climate action, also in the Irish context.

B1. EU Circular Economy Policy

In December 2019, the European Commission under Commissioner Ursula von der Leyen released their new European Green Deal, with the target to achieve a carbon-neutral continent by 2050. While the European Green Deal calls for action around a diverse range of environmental policy, such as renewable energies, green technology and biodiversity, it builds its climate mitigation vision on a circular economy for the EU. The Green Deal envisages the publication of a new Circular Economy Action Plan for the EU in March 2020 together with an EU industrial strategy to transform industry and value chains. As this transformation will take a generation, the Commission points out that "[t]o be ready in 2050, decisions and actions need to be taken in the next five years" Therefore, it is now timely that the Irish government acts decisively and initiates the lead for a fundamental transition to a circular economy.

The new EU Circular Economy Action Plan will include a sustainable products policy, for circular product design, production and marketing. As pointed out in the Roadmap for the Circular Economy Action Plan, it will prioritise options for reuse and repair before recycling. The Plan will promote a transition in all sectors while specifically focusing on resource-intensive sectors, including textiles, construction, electronics, and plastics. It will tackle the producer side by encouraging businesses to offer reusable, durable and repairable products, as well as new business models based on sharing and renting. The consumer side is tackled through improved consumer policy, such as right to repair, and tackling false green claims through comparable, verifiable product information. The plan will also entail changes to certain waste laws, to reduce waste generation and a proposed EU model for separate waste collection. Digital technologies and frontrunner businesses are seen as solutions for driving the EU circular economy, including in sectors such as mobility (Mobility as a Service), food production (through the Farm to Fork policy), bio-economy, and research and innovation.

B2. National Circular Economy action across the EU

Out of the 28 EU Member States, 13 have already adopted national Circular Economy strategies or action plans. Out of the EU-15 countries, eleven have adopted strategies, while the United Kingdom has published several regional and city-level strategies and Sweden set up a CE delegation in preparation for their strategy.

¹⁴ IRP (2019). *Global Resources Outlook 2019: Natural Resources for the Future We Want.* Oberle, B., Bringezu, S., Hatfield-Dodds, S., Hellweg, S., Schandl, H., Clement, J., and Cabernard, L., Che, N., Chen, D., Droz-Georget, H., Ekins, P., Fischer-Kowalski, M., Flörke, M., Frank, S., Froemelt, A., Geschke, A., Haupt, M., Havlik, P., Hüfner, R., Lenzen, M., Lieber, M., Liu, B., Lu, Y., Lutter, S., Mehr, J., Miatto, A., Newth, D., Oberschelp, C., Obersteiner, M. Pfister, S., Piccoli, E., Schaldach, R., Schüngel, J., Sonderegger, T., Sudheshwar, A., Tanikawa, H., van der Voet, E., Walker, C., West, J., Wang, Z., Zhu, B. A Report of the International Resource Panel. United Nations Environment Programme. Nairobi, Kenya.

¹⁵ Ellen MacArthur Foundation & Material Economics (2019). *Completing the Picture: How the Circular Economy tackles Climate Change*.

¹⁶ Material Economics (2018). The Circular Economy – A Powerful Force for Climate Mitigation. Transformative Innovation for Prosperous and Low-carbon Industry.

¹⁷ European Commission (2019). *The European Green Deal*. Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee, and the Committee of the Regions.COM(2019) 640 final, p. 7.

¹⁸ European Commission (2019). Roadmap New Circular Economy Action Plan to increase recycling and reuse of products in the EU. Retrieved at https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2019-7907872_en

These national strategies, as well as several regional ones are reviewed in the *Circular Economy Action Plans* & *Strategies Webinar* developed by the Rediscovery Centre and supported by the EPA.¹⁹

Some of the lessons to be learned from other plans include the focus and breadth of the strategy, the objective, priority sectors, and potential policy instruments. The vast majority of national strategies are developed in a concerted, interministerial effort, with at least two national ministries involved in the writing in implementation. These are usually the ministries for environmental, finance or economics, agriculture etc.,²⁰ This cross departmental cooperation shows the recognition of the fundamental transition needed and the sector-spanning impacts of a circular economy.

The national strategies also vary in scope, with some (e.g. Luxembourg) restricting themselves to a transformation of priority sectors and others (e.g. Denmark, Finland, Netherlands) aiming at a more holistic, all-encompassing transformation of the economy.²¹ While both approaches have benefits (swift results with a sectoral approach and partnership and learning with a holistic approach), it is essential that strategies are not "limited to components of the circular economy concept (e.g. waste management)"²². A circular economy policy focussed on waste will limit the development of policies for a real transition.

Common economic sectors addressed in the EU strategies are construction, waste, manufacturing, and agriculture. The Irish Circular Economy Plan should take the opportunity to tackle areas outside of the scope of waste management. For the circular transition, it is essential that the entire value chain is considered: "If any one of the "five stages" – production, consumption, waste management and secondary raw materials, innovation, or investment – is not included, the circle is broken and the paradigm shift will not be reached"²³.

Additionally, a circular economy strategy can capitalise on the opportunity to steer public opinion towards the transition, as actioned in the French, Slovenian, Italian and Greek strategies. As the European Environmental Agency (2019) points out, "public interest in a more sustainable or circular society is crucial for the viability of new business models or policy measures that stimulate shared use, reuse, repair or recycling" (p. 25). The Finnish, Danish and French plan build on education for the circular economy, so that the concept becomes a well-known term that every citizen can relate to. This learning is oftentimes supported by information websites about the circular economy, such https://www.circularchange.com/ Slovenia). https://hollandcircularhotspot.nl/en/ (in the Netherlands) or https://www.ellenmacarthurfoundation.org/ (UK and international) which provide teaching and learning resources for the general public. The Irish transition to a Circular Economy could benefit from a similar approach of making circularity mainstream. The Circular Economy in Ireland would benefit from a national information platform/portal such as Circular.ie as proposed by the Rediscovery Centre's in a submission to DCCAE in December 2019

In the transposition of the EU Waste Framework Directive, France is taking a lead towards circular measures and working on the higher tiers of the waste hierarchy. In January 2020, the French Senate validated a

¹⁹ https://youtu.be/7Qrobd7wH3o

²⁰ van Buren, N. & de Vries, M. (2017). Europe goes Circular – Outlining the implementation of a circular economy in the European Area. EEAC Working Group on circular economy.

