

Throwing away jobs

How investment in re-use and re-manufacturing industries could drive a UK low carbon industrial strategy

Briefing Paper, May 2009

Executive Summary

1. Re-use and re-manufacturing industries are essential to decarbonising UK industry, refurbishing our buildings and creating the foundations for a low carbon economy. The current approach, which wastes “carbon capital”, isn’t working.
2. For every 1 job created by throwing waste away, and 3 created by incineration, 25 jobs can be created in re-use and re-manufacturing.
3. The Government is missing opportunities to create jobs in these industries.
4. BioRegional’s recent research and practical demonstrations of solutions provide a model for government policy in this area.

Embodied carbon

The majority of energy and climate change policy in the UK focuses on energy in use – in our homes, factories and other industrial processes.

But the energy required to meet our consumption of goods and services – including food, consumer goods, construction materials and more – is comparatively neglected. Many goods are produced outside the UK’s borders, making it difficult to address their manufacture through UK policy. But with the Government considering major construction works as part of the solution to the recession, and with their development of a low carbon industrial strategy, the carbon embodied in UK industry’s activities and outputs should become a major policy focus.

Reducing the need to manufacture new products by improving durability, reducing waste and re-manufacturing old into new, should be a key component of any low carbon industrial strategy. This approach will also create more jobs.

Investment in the UK waste sector tends to focus on landfill diversion through recycling and incineration. This “downcycling” of materials fails to tackle waste reduction – top of Defra’s waste hierarchy – and wastes much of the carbon capital embodied in materials that could be re-used.

Low carbon industry parks

Existing eco-industry parks for waste have focused on downcycling and burning. Low carbon industry parks should use social enterprises – which focus on the top of the waste hierarchy¹ – to provide the products and services for low carbon construction, refurbishment and renewable energy industries.

Public investment in industrial parks that prioritise re-use and re-manufacture could address the market’s failure, compounded by distortions created by public investment in recycling and incineration. Co-locating re-use and re-manufacturing businesses and social enterprises with subsidised provision of land and infrastructure would incentivise this sector through economies of scale, and encourage collaborative opportunities in providing the products and services for other parts of the Government’s low carbon industrial strategy.



Other low carbon manufacturing, reuse and recycling industry would create an “industrial ecology” where wasted carbon is avoided².

The UK cannot transition to a low carbon future without low carbon industry.

BioRegional has worked in the East Midlands with the Regional Development Agency and social enterprise sector to complete a detailed proposal and business plan for an industrial ecology park³.

¹ LCRN (2008) [Reuse Capacity in London](#)

² For example, local loop recycling like [The Laundry](#)

³ Available on request until public, contact [Tom Chance](#).

Low carbon construction & refurb

The UK is being encouraged to build our way out of the recession⁴. If we are to reinvigorate the construction industry with public investment, and refurbish every building to high energy efficiency standards, UK industries will be using vast quantities of materials in energy-intensive processes.

Materials and processes in constructing, maintaining and demolishing / deconstructing our built environment account for 15% of our CO₂ emissions⁵ and 32% of waste arisings⁶. We shouldn't hold back from refurbishment programs, but the Government must address the market's failure to address this to reduce the "carbon emissions bump" that will result from construction and refurbishment.

BioRegional is establishing a network of ReLY social enterprises – re-use it yourself shops that take surplus materials (reducing waste) and waste materials (enabling re-use) and sell them on⁷.



A volunteer in Madison ReStore, the model for BioRegional's chain of ReLY stores in the UK

Reclamation "megayards" located in industrial ecology parks would enable this waste reduction and re-use strategy for big items such as the reuse of Olympic Park materials after the games, and large long-term construction projects for eco-towns and the Thames Gateway.

BioRegional has published research and guidance on the potential for material reuse and remanufacturing⁸. But currently reuse is declining in the UK⁹, and the cost of land combined with the expense of brokering partnerships is holding the ReLY and megayard models back. These could be addressed by the right low carbon industrial strategy.

⁴ See [The Great British Refurb](#) campaign and the Government's [Heat and Energy Saving Strategy](#) consultation

⁵ REAP data from the Stockholm Environment Institute.

⁶ Defra (2007) [Waste Strategy](#)

⁷ See the [ReLY web site](#) for more information.

⁸ See BioRegional's relevant [publications](#)

⁹ See the [BigRec Survey 2008](#)

Throwing away jobs

Guidance from the European Commission shows that recycling and re-use creates 25 times as many jobs as landfill, and 8 times as many jobs as incineration¹⁰.

Whilst Defra provides £2 billion to subsidise PFI waste projects¹¹ which focus on recycling and incineration, there is much less direct investment in low carbon re-use and re-manufacturing industry.

There are also few policy drivers to encourage waste reduction and re-use before recycling; and almost no incentives to reduce the embodied carbon in construction and refurbishment activities.

Policy recommendations

1. Provide public land for low carbon manufacturing parks, with investment in infrastructure and prioritised business support for low carbon industries. Optionally cede the park to a community land trust owned by the park's industries¹²;
2. Place requirements on local authorities to develop reduction, re-use and remanufacturing strategies for business waste, provide resources to assist them and create a new national indicator as part of Local Area Agreements;
3. Enable and encourage local authorities to invest directly in local low carbon industries where this will gain a reasonable rate of return;
4. Incorporate re-use and re-manufacturing into the low carbon industrial strategy.

About BioRegional

BioRegional is an entrepreneurial charity which invents sustainable products, services and production systems, and initiates the development of sustainable communities.

We deliver our practical sustainability solutions by setting up new enterprises and partnerships around the world. We assist and encourage others to achieve sustainability through consultancy, education and informing policy.

Our aim is to lead the way to sustainable living through practical demonstration.

Contact [Freya Seath](#) for further information.

¹⁰ European Commission (2005), [Taking sustainable use of resources forward: A Thematic Strategy on the prevention and recycling of waste](#).

¹¹ HM Treasury press release (3rd March 2009), [Safeguarding Government infrastructure investment](#)

¹² Similar to [DCLG policy](#) for communities and land assets;