

**Department of Environment Food and Rural Affairs**

**Review of Waste Policies: 'Working Towards a Zero Waste Economy'**

**Submission for the 'Call for Evidence' on behalf of 2020 Zero Waste Project**

**Foreword**

**This submission reports on a zero waste initiative which, whilst based in the West Midlands, aims to make a contribution to the national waste management programme. The '2020 Zero Waste Project' has taken the first steps towards the development of a zero waste network and plans to promote the establishment of a Residual Screening and Research Centre. Such initiatives could help provide the mechanisms for answering the questions: 'What should the nation's ambitions for waste management be? What do we need to do to achieve a 'zero waste economy'?' (Waste Consultation 2.3)**

This 2020 Zero Waste Project has drawn together some main stakeholders involved in the waste sector; from public bodies, representatives from business and commerce, environmental NGOs, academic and professional bodies. Its first two meetings have been addressed by Professor Paul Connett and by Peter Jones OBE respectively.

Prof Connett's power-point address to the UN; 'Zero Waste: Theory and Practice around the World' is attached and below (1) is an extract from his article 'Zero Waste: A Key Move towards a Sustainable Society'. Also attached is the Power-point given by Peter Jones, 'Energy – Powering forward. The Challenges' and the article 'No Time to Waste' which discusses his ideas.

**Introduction**

The aims and scope of the DEFRA Waste Review puts a zero waste economy at the centre of sustainability; for environmental protection, economic renewal and for addressing climate change. The Government's has made its ambition for wider social involvement; of localism and the big society; integral to its proposed waste strategy.

The call for the world's first Residual Separation and Research Centre arises because of the need to examine the waste which at present is classed as 'residual' and mostly treated by disposal. By separating this non-recyclable fraction into its component parts academic and professional bodies could work together with business and commerce on the best way to treat each stream; finding alternative uses for materials through to better industrial design. A zero waste centre would bring the best of waste practice together in one place and be responsive to the rapid developments in waste technology thereby suggesting answers to the question, 'What?' (Waste consultation part 4.) It would advance the goals of a zero waste economy by providing a model of interaction between all stakeholders who are involved in and will be agents for the transition from a wasteful to a resourceful society. (Section 4 'How?')

## **(1) Residual Separation and Research Facility**

The residual fraction is the key difference between waste disposal (landfills and incinerators) and the Zero Waste Strategy. The former attempts to make the residuals disappear, the latter needs to keep them very visible. The residual fraction represents our non-sustainable mistakes, either through citizens' poor purchasing decisions or through poor industrial design. We need these residuals kept visible if we are to move towards a sustainable society. We need to study our mistakes.

Thus in the Zero Waste Strategy the residuals need to be sent to a Residual Separation and Research Facility and not for incineration or directly to a landfill.

### **Residual Separation**

Traditionally the approach to resolving the problems posed by landfills has been to apply more and more sophisticated engineering to landfills in an effort to contain both gaseous and liquid effluents (leachate). This has involved daily cover, methane capture, and lining and leachate collection systems. Essentially, the goal has been to control what comes out of landfills, willy-nilly of what is put into them. The Zero Waste approach sets out to control what goes in. If we can get very good at keeping both toxic and biodegradable materials out of landfills, we might be able to return to the notion of filling holes in the ground like old quarries without environmental complications. With this screening approach we can certainly make landfills much smaller than raw waste landfills and a lot safer than incinerator ash landfills.

However, there is more we need to do in a Zero Waste programme than landfilling this nontoxic material. We need to carefully observe and study the currently non-recyclable fraction left in the residuals. This gives us our first opportunity to integrate zero waste with the educational system.

We need to build a research centre at the Residual Screening Facility. In this research centre Professors and students with various interests in a sustainable future (industrial design, ethical advertising, urban and community development, economics, environmental management and global degradation) could study the non-sustainable mistakes of today's society and propose future solutions.

Such research activities and recommendations could involve suggestions for:

1. Improving capture rate of reusables, recyclables and clean compostables in the door to door collection systems
2. Advocating waste avoidance strategies for local businesses
3. Developing some local uses for some materials
4. Developing alternatives to some of the toxics in products (batteries, paint, solvents etc)
5. Offering better industrial designs to industry on packaging and products

It is the Residual Screening and Research Facility that represents the key interaction between individual, community and industrial responsibility for a sustainable future. It takes the form of this simple but very important message from the community to industry: "if we can't reuse

it, recycle it or compost it, you shouldn't be making it and we shouldn't be buying it. We need better industrial design for the 21<sup>st</sup> Century.”

As we think about integrating waste (or rather resource) management with the educational system, it is important to stress that waste is too important a matter to leave to 'waste experts'.

The attraction of Zero Waste as a tool to advance towards sustainability is that every human being is involved with the problem, every day. Every day we make waste we are part of a non-sustainable way of living on the planet and every day we “unmake waste” by separating our discarded materials, and by avoiding unnecessary products and packaging, we are part of a sustainable way of living on the planet.

Moreover, the Zero Waste movement can be linked to the other demands of a sustainable future. We need to integrate those working on this issue with many other sectors in society. It is easy to see how this can be done: composting can be linked to sustainable agriculture; anaerobic digestion can be linked to sustainable energy; deconstruction can be linked to green architecture; the residual screening and research facilities are clearly linked to education and better industrial design; the reuse and repair centres can be linked to community development and the whole program can be linked to sustainable economic development and job creation.

## **(2) 2020 ZERO WASTE PROJECT**

(A draft aims and vision for consultation regarding this project.)

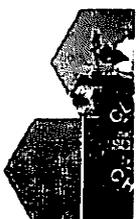
In a world of finite resources, with growing population and consumer demand generating ever more greenhouse gas emissions, a paradigm shift is imperative for the transition to a low carbon, sustainable future.

This project aims to promote resource efficiency through knowledge, skills and innovation in the critical sector of 'waste' management. It will require a holistic approach; from lifecycle analysis to lifestyle change to redress unsustainable production and consumption.

'Zero Waste' represents the ultimate use of waste as resource and maximises energy and CO<sub>2</sub> gains. It replaces the present linear chain of material use: extraction, manufacture, distribution, consumption; waste.

The establishment of A 2020 Zero Waste Network would aim to establish an initial 'Zero Waste' Centre. By integrating academic and technical expertise in one place, the currently non-recyclable fraction of waste could be studied and solutions devised.

A future Residual Screening and Research Facility would allow the latest technologies to extract the greatest amount of recyclate and value from each waste stream. When it is not possible to 'reduce, re-use or recycle' something then responsibility would be returned from the 'back end of waste management' to the 'front-end of industrial design'.



This project would establish a central hub, with office facilities and team to develop this, as well as a network of volunteers. It would be complemented by a virtual network linking relevant partners and projects, locally and globally, from business, public sector and community.

**Submission on behalf of 2020 Zero Waste Project**

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