²¹ European Economic and Social Committee (2019). Circular economy strategies and roadmaps in Europe: Identifying synergies and the potential for cooperation and alliance building.

²² European Economic and Social Committee (2019). Circular economy strategies and roadmaps in Europe: Identifying synergies and the potential for cooperation and alliance building, p. 44.

²³ European Economic and Social Committee (2019). Circular economy strategies and roadmaps in Europe: Identifying synergies and the potential for cooperation and alliance building, p. 13.

transposition law that promotes waste prevention, reuse and social enterprise through a variety of measures. ²⁴ The measures include a Solidarity Re-use Fund that channels 5% of fees from Extended Producer Responsibility Schemes to finance re-use and preparing for re-use activities conducted by social enterprises. Through this fund, the French government aims to create 70,000 jobs for disadvantaged groups by 2030 and tackles the issue of EPR schemes prioritising recycling over prevention and reuse. Another measure is a target for reuse and preparing for reuse. Here, France follows the examples of Spain and Flanders that have already successfully implemented targets. The new French law will also force municipal waste collection points to dedicate areas for reuse and partnering with social, solidarity or circular economy organisations. This move will enable more reuse, as the proper collection and storage of goods is paramount for their reuse²⁵. The French "anti-waste bill for a circular economy" is additionally working towards better repair and consumer information, with a mandatory repairability scoring system for electronics and banning products that cannot be repaired. ²⁶ This transposition of the WFD in France should provide inspiration for Ireland and other EU countries in promoting a circular economy that abolishes waste and supports consumers.

C. The Waste Action Plan for a Circular Economy

As confirmed in the leaked draft of the EU Circular Economy Action Plan, we need to implement the circular economy upstream, in the production and consumption of materials²⁷. As such, the Waste Action Plan for a Circular Economy should promote a shift towards circularity at the start of the product life-cycles. **The title of the plan should promote going beyond waste** towards the higher tiers of the waste hierarchy, as is exemplified in the title of the Welsh CE strategy "Beyond Recycling"²⁸ or the Scottish "Making Things Last"²⁹. Since the focus of the document is on waste specifically, **it is important that the policy should support the waste hierarchy in it is entirety**. While the EPA's National Waste Prevention Programme is cited as an existing measure, the plan provides a limited amount of actionable measures to promote further waste prevention, reuse and repair. Instead, the waste action plan focuses its efforts on new policies for waste management, recycling and waste incineration, which represent the lower tiers of the waste hierarchy.

C1. Timeline and Roadmap

While there are several positive steps forward presented in this Waste Action Plan, more work is needed to ensure Ireland is doing everything it can to combat the climate crisis. As discussed previously **Ireland needs of a comprehensive circular economy plan**. It should join other EU countries in setting aside resources for circular economy policies and committing to a plan and timeline for implementing these policies. It should be stated clearly that the Waste Action Plan is not, a circular economy plan, but a necessary piece of the puzzle needed to address the current climate emergency. Ireland should be cognisant of the upcoming EU climate regulations considered under the European Green Deal and should be proactive in identifiying policy that goes beyond meeting proposed targets. The timeline of this Waste Action Plan coincides with the implementation period for the updated Waste Framework Directive and with the upcoming publication of the European Commission's new Circular Economy Action Plan. As detailed in previous sections, the WFD can

²⁴ RREUSE (2020) France to create a Solidarity Re-use Fund (and other re-use friendly measures). Accessible at https://www.rreuse.org/wp-content/uploads/France-to-create-a-Solidarity-Re-use-Fund_Final.pdf

²⁵ European Commission (2019). Waste potential: more of our refuse electronics, furniture and leisure goods could be re-used, suggests German study. Science for Environment Policy, Issue 530.

²⁶ https://repair.eu/news/major-steps-taken-for-durability-and-right-to-repair-in-france/

²⁷ European Commission (2020). Draft for A new Circular Economy Action Plan. Accessible at

https://www.euractiv.com/section/circular-economy/news/leak-eus-new-circular-economy-plan-aims-to-halve-waste-by-2030/.

²⁸ Welsh Government (2019). Beyond Recycling – A strategy to make the circular economy in Wales a reality. Consultation document Number WG39588.

²⁹ Scottish Government (2016). Making Things Last – A Circular Economy Strategy for Scotland. Edinburgh.

be implemented with the necessary consideration for waste prevention, reuse and repair, as demonstrated by France. In addition, the future CE Action Plan will require a more far-reaching overhaul of the economy. Investing in lower waste hierarchy strategies, such as incineration or recycling should be approached with caution and considered alongside the measures required for radical change to future proof resilience and avoid locking the country into system that will be difficult to change as advances in innovation and CE business models are achieved. It is important to note that many of the proposed policies and projects will only be successful with sustained investment and a proper time commitment. While change is needed quickly, transformational change does not happen overnight.

C2. Institutional Arrangements

The work of the public sector to promote waste prevention and the circular economy is of paramount importance, with EPA programmes such as the National Waste Prevention Programme, and Green Public Procurement highlighting the role the public sector can and should play a key role in driving Ireland towards circularity. Further cross-governmental cooperation and a strong regulatory role might be needed to achieve the relevant overarching changes required for a circular economy.

The current privatised waste collection system in Ireland poses concerns, including a lack of responsibility for the prevention of waste, a missed opportunity on enforcement (re. what consumers place in bins), and in general the provision of a public service by profit-making enterprises/private companies. Returning waste collection to the hands of local authorities and treating as a public service, funded by the collection of fees and taxes, would allow for increased enforcement of current waste legislations and for local authorities to address the current high levels of contamination.

