

Generic Business Plan for a new UK Building Material Reuse Centre (BMRC)

Including resources for developing a site specific plan



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Executive Summary

This business plan responds to the opportunity to reduce the widespread wastage of unused and reclaimable products within the building industry, in ways that maximise carbon reduction and benefit the local community.

This is a generic business plan for establishing a financially sustainable Building Material Reuse Centre (BMRC). This is designed as a “not-for-profit” venture, initiated with grant funding and/or in-kind support but reaching financial sustainability within five years. This business opportunity complements trends within the UK’s salvage industry - which is increasingly focusing on “high-end” architectural salvage and new and replica products. The BMRC aims to mainstream the DIY retail market for many of the lower value reusable building products that are increasingly being *downcycled* into lower value applications such as aggregate and wood chip.

A Financially Sustainable Business Model

The model for a BMRC is set out as a retail-focused business with wider services attached. The core revenue is from selling building products to both the general public and smaller trade customers at reduced prices. Products are predominantly sourced from the building industry’s waste stream through a competitively priced site clearance and collection service. The main sources include construction-site excess products (as new), retail end-of-line products (new) and demolition-site products that are often considered too low value to be reclaimed (second use).

The business structure is a social enterprise staffed by a small employed management team and a large trainee and/or volunteer workforce. The BMRC will adopt a retail-led approach utilising high quality stock display, environmental/ethical product labelling and electronic inventory (optional) to provide an exciting retail experience. Additional deconstruction and building maintenance services, and training will increase financial viability. The core income streams proposed are from:

- Skip hire, site clearance and collection service;
- Product sales to public and trade customers; and
- Charged services including vocational training programmes, deconstruction and maintenance work.

The BMRC concept has the potential to lead to financially sustainable social enterprises, but is financially marginal in its early years. The financial model presented estimates that a successful BMRC is dependent on the provision of training and wider services. Sales of reusable products alone are not predicted to cover total expenditure within five years of operations. The model estimates reaching financial sustainability by year five through initial grant support of 7-10% of turnover. During this period, the model estimates an 80% increase in total income through expansion of remanufacturing activities, wider services and training, and the breadth of product range. The BMRC is estimated to require an initial investment of £100k to cover capital purchases and to implement an approved site specific business plan. Where upfront capital funding is secured; grant income can be reduced.

The model is based on a number of assumptions for potential supply and sales. Local projects or networks investigating the viability of a BMRC will need to undertake detailed local analysis before any project decides to proceed.

Sector Analysis

The DIY retail industry is worth an estimated £8bn a year. Whilst growth of sales has begun to show contraction in the last few years; there are emerging growth areas in ethical and environmental products. The BMRC approach and stock range should

allow it to compete well on both these factors. Taking a retail-led approach, learning from the DIY sector, will allow the BMRC to reach a wide range of customers in both the general public and trade sectors.

There are a well established and growing number of social enterprise operations focussed on reuse and recycling. National bodies have emerged to represent and support specific elements of these. As yet, the areas of building products and site waste are not fully addressed. Various sector bodies and individual organisations have expressed interest in collaboration and knowledge sharing