

# Building Material Reuse Centres Business Plan

Jonathan Essex, BioRegional  
Lewis Herbert, WasteWise

[www.bioregional-reclaimed.com](http://www.bioregional-reclaimed.com)

An initiative from:



Funded by:



# presentation outline

---

1. Introduction – Environmental imperative
2. Why Reclaim?
3. The Business Opportunity
4. The Response
5. Creating a UK model
6. Reuse in Middlesbrough

***BioRegional***

BioRegional Consulting



***BioRegional***

BioRegional Consulting



# serious about property?



**UK ■ Overseas ■ Residential ■ Commercial**





# Some numbers

- 19% of the UK ecological footprint.
- 23% of the UK carbon footprint (embodied energy, transport, construction, maintenance and demolition of the built environment).
- 32% of the UK total waste stream. Of this 90 million tonnes for construction and demolition, 69% is recycled or re-used.
- 30% of UK freight transport. Building materials accounted for 15% of total tonne-km by road and 13% by rail.



One Planet Living® is a global initiative based on 10 principles of sustainability developed by BioRegional and WWF. BioRegional are working with partners on One Planet Living communities and other exemplary projects.

[www.bioregional.com/oneplanetliving](http://www.bioregional.com/oneplanetliving)

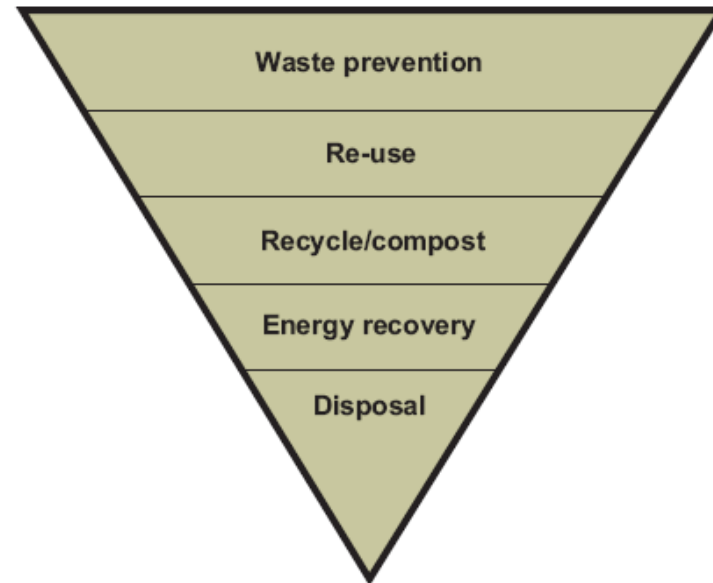
**BioRegional**

BioRegional Consulting

# UK Waste Hierarchy

## Defra Waste Strategy:

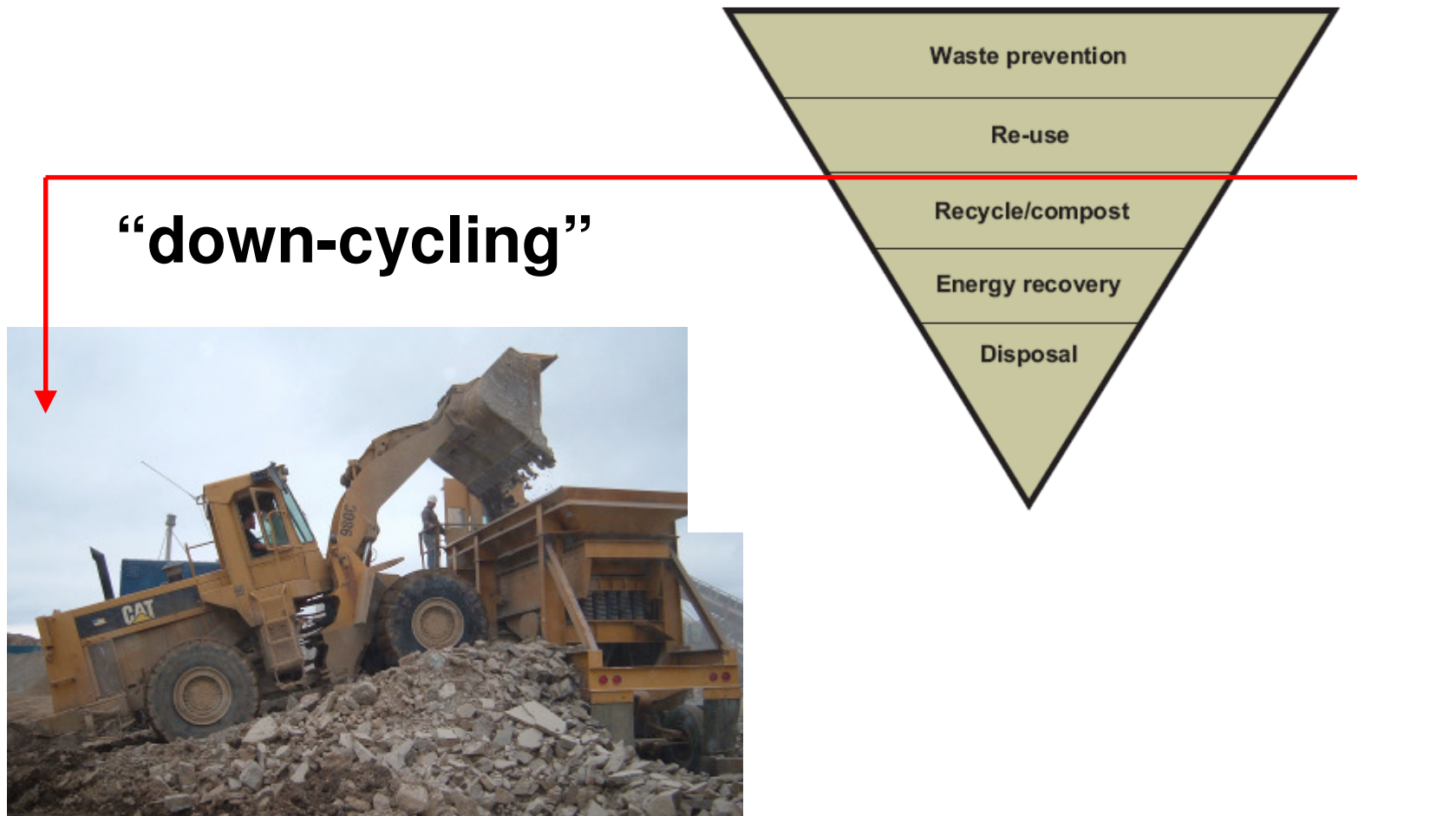
As a society, we are consuming natural resources at an unsustainable rate. If every country consumed natural resources at the rate the UK does, we would need three planets to live on. The most crucial threat is from dangerous climate change. Our goal is to make the transition towards what the WWF and BioRegional call '**One Planet Living**'.