Additionally, current Extended Producer Responsibility (EPR) schemes in Ireland (e.g. WEEE, Packaging Waste) focus on supporting recycling efforts rather than promoting reuse and waste prevention. Examples such as the new law in France demonstrate how EPR schemes can be built to support reuse and prevention, as well as social enterprises. Current and future Irish EPR schemes should be required to support waste prevention, reuse and preparation for reuse activities, rather than pushing for further recycling that is less favourable.

C3. Municipal (Household and Commercial) Waste

New policies and measures for municipal household waste should focus on encouraging waste. More circular opportunities need to be made available and promoted to the public. Examples of such opportunities are making repair more affordable through **a reduction in VAT to 0%** or embracing schemes that promote reusable containers and the amount of packaging waste. Any new targets or policies need to include investment in, and set targets for, additional reuse activities.

The Rediscovery Centre supports CRNI in the formalisation of ReMark as a national quality mark for reuse. This accreditation system will give consumers the confidence that the reused goods they are purchasing are of a high quality and will encourage them to buy reused goods over new products made with virgin materials.

Stronger enforcement is needed of household and commercial waste collection bins, including monitoring of what items and materials are placed in each bin. Privatised waste collection systems should be required to monitor and enforce regulations about correct bin usage. Increased focus should be placed on the separation of materials to reduce contamination levels through education and communications. Waste collection

companies should be responsible for informing their customers regularly what types of material goes in each bin and for providing necessary resources &/or finances to deliver effective and targeted education programmes.

Local authorities should work with waste collection companies to study the feasibility or advantages of implementing an incentivised schedule of waste collection as opposed to incentivised charging. For example, the collection of recycling and food waste every week with the collection of general waste every three weeks. Household glass collection could also be considered. This could be informed by the waste collection system in Wales which would be particularly relevant should Ireland switch to waste collection by local authorities.

Changes to the municipal waste system, such as incentivised scheduling or increased enforcement of correct bin usage, could prompt backlash from consumers who could view the changes as a reduction in service or punitive measures for using their households bins as they have always done. Local authorities and waste collection companies would need to undertake a sustained public information campaign before any changes are made to the household and commercial collection policies. This could be coordinated in unison with the education and awareness campaigning discussed in section C8.

Comparing household waste segregating performance with neighbouring households might be an interesting scheme to raise awareness through 'naming and shaming'. This would need to be coupled with a large-scale information and education campaign (as pointed out in section C8). It would also need to be paired with stronger enforcement of policies and regulations to ensure the adoption of correct behaviours.

Civic Amenity Sites (CAS) have an important role to play in providing more reuse opportunities to consumers. They should be accessible and available to the public so that waste can be disposed of correctly, avoiding littering and dumping. These CAS should also move from being a site of waste collection to becoming "reuse centres" or "resource centres" with dedicated storage for reuse and preparation for reuse. Investments should be made at CAS to encourage and enable reuse activities. These investments must include service enhancements which will make reuse more accessible and attractive to users as well as raising awareness about the benefits of reuse. All CAS should include separate reuse areas with trained employees (or staff from reuse organisations) responsible for the screening and assessing of goods. These reuse goods should, where possible be made available to social enterprises to support local community development and job creation. CAS could be expanded to include repair, sharing, swapping or upcycling activities onsite. A great example of such a facility can be found in Eskilstuna, Sweden, with the ReTuna mall and site. (https://www.retuna.se/english/).

Regarding apartment complexes, there is a need to implement a full waste segregation system with legal requirements for black, green and brown bins in all buildings. Building owners should work with their management companies to monitor waste segregation and contamination rates. Technology innovations such as Accessgreen's (https://www.accessgreen.ie/) smart lock technology with integrated CCTV ensure user accountability and a reduction in fly tipping. Accessgreen works with a lock which is opened via a registered mobile phone, providing a clear two-way communication channel to exchange information, education and support. Their work also focuses on waste reduction: at registration, users sign a social contract acknowledging the community's values of waste reduction and committing to achievable individual actions.

Through waste reduction and improved segregation, waste collection costs decrease by on average 38% which can cover the annual subscription costs of the service.³⁰

Adopting a certification scheme for correct waste management in businesses would be a step in the right direction that can encourage proper bin usage among commercial enterprises. However, the legislation should go further here in penalising incorrect segregation, with proper enforcement and regulations in place to manage inappropriate disposal, especially in regards to food waste in the foodservice industry. The research on 'Reducing Commercial Food Waste in Ireland' undertaken by the Clean Technology Centre Ireland could be a great starting point for action here. (Broderick, S. & Gibson, C. (2019). Reducing Commercial Food Waste in Ireland. EPA Research, Report No. 282. http://www.epa.ie/pubs/reports/research/waste/research282.html)

Overall, policies for municipal waste should be based on the waste hierarchy, prioritising waste prevention, reuse, and repair. The government plays a pivotal role in educating and informing the public, so a nationwide awareness campaign, as described in section C8. Should be developed to focus on the higher tiers of the waste hierarchy, not just recycling. Recycling cannot be viewed as a solution to Ireland's waste problem.

