Building Material Reuse Centres
Business Plan

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www.bioregional-reclaimed.com
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
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
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’.
Current mainstream practice

“down-cycling”
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

Triangle Diagram:
- Waste prevention
- Re-use
- Recycle/compost
- Energy recovery
- Disposal
Why Reclaim?

Saves energy and waste

Saves waste

“Reclamation reduces climate change impact not just stops waste going to landfill.”
Legislative Drivers – UK, EU

- EU policy (From 2000, leads UK targets, TG39)
- 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.”
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
Overall environmental benefits

Bar chart showing the 96% environmental impact saving by reclaiming and reusing steel sections
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
The Business Opportunity: Building Material Reuse Centres

Key Opportunity?
Building Material Reuse Centres – US Example

http://www.re-store.org/ballard.htm
Building Material Reuse Centres – US Example

http://www.restoredane.org/
Building Material Reuse Centres – UK Pioneers

SALVO
ARCHITECTURAL SALVAGE & ANTIQUES, doors, fireplaces, furniture, gardens, glass, ironwork, kitchen 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 & WORLDWIDE salvoweb.com

GREEN-WORKS

Children's Scrapstore and Artrageous

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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.reuseitdon'tloseit.co.uk – in Brighton
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)
Improving economics

Long-term plans to eliminate need for a tax break

BioRegional Consulting
POTENTIAL MATERIAL FLOWS THROUGH BMRC

Material from soft demolition and 'deconstruction' → Material from construction site segregation → Building material processing by Building Materials Reuse Centre

Material collected from supply chain - up to 50 miles → Material from Household Waste Sites - up to 25 miles

Building material/timber resale to public/Neighbourhood centres → Supply of material to other projects/community

Main reuse of materials in refurbishment and new build projects → Other materials and inputs needed for projects

1) Increased material reuse in regeneration projects
2) Use in renovation e.g. 'decent homes' and Housing Associations
3) Demonstration 'recycled building' locally, like BedZed

Material from Household Waste Sites - up to 25 miles
WIDE RANGE OF TEES VALLEY/NE BMRC PARTNERS

TEES VALLEY CLIENTS

- Council Regeneration Teams
- Housing Associations managing former council housing stock
- Local team of developers and architects

THE THREE ‘OUTPUTS’

1) Work in regeneration area projects and on temporary housing
2) Renovation work for Housing Associations incl transferred homes
3) Demonstration ‘Recycled building’

LOCAL/LARGER DELIVERY PARTNERS

- Local Demolition Companies
- Construction Company Partners
- National expertise incl BRE, Bioregional, and WRAP
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
Community Campus BMRC Perspective - Knitting Outputs Together

**CORE BUSINESS**
- Deconstruction/Soft Demolition
- Architectural Salvage
- Building with Recycled Materials
- Ebay-type Sales

**CORE OUTPUTS**
- Jobs
- Qualifications
- Work Placements
- ILM

**FUNDED VIA**
- Income Generated from Trading
- LSC (Quals/e2e)
- Jobcentre Plus (DAF/ILM)
- Charitable Foundation(s)
- Partners/Carbon Footprints
- Local Authority Procurement
- Housing Association Contracts
- Private Sector

**DEMOLITION**
Potentials to increase soft strip – with that element by a social enterprise

**WHERE?**
- Growth Areas – major new communities
- Districts with significant housing
- Urban regeneration areas

**OTHER ISSUES**
- Decent Homes Standard
- Supplementary Planning Guidance
- Housing Corporation
- Regional Skills Action Plan/Shortages
- Statutory Legislation
Linking to Regeneration …
Masterplan for Middlehaven, Middlesbrough

Iconic buildings + zero carbon …
to transform brownfield site
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
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
Conclusions

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

... Any questions?