**BioRegional**

BioRegional Consulting

# Current mainstream practice



**BioRegional**

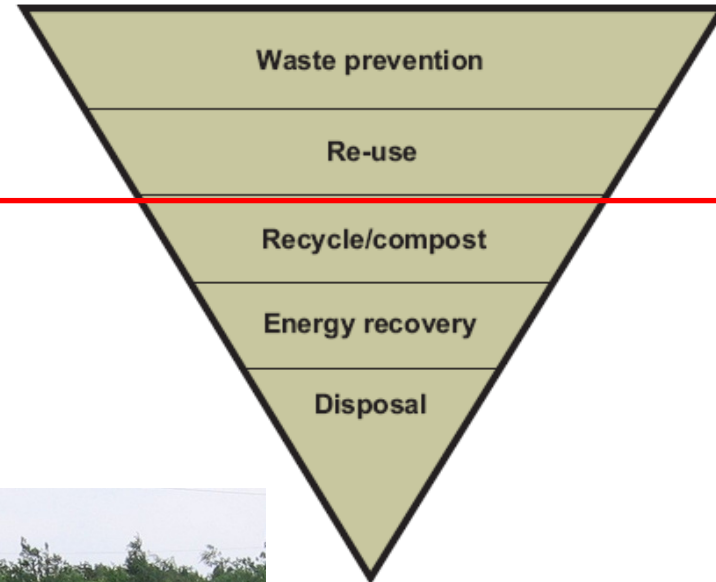
BioRegional Consulting



# Starting at the Top

## Reclamation hierarchy for demolition materials

1. Minimise demolition waste
2. Re-use on site
3. Re-use off site
4. Recycle
5. Energy from waste
6. Landfill



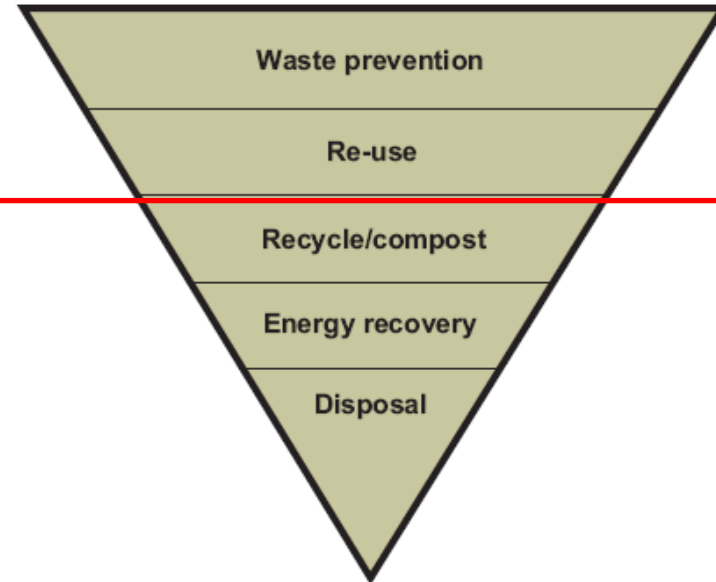
**BioRegional**

BioRegional Consulting

# Why Reclaim?

Saves energy and waste

Saves waste



*“Reclamation reduces climate change impact not just stops waste going to landfill.”*

**BioRegional**

BioRegional Consulting

# Legislative Drivers – UK, EU

- EU policy (From 2000, leads UK targets, TG39)
- National policy, Waste Strategy, 2007
- New Site Waste **Management** Plans, 2007
- Specifying reclaimed - WRAP, BREEAM and Code for Sustainable Homes
- Planning guidance (national, regulation, local)
- Public sector, council and project targets

*“Reclamation reduces climate change impact not just stops waste going to landfill.”*

**BioRegional**

BioRegional Consulting



# Why Reclaim?

---

So... Reclaiming and reusing = highest form of recycling

- Massive untapped sustainable resource
- Diverting waste and closing the loop
- No energy intensive reprocessing