C4. Food Waste

There is a distinct lack of awareness in Ireland surrounding the adverse environmental effects of food waste. Successful programmes for waste prevention, such as the EPA's StopFoodWaste programme, need to be scaled and supported to ensure food waste in Ireland is reduced. Public awareness campaigns regarding smart shopping, buying only what is needed, and the importance of buying local and in season should be a critical next step to combat food waste. This will need buy-in from food retailers and should be done in conjunction with StopFoodWaste.ie. This food waste prevention work should also address the food waste in the Irish hospitality and foodservice industry that generates costs of up to €180 million worth every year in hotels alone (https://foodwastecharter.ie/wp-content/uploads/2019/07/Hotels-Daily.pdf). Tackling this large problem sector should be informed by research, such as EPA Research on 'Reducing Commercial Food Waste in Ireland' by CTC. (Broderick, S. & Gibson, C. (2019). Reducing Commercial Food Waste in Ireland. **EPA** Research. Report No. 282. Accessible at http://www.epa.ie/pubs/reports/research/waste/research282.html)

Another critical issue regarding food waste is the connection with packaging. While retailers point to the increased shelf-life of food due to plastic packaging, pre-packaged foods also entail buying more than is needed. This current practice passes the food waste on from retailers to consumers who 'create' food waste by buying too much. Research is needed into how food, such as vegetables and fruit, can be sold loosely without increasing food waste.

Similarly, it is estimated that over a third of the food waste is created in the production of food (https://foodwastecharter.ie/irelands-food-waste/). **Implementing** initiatives such Oddbox as (https://www.oddbox.co.uk/about) supporting retailers offering 'wonky' vegetables or in (https://my.morrisons.com/wonky-fruit-veg/) could greatly increase public acceptance of differently shaped products and decrease food waste in production.

³⁰ Accessgreen is a member of the Rediscovery Centre's Circular Economy Academy http://www.rediscoverycentre.ie/research/circular-economy-academy/)).

Ireland should introduce a national food waste prevention target, in advance of any possible targets set by the European Union. These targets should be ambitious and set in line with what experts think Ireland would be able to achieve with a dedicated food waste plan. This plan must include a focus on buying local and seasonal food, and developing Ireland as a farm-to-fork leader in Europe. The government must take its lead from other EU countries who have set bioeconomy and circular agriculture as priority sectors for their Circular Economy plans, moving beyond just food waste. To achieve a true farm to fork society, the conversation cannot be fully centred on food waste. Sustainable agriculture practices, promoting the consumption of local foods, and encouraging consumers to think about the impact of food, is essential.

The government should also look into providing tax benefits to retailers who agree to donate unused food through services like FoodCloud and should commit to prioritising people first when there is surplus good quality food.

C5. Plastic and Packaging Waste

While, ultimately, the government is responsible for the implementation of circular practices in Ireland, Irish retailers will have an important role to play in sustainability initiatives. Retailers can play a pivotal role in changing public attitudes and will be more effective at gauging the attitudes and reactions of consumers when implementing circular principles, particularly with issues such as plastic and packaging waste. Retailers are not likely to willingly change their business practices, especially if it negatively affects their bottom line, so these changes should be pushed through government regulations.

The government should enshrine the strategies promoting reuse in legislation, similar to policies enacted by France.³¹ This will address retailers' liability concerns about consumers bringing their own containers for items such as meat, fish, dairy, salads, and drinks. Additionally, retailers should be incentivised to implement refill stations or machines for items ranging from washing up liquid and shampoo, to milk and various dry goods.

Voluntary measures can only go so far. Manufacturers must be encouraged to innovate and required to reduce their environmental impact. However, these changes will have to be backed by government regulations as companies are unlikely to adapt different practices which might negatively affect profits in favour of environmental benefits. Measures enshrined in law and stringently enforced will have the highest impact. While voluntary measures are helpful and encouraged and organisations that go beyond what is required should be commended, the government needs to be more concerned about enforcing policies.

Only packaging that is recyclable should be allowed to be sold on the Irish market, with exceptions for single use or non recyclable packaging where it is medically necessary. This should include the prohibition of any modifications made to the packaging including stickers, lids, sleeves, or dye that render the packaging non-recyclable. Producers and retailers putting non-recyclable packaging on the Irish market should bear the full cost of end of use management for the packaging.

Ireland should set more ambitious targets that go beyond meeting the EU-mandated targets, especially in the area of plastic packaging waste where the country lags behind³². Ireland should take bold and decisive actions and set ambitious goals that will encourage more effective action at all levels. Ireland should not just be content with doing the minimum required and should use this opportunity to align with and surpass other

³¹ http://www.assemblee-nationale.fr/15/ta/tap0385.pdf

 $^{^{32} \}underline{\text{https://www.europarl.europa.eu/news/en/headlines/society/20181212STO21610/plastic-waste-and-recycling-in-the-eu-facts-and-figures}$

countries in Europe by leading the way in the reduction of plastic packaging waste. Opportunities to lead Europe in developing innovative packaging solutions should be encouraged, resourced and implmented.

C6. Single Use Plastic

The government should introduce a mandatory levy on all single-use items retailed in Ireland to move against the 'disposable' culture in Irish society. This levy must be passed onto the consumer at the point of sale, much like the successful plastic bag levy and the cost should not be absorbed by retailers. Studies have shown that this system is a more effective means of behaviour change than attempting to incentivise consumers to change through promotions or discounts³³. People are more likely to change when there are negative consequences that can be avoided by adopting a different practice, than going out of their way to adopt a different practice for a reward. The levies would need to be strong enough so that consumers / or businesses will not be tempted to simply absorb the cost without changing practices.

Retailers will need to be involved in reducing single use items, especially on ways in which they can encourage their customers to adopt reusable containers or accept innovative packaging. Retailers will have first-hand knowledge of what is or is not feasible for their business currently, what types of support may need to be developed to aid in the transition away from single use items, and what needs to be done to ensure health and safety regulations and liability concerns are addressed appropriately.

The current conversation needs to go beyond single use *plastic* and discourage any single use item which is not strictly or medically necessary. While single use plastics are certainly among the most egregious examples of waste, any single use item carries with it a negative environmental impact and oftentimes could be replaced with an item that could be reused. This move away from the throw away or disposable consumption culture will be necessary to highlight the value inherent in items and the material and labour that went into producing them.