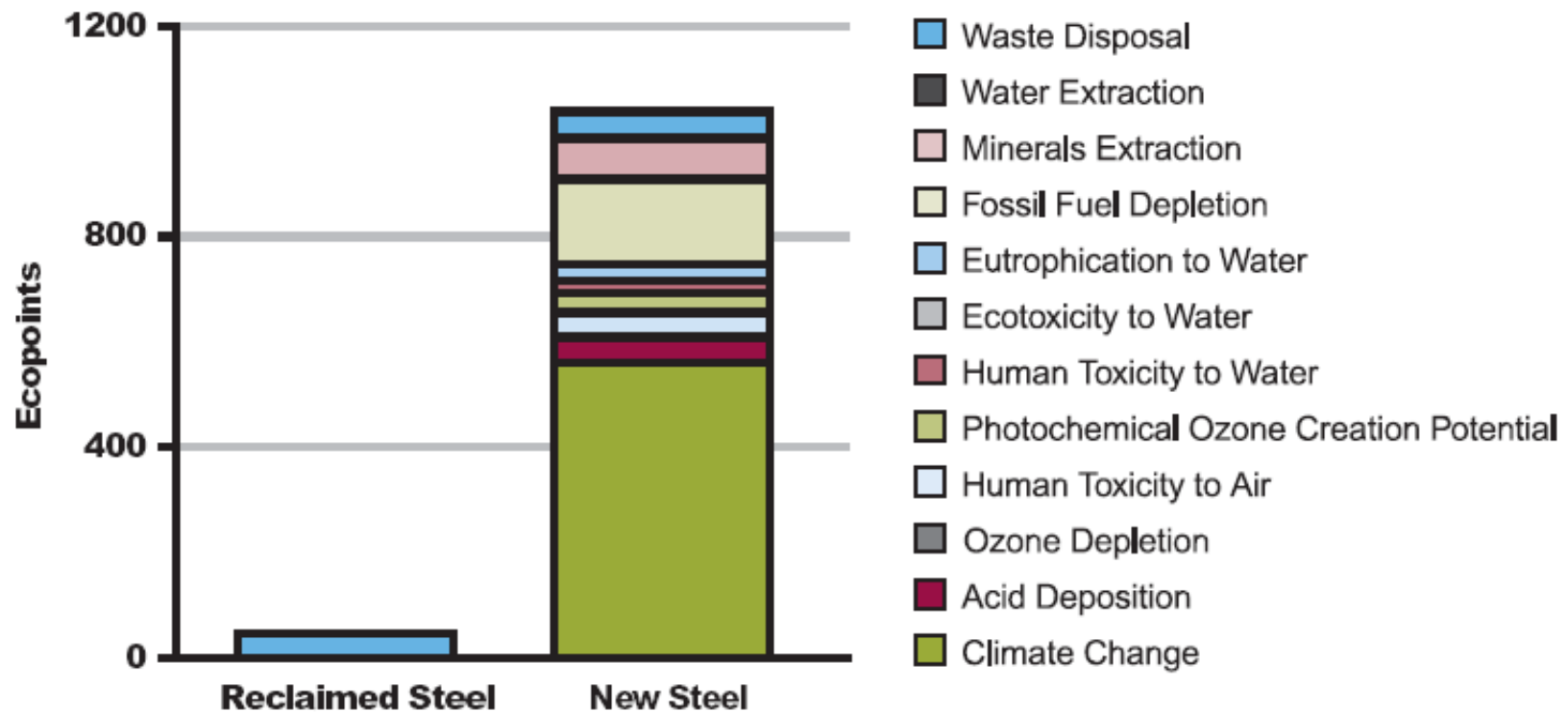
## Bricks

- Embodied CO2 – 878kgCO2/tonne
- Crushed for reuse
- Replaces virgin material
- Saves 16kgCO2/tonne as hardcore
- 98% resource expenditure

**BioRegional**

BioRegional Consulting

# Overall environmental benefits



*Bar chart showing the 96% environmental impact saving by reclaiming and reusing steel sections*

**BioRegional**

BioRegional Consulting

# Example: Reclaimed timber

---

- Sourced from reclamation yards
- Or taken directly out of demolition jobs
- Or from refurbishment

Joists can be:

- Reused as joists or
- Milled into floorboards

Studwork:

not structural or visible

54km at BedZED

carbon benefit, cost neutral



**BioRegional**

BioRegional Consulting



# The Business Opportunity: Building Material Reuse Centres



Key Opportunity?

**BioRegional**

BioRegional Consulting

# Building Material Reuse Centres – US Example



<http://www.re-store.org/ballard.htm>

**BioRegional**

BioRegional Consulting

# Building Material Reuse Centres – US Example



*Habitat ReStore, Madison, Dane County, Wisconsin,*

<http://www.restoredane.org/>

**BioRegional**

BioRegional Consulting



# Building Material Reuse Centres – UK Pioneers

## SALVO

ARCHITECTURAL SALVAGE & ANTIQUES, doors, fireplaces, furniture, gardens, glass, ironwork, kit lighting, radiators, stone, windows and woodwork. RECLAIMED BUILDING MATERIALS, beams, bricks, flagstones, flooring, roof slates and tiles, timber. Some new, replica and reproduction. DEALERS & UK [salvo.co.uk](http://salvo.co.uk) & WORLDWIDE [salvoweb.com](http://salvoweb.com)



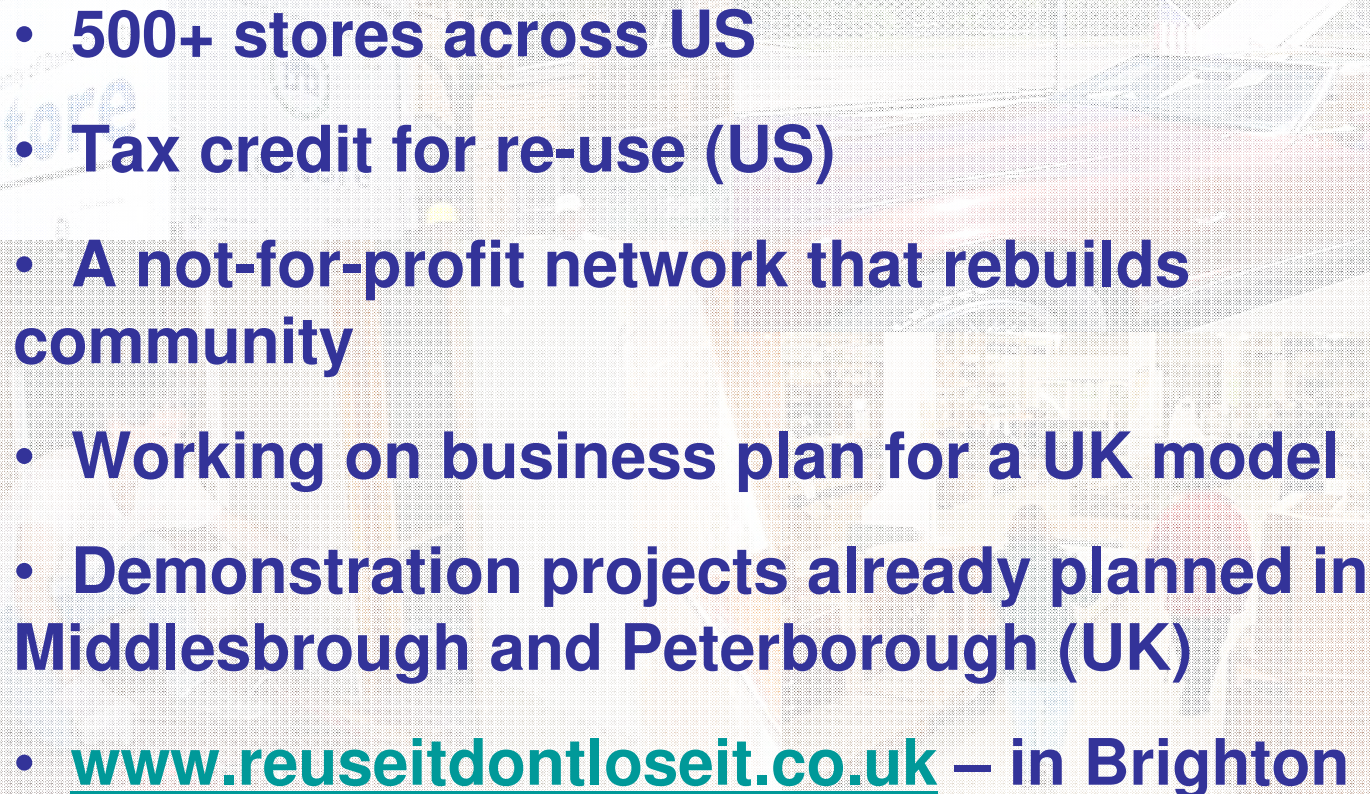
GREEN-WORKS



**BioRegional**

BioRegional Consulting

# Building Material Reuse Centres – Reclaiming our homes

- 
- 500+ stores across US
  - Tax credit for re-use (US)
  - A not-for-profit network that rebuilds community
  - Working on business plan for a UK model
  - Demonstration projects already planned in Middlesbrough and Peterborough (UK)
  - [www.reuseitdontloseit.co.uk](http://www.reuseitdontloseit.co.uk) – in Brighton

**BioRegional**

BioRegional Consulting

# Response

- Around 70 responses (social enterprises, small businesses, networks and local authorities)
- Actively engaged with furthest forward to develop the business plan
- Discussing potential for reuse centres as part of new developments
- Interest in up-scaling this to develop business plan for large-scale reclamation.