Any solution to the single use item issue must focus on prevention first. Proposals such as segregated recycling for single use plastic packaging may not address the root of the problem but only the symptom. Consumers and retailers must be forced to confront the waste and environmental impact of single use items and change needs to be enacted to reduce the amount of waste, not simply increase the recycling potential. Government should support the growing awareness of its citizens and willingness to change (with almost 15,000 members in the Facebook group Zero Waste Ireland that promotes a lifestyle without creating waste - https://www.facebook.com/groups/zerowasteireland/). Support needs to be made available for waste prevention and reuse campaigns, such as the Conscious Cup campaign (https://consciouscup.ie/) or the mapping of zero waste directory GoZero (http://gozero.ie/).³⁴

C7. Circular Economy

Considering the status of the Waste Action Plan as a document for a circular economy, it is concerning to see a specific section for the circular economy in the middle of the document. Waste prevention and management are an important part of the circular economy, but only represent the tail of a product lifecycle that needs transformation. Therefore, this plan in its entirety should be guided by the umbrella of the circular economy rather than only introducing the concept in one section. While research such as the IBEC study

³³https://orca.cf.ac.uk/99366/1/Coffee%20cup%20summary%20report%20-%20Poortinga%20%28FINAL%29.pdf

³⁴ (Footnote: GoZero is a member of the Rediscovery Centre's Circular Economy Academy http://www.rediscoverycentre.ie/research/circular-economy-academy/

suggest that the circular economy is not yet a well-known term (https://www.ibec.ie/connect-and-learn/media/2019/08/14/new-ibec-survey-shows-just-half-of-businesses-understand-the-circular-economy), this current body of works should be seen as an opportunity to make the CE a well-known term and implement transformative action in all sectors (following the likes of France, Finland and Slovenia in their CE strategies). After all, EU policy is quickly moving towards a Circular Economy, with new legislation such as the Green Deal building heavily on the transformation to circularity.

As highlighted in the initial sections of this submission, implementing a circular economy in Ireland will require a transformation of the entire economy. The EU Industrial Strategy and Circular Economy Action Plan identifies several key sectors to focus on, including textiles and construction, but Ireland also has potential to implement circular principles in its largest sectors, including agriculture, pharmaceuticals, and the service industry. Focus needs to be placed on sectors with the largest impact, such as manufacturing, to implement prevention and reuse at the beginning of processes as opposed to simply dealing with the waste at the end. A participant survey of policymakers that attended the Rediscovery Centre's *Circular Economy Action Plans & Strategies Webinar* (https://youtu.be/7Qrobd7wH3o) inquired their opinion on areas with the highest potential for a transition to circular economy. Respondents highlighted integrating a circular economy with existing policies, such as the National Waste Prevention Programme and bioeconomy policies, targeting Ireland's major sectors, such as agriculture, marine, IT, and considering their potential for Ireland to become a leader in the circular economy. Respondents also highlighted the circular potential of Ireland's industry and manufacturing, which is in line with the EU's focus in their new Green Deal. Several respondents said the transition should first be driven in the country's worst greenhouse gas emitting sectors.

There will be a need to change consumer practices and behaviour, to drive acceptance of new business models and strategies. There is a need to promote innovation, such as the sharing economy, product as a service systems, the reuse of material, using excess or recovered food, and embracing second hand products. Getting consumers on board with these changes should be a critical aspect for any circular economy plan.

Irish businesses need to accept circular principles as well. Industrial exchange and symbiosis need to be facilitated to ensure that no valuable materials are wasted. Exchange platforms such as the former SMILE exchange are needed to connect interested businesses. Collaboration and partnerships could be supported and encouraged through an exchange platform. Similar to consumers, producers also need to be made familiar with the circular economy concept to ensure a widespread uptake of circular measures.

To increase understanding of the Circular Economy concept across individuals, businesses, and other organisations in Ireland, the Rediscovery Centre proposes a gateway platform that bundles information and presents it in a targeted, easily accessible manner. This gateway platform would act as the entrance point to the Irish Circular Economy, providing background information on the concept, case studies of CE work in Ireland, details on funding and policies, and support on how to implement circular living and business.

Education for the Circular Economy is also an integral part to increasing awareness. Finland and Denmark offer examples of countries that successfully integrate the CE into their educational curriculum. Education is not only needed to increase awareness of the concept but also to build the skills and knowledge required in the following years to move towards circularity and implement EU legislation.

C8. Citizen Engagement – Awareness & Education

As highlighted in the previous sections, there is an immediate need to increase awareness of and education for the circular economy. This should not be limited to waste education. When designing communication and awareness campaigns, the waste hierarchy should be followed. These campaigns must focus on waste prevention as the foremost tool in combating Ireland's waste problem. This must include information on smart shopping, the necessity and value of items and materials, and the environmental impact of Ireland's current levels of consumption. After prevention, reuse and repair need to be emphasized. The importance of repairing products, along with any measures the government enacts to promote the repair of products, should be communicated to the general public. Local repair shops and craftspeople should be featured, with repair and reuse framed as a way to support local communities and social enterprise. The campaigns should also attempt to change the current thinking around reuse, second hand, and upcycled items. Many consumers hold negative connotations when it comes to reusing materials or buying second hand. Featuring shops that sell high-quality second hand or upcycled items will help combat consumer's negative perceptions. The Rediscovery Centre supports CRNI's effort to seek support and investment in ReMark as a national quality mark for reuse. Investing in this important tool will drive both demand and supply and combat negative consumer perceptions regarding the quality and safety of reused goods.

Existing programmes that raise awareness and educate on waste prevention and the circular economy needs to be supported. This includes but is not limited to CRNI's Reuse Month, the EPA National Waste Prevention Programme, and work undertaken by the Rediscovery centre and other CRNI members ReCreate and Conscious Cup Campaign. With its mission to lead change from waste to resource through reuse, redesign, research, and education, the Rediscovery Centre drives behaviour change towards sustainable living and the circular economy. Our education programme and social enterprises provide hands-on workshops for all ages, covering a range of over 60 different topics with a connection to sustainable resource use and development. The Centre also hosts public workshops, conferences, events and tours to promote the circular economy to as wide an audience as possible. We suggest building a gateway platform, co-managed by relevant stakeholders, to provide information, as an entry point to the circular economy for Ireland.