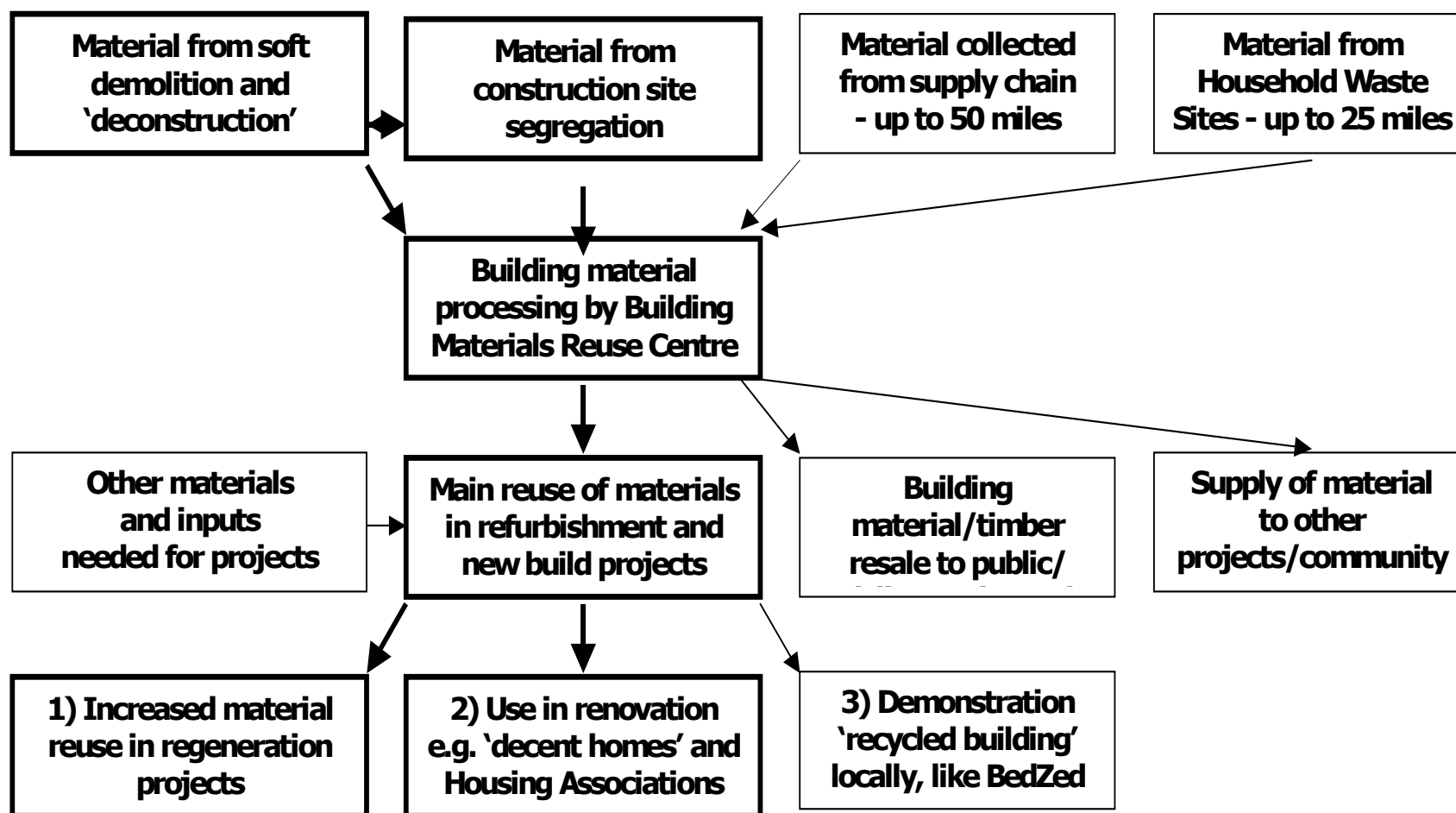


# Next Steps

- Site specific business plans
  - Pioneer projects established
  - Develop range of alternative models
  - Replication to all major UK centres
  - Business Plan for MegaYards
- (large scale reuse for construction materials)



# POTENTIAL MATERIAL FLOWS THROUGH BMRC



**BioRegional**

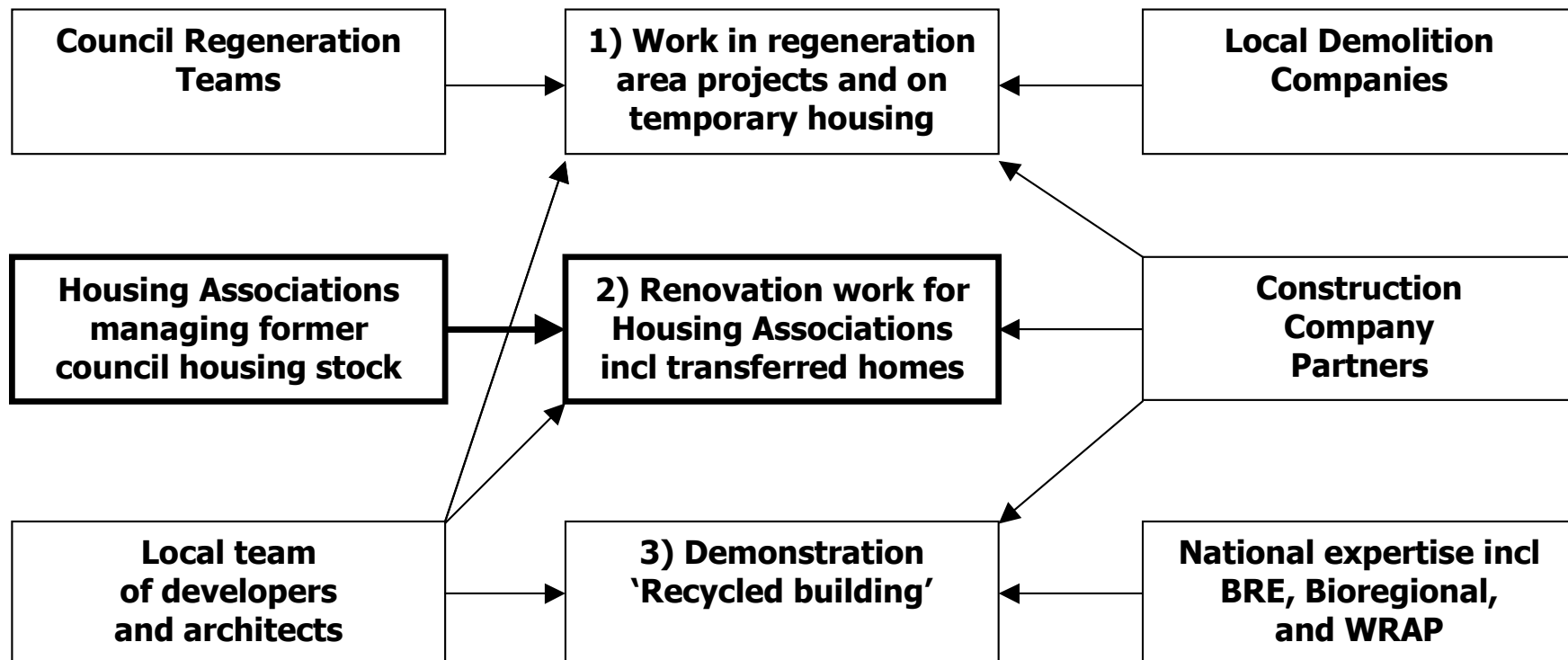
BioRegional Consulting

## WIDE RANGE OF TEES VALLEY/NE BMRC PARTNERS

### TEES VALLEY CLIENTS

### THE THREE 'OUTPUTS'

### LOCAL/LARGER DELIVERY PARTNERS



**BioRegional**

BioRegional Consulting



# FINANCIAL ANALYSIS IN BUSINESS PLAN TOOLKIT

US BMRC data/experience

- Madison BMRC, Wisconsin detailed data
- income analysis, costs and surplus
- two stage development
- start up, year 2 and Year 6 data

UK BMRC projections with local costs e.g. SE and Middlesbrough & key differences from US

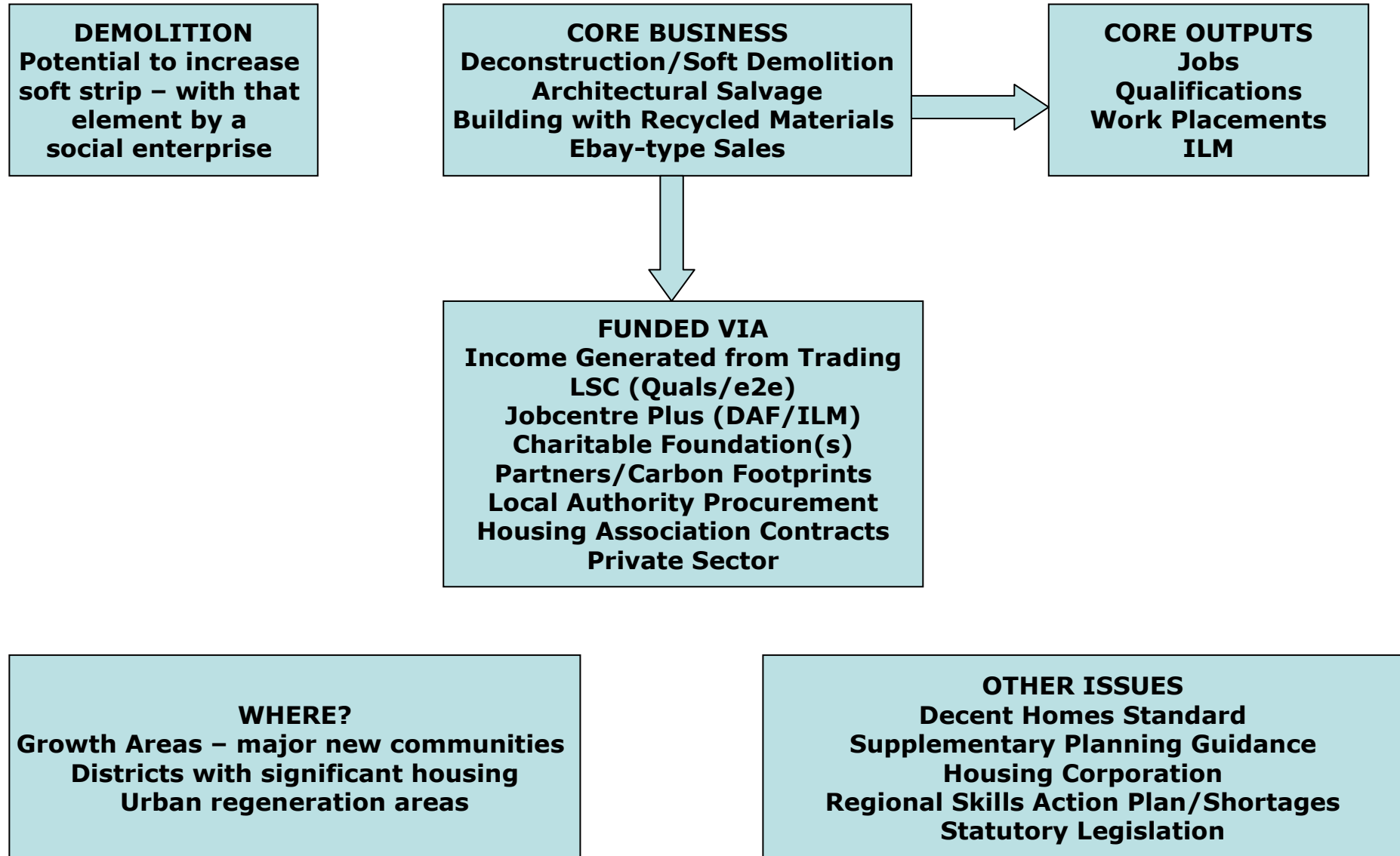
UK comparators

- architectural salvage companies
- community wood reuse projects

**BioRegional**

BioRegional Consulting

# Community Campus BMRC Perspective - Knitting Outputs Together



# Linking to Regeneration ... Masterplan for Middlehaven, Middlesbrough



Iconic buildings + zero carbon ...  
to transform brownfield site



Tees Valley

new energy + recycling = new opportunities

# Middlehaven dimensions

- Investment of £200 million
- 1,000 new jobs
- 750 homes designed by top architects
- One million sq ft of quality development
- First rate shops, stylish bars, cafés & restaurants
- High specification offices
- Luxury hotel



Tees Valley

new energy + **recycling** = new opportunities



# Understanding how to make reused materials attractive for Middlehaven

- Standard specification materials e.g. paving slabs
- No re-processing needed e.g. timber lengths/specs
- Price benefits compared to new stock
- Delivered from within a small radius
- Availability of nearby cost-effective storage
- Flexibility built into contracts with developers

# Reuse opportunities at Middlehaven

- Value of linking the site to the area's heritage
- Relating the site also to the adjacent landscape
- Opportunities for creating buildings and external spaces with character as well as bold new designs

## ASSISTED BY REUSED MATERIAL

- On site materials from demolition
- Opportunities from quality NE salvaged material
- Over 5000 brick 2 bed terraces being demolished within delivery catchment



new energy + **recycling** = new opportunities

## Conclusions

- Reuse then recycling
- Cross sector partnering/skills sharing
- Sustainable regional reuse businesses (BMRCs)
- Opportunity in both regeneration and growth areas

... Any questions?

---

**BioRegional**

BioRegional Consulting

---