Recycling should be a message of last resort. If it is not possible to reduce the consumption, repair, or reuse the item, then public information should be available on how to properly dispose of the item. The government's current awareness work through mywaste.ie is a great step in the right direction but will need to be expanded and move away from segregation of waste for recycling towards a clear focus on waste prevention.

Conversations in the Advisory Group to the Waste Action Plan for a Circular Economy show a clear need for a robust, nation-wide awareness campaign, following the likes of the 'Race Against Waste'. This campaign should bring together all relevant stakeholders, led by the government, and target the Irish public through clear, appealing messages around preventing waste, first and foremost. These campaigns will take time and money, and the government should commit to running a robust public information campaign as part of any circular economy policy. Previous communication campaigns run by government and EPR schemes often focussed on waste segregation and recycling which is a less preferable option for material management.

Building on existing work through the National Waste Prevention Programme and mywaste.ie, the Waste Action Plan should also include a clear commitment to communications on the importance of prevention, repairing, and reuse. Funding for the campaigns could be derived through taxes and fees levied on the waste sector or the manufacturers of waste items, but the government should be the ultimate arbiter in the content and organisation of the campaigns.

As discussed, Waste Collectors should be doing more to communicate with their customers and need to provide more information on the correct usage of the 3 bin system, as evidenced by the current levels of contamination. There is, however, a need for an overarching government-run communication campaign that promotes the prevention of waste and how to properly dispose of any waste created. If consumers are receiving different messages from different organisations, it will create confusion. A cohesive message on waste and waste prevention is necessary and while waste collectors could have a role in delivering the message to their customers, the content must be uniform and created by a singular, neutral source.

C9. Construction & Demolition Waste

The Rediscovery Centre, housed in an eco-demonstration facility, has led the way on circular construction and exemplifying material reuse and prevention of waste in construction projects. In collaboration with Dublin City Council, DCCAE, and the Department of Housing, Planning, and Local Government, the Rediscovery Centre received European LIFE funding to demonstrate best practice in sustainable construction, material reuse, and usage of innovative construction materials. In the WISER LIFE+ project, much of the material used in the project was salvaged from the old Ballymun Boiler House and other local construction and demolition projects. The Centre continues to be a physical teaching tool on sustainable building systems and effective material reuse.

The Rediscovery Centre supports the proposal to enact levies on projects that use virgin materials where recycled or reuse materials are available as a feasible alternative. While virgin materials may be easier and cheaper to source, the negative environmental externalities associated with those materials must be considered. Implementing a levy on virgin material would help reflect that negative externality in cost. Subsidies and tax credits should be made available to projects that utilise reuse or recycled materials, to reflect the positive externalities and encourage developers and architects to use those materials when available.

In July 2019, the RDC convened stakeholders and leading thinkers on circular C&D in a Circular Construction Conversation. A key theme of the event was that waste prevention begins at the design phase. **More support must be in place to encourage sustainable design of buildings** and more oversight is needed over the amount of C&D waste produced by a project. Circular principles should be implemented in the curriculum for design and engineering students to ensure that the next generation of buildings is designed for longevity, modularity, recyclability of materials or reuse.

C10. Textiles - Waste and Recycling

The EU Waste Framework Directive requires that Member States establish the separate collection of textiles by 2024. The Rediscovery Centre believes this represents a great opportunity for the Irish government to involve local social enterprises, upcycling and material reuse organisations, and second hand retailers in establishing a new system of collection for textiles. This system should focus primarily on direct reuse or activities preparing the material for reuse, either through supporting the resale of items in second hand retailers or the reuse of the material in upcycling and other innovative reuse operations. This support should provide cost-coverage of non-reusable textiles, potentially via a system in which textiles unsuited for reuse are in turn used to create rag materials.

The prevention of textile waste begins at the design phase. New regulations should be adopted requiring information on new garments sold in Ireland detailing best care, expected lifetime, origin, and environmental

impact. Any products made with virgin material should be subject to a levy on the producer, encouraging the adoption of reused and recycled materials within the industry.

To prevent waste textile, education about the impact of the fashion industry and current consumption is needed. Programmes such as Rediscover Fashion, Relove Fashion or Junk Kouture highlight the impact of excessive clothing consumption and support new ideas for revaluing materials considered waste. In 2019, the Rediscovery Centre also organised a Circular Fashion Conversation with stakeholders from the sector to highlight the need for an overhaul of the fast fashion industry and discuss alternative pathways. Circular business models for fashion, such as clothes rental, reuse, sharing or repair, should be supported to ensure that clothing textiles do not end up in waste.

The RDC is supportive of an EPR scheme for textiles to ensure that producers are affected by what happens to their products during the end of use management. This EPR scheme should be modelled after the French scheme, with eco-modulated fees and costs going towards the sorting of items for reuse and R&D projects focused on innovative ways to recycle used clothing and textiles.³⁵

The Irish government should support the development of an integrated micro-fibre filter for washing machines and, once developed, require all new washing machines sold in Ireland to be fitted with one. This would be a significant step forward in reducing the amount of microplastics infiltrating the water system.

C11. Waste Management Infrastructure

While a national, unified waste management plan can be an improvement to the system, it would need to be a strong lead for waste prevention. Infrastructure for waste management should support facilities for waste prevention, through grants, loans, and favourable policies. There is a large need for physical infrastructure, for storage, sorting, workshops and retail space, to support waste prevention, reuse and repair activities in Ireland.

It is important the plan does not over-invest or lock-in too much capacity for recycling at the expense of prevention or reuse. To support waste prevention and reuse, indigenous recycling infrastructures must support the preparation of materials for reuse and aim to support non-waste facilities for reuse. Any development of new facilities or redevelopment of existing facilities should prioritise reuse over recycling, in line with the waste hierarchy and will be critical to the goal of ensuring materials are not classified as waste in the first place. Developing this new infrastructure will include not only investment in physical spaces, facilities, and equipment, but also in staff training, the creation of new jobs, and other necessary operational activities.

The Rediscovery Centre supports the funding and development of regional indigenous recycling infrastructures as long as infrastructure is in place to support activities that prepare materials for reuse and to support non-waste facilities for reuse.

C12. By-products

Industrial symbiosis and revaluing the by-products of one industrial process as the raw materials of another is an essential component of a transition to a circular economy. Therefore, the Rediscovery Centre supports further research into avenues to safely reintroduce by-products into use. The process to apply for by-

³⁵ https://www.ecotlc.fr/page-297-information-in-english.html

product notification should be clear and timely. Increased resources for the EPA's work on by-product (and end of waste) might be of advantage.

C13. End of Waste

Based on conversations with Irish recycling processors, undertaken through the Rediscovery Centre's research on plastic reprocessing in Ireland, more investment in the End of Waste licensing process is needed. Many processors indicated they would either like to apply for End of Waste or were in the midst of applying for it, but pointed to the lengthy, arduous process for obtaining the license as a major barrier. Most processors concluded they decided simply not to apply for the license. Simplifying or speeding up the application process for End of Waste would perhaps result in more processors availing of the license and consequently, bring about an increase of Irish manufacturers using Irish recyclate in their products.

C14. Exemptions

Under EU legislation, reuse activities are defined as "any operation by which products or components that are not waste are used again for the same purpose for which they were conceived" (https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Reuse of waste). Therefore, reuse operations do not fall under waste legislation and should be strictly kept apart from preparation for reuse and recycling activities.

C15. Extended Producer Responsibility (EPR)

Any new EPR infrastructure must be required to focus on waste prevention and the preparation of material for reuse, in line with the existing waste hierarchy. This focus should be facilitated through significant financial support provided through fees collected in new EPR schemes. This could be modelled on the French example mentioned earlier in section B2. In order to incentivise innovative design and better product performance, the eco-modulation of fees could be introduced to reward those that have taken steps forward that other producers may have not. The EU Waste Framework Directive requires Member States to support eco-design, including encouraging the design, manufacture, and use of products that are resource-efficient, durable (including in terms of life span and absence of planned obsolescence), reparable, reusable and upgradable (Article 9 (1) (b)). The eco-modulation of EPR fees would be an effective means for the government to promote eco-design.

The Rediscovery Centre is supportive of new EPR schemes for furniture, paint, textiles, and other bulky household items like mattresses. These new schemes must prioritise waste prevention and the preparation of the materials for reuse. Current Irish EPR schemes provide little support to prevention and reuse. As a result of the imbalance in subsidies, recycling is currently more viable than activities surrounding preparation for reuse. RDC believes that producers should be held responsible for the end of use disposal and management of their products, but the current organisation of these schemes in Ireland leaves much to be desired. With a renewed focus on prevention and reuse, EPR schemes will be an effective tool to achieve waste and reuse targets and involve all necessary parties in responsible end of use management of products.

The Rediscovery Centre would like to highlight that eco-design and circular design should be related to the overarching circular economy section rather than EPR schemes specifically. Design for, for instance, reuse, recycling, repair, modularity and disassembly, is at the centre of the circular economy. One of the main principles of the CE is to "design out waste" (see section B), so there should a larger focus on supporting circular product and service design across the Waste Action Plan and future Irish Circular Economy policy. This links in with the education and skills needed for a circular economy. An example of promoting circular

design is the NCAD Master scholarship on Circular Product Design, supported by the Eastern Midlands Waste Region and co-hosted at the Rediscovery Centre.

C16. Waste Enforcement

Waste crimes, such as fly-tipping and illegal dumping, are a nuisance to communities and harmful to our urban and rural environments. Ensuring easy access to waste collection services or Civic Amenity Sites will reduce the frequency of such behaviours. The prevalence of littering and illegal dumping, especially in disadvantaged areas, could be potentially curtailed if waste collection was provided by local authorities rather than private companies. Treating waste collection as a public service could decrease the amount of waste crime in Ireland.

C17. Waste Data & Waste Flows

The Rediscovery Centre is strongly supportive of collecting as much waste data as possible, as only 'what is measured can be managed'. The more information available about waste, the better to keep consumers, waste management providers, and the government accountable as they work together to meet new waste targets. Reporting must be uniform and standardised, with a mandated reporting period. Penalties against those who are late or fail to report should be considered.

The Rediscovery Centre is involved in the EPA-funded Q2Reuse research project (http://www.rediscoverycentre.ie/research/qualifying-and-quantifying-the-reuse-sector/) led by the Clean Technology Centre (CTC), in collaboration with the Community Resources Network and the Eastern Midlands Waste Region to develop methodologies for the qualitative and quantitative assessment of the reuse sector. The quantitative data provided by the research will allow Ireland to compare the reuse sector against those of other EU countries and regions and provide a picture of the scale of reuse currently ongoing within the country. This data can be compared to overall material flows, consumption rates, waste arisings and rates of recovery and recycling. The integration of this measurement into EPA reporting and comparison against future prevention and reuse targets should be an important consideration.

The tracking of waste from creation to final destination will be an important step forward in the Irish waste management strategy. While undoubtedly a significant undertaking, with the right infrastructure in place it is possible. For example, MIT ran Trash | Track, a similar project in the United States in partnership with waste management, technology, and communication companies.³⁶ Being able to see the entire lifespan of a material, from production to disposal and end of use outcome, would be beneficial to manufacturers, retailers, consumers, and the waste industry.

C18. Research & Innovation

More research and development funding is needed to study key Irish sectors and their current potential for circular economy projects. Research into industrial symbiosis, behavioural change among commercial enterprises, and circular business models would be beneficial to helping develop a case for the Irish circular economy, especially among non-consumers. Additionally, research such as the Q2Reuse project is needed to assess the state of the Irish circular economy and provide methodologies on how to measure and support it.

³⁶ http://senseable.mit.edu/trashtrack/index.php?id=1

Current research into circular economy projects in Ireland tends to be dispersed. Oftentimes, circular economy projects are only loosely or not at all connected to other projects undertaken across the country. More needs to be done to facilitate collaboration between the many circular economy projects happening across Ireland. The Rediscovery Centre has proposed the establishment of a gateway platform to create a space for collaboration between researchers, organisations, and individuals working towards the Irish circular economy. This would become a clearinghouse for the circular economy in Ireland, centred on knowledge sharing and cooperation.

There is a need to expand the Green Enterprise programme, as businesses will need support (oftentimes financial) if they are to transition to circular practices. A transformation of the economic system will be difficult for many businesses and government should not only provide various supports to businesses during this transition period, but also communicate the opportunities the transition can provide. Solid data and research which show the benefits of a circular economy will help convince businesses and consumers that the circular economy is the best way forward to create a sustainable and equitable society.

C19. Consumer Protection & Market Monitoring

More consumer protection is needed in ensuring that products sold on the Irish market are durable, repairable, and produced in a sustainable manner. This will help reduce the amount of waste created from current products not produced with durability or repairability in mind and will tackle the problem with premature obsolescence. The French Parliament is expected to adopt an "anti-waste bill for a circular economy" enshrining French citizens' right to repair and mandating all electronics sold in France be assigned a repairability score, including information about the price of spare parts.³⁷ The bill will also ban products that are impossible to repair and repair will be encouraged and demonstrated through state action via public procurement.

A leaked draft of the upcoming EU Circular Economy Action Plan indicates the EU Commission is set to introduce the right to repair in consumer law and ban practices such as greenwashing and planned obsolescence.³⁸ Ireland should anticipate these upcoming regulations and include these consumer protection policies in any Waste Action Plan as preventative measures to reduce waste.

C20. Green Public Procurement (GPP)

The Irish Government and local authorities should do more to promote and lead on Green Public Procurement. A main barrier to expanding the adoption of GPP is a lack of policy measures promoting reuse and exchange activities. Policy measures will be critical for underpinning action in this sector and are needed to address the lack of public services facilitating reuse and exchange activities, the negative perceptions surrounding reused materials and item exchanges, liability concerns, the scale of available exchange systems and the reuse sector, and the lack of infrastructure to support exchanges. This lack of infrastructure is especially problematic, as a wide network (including both those donating products and those willing to take products) is necessary for any effective reuse community.

The policies must also address the disparity in cost between refurbished goods and new products, where more labour is required for the refurbishment of existing products. While new products may be cheaper and more appealing to those looking solely at the bottom line, these prices do not reflect the negative externalities

³⁷ https://repair.eu/news/major-steps-taken-for-durability-and-right-to-repair-in-france/

³⁸https://www.euractiv.com/section/circular-economy/news/leak-eus-new-circular-economy-plan-aims-to-halve-waste-by-2030/

associated with buying products made from virgin material nor the positive externalities of refurbishing existing goods through local and social enterprises. The relevant departments in the government and local authorities should lead by example on GPP. This can be accomplished by beginning work with SMEs on GPP projects as soon as possible.

A successful example of Green Public Procurement that promotes the circular economy and social enterprises can be found in the refurbishment of the National Waste Collection Permit Office in Tullamore in 2019. The RDC supported the Community Reuse Network Ireland, together with Back2New in with fitting out 16 work stations, two meeting rooms, a staff canteen, a lobby, and an outdoor seating area with upcycled furniture, recycled paint, and other reused materials. In total, 97 items of furniture were provided, saving approximately 2.6 tonnes of CO2.

C21. Household Bulky Waste

The Rediscovery Centre would like to note that several of the reuse support measures set out in the section are highly welcome. This includes a reuse target for IT and large household appliances, a reduction in VAT for repair and reuse, and appropriate reception facilities in Civic Amenity Sites. However, all these measures would also be greatly beneficial to other product and material categories and should not be limited to bulky waste only.

Civic Amenity Sites should invest in facilities and create Reuse Centres that properly store items with trained staff, thus making the sites more accessible for reuse and exchange systems (see also section C3). This should involve the acceptance of household bulky waste, including items of furniture, large appliances, and plumbing fixtures. Should these Reuse Centres prove successful, there is the potential for **introducing a monthly bulky waste collection service for items fit for reuse**. In both instances, these services should be available to the consumer at a low cost.

More must be done to ensure appropriate end-of-life disposal for household bulky waste. This will include requiring consumers to pay more to dispose of items no longer fit for reuse or exchange. The full burden of the cost should not be placed solely on the consumer. It is essential that it is shared between consumers, retailers, and producers to ensure that everyone has responsibility regarding what happens to products at the end of their usage. This might be connected to new EPR schemes for furniture to ensure producers are made responsible for the end-of-use of their products. Here, eco-modulation fees might be relevant to ensure hazardous materials are phased out and items can be reused, repaired, refurbished or recycled.

C22. Bioeconomy

The bioeconomy has an important role to play in any circular economy, especially when dealing with agricultural and animal waste and by-products. With the release of the National Policy Statement on the Bioeconomy in 2018, it is important that proposed actions are implemented in concert with any future Irish circular economy plan. Both the bioeconomy and the circular economy are conceptually linked and the "shifting of non-renewable resources to biomaterial is an important innovation aspect of the circular economy agenda" (https://www.eea.europa.eu/publications/circular-economy-and-bioeconomy). It is crucial for the circular economy that any bioeconomy systems use unwanted products and do not create additional demand for food products that otherwise would not exist or drive unsustainable practices. The government needs to ensure a people first policy in the development of a bioeconomy based on agricultural outputs.

The Rediscovery Centre views an Irish bioeconomy as a promising component of a circular economy, as long as it is implemented in a truly circular and sustainable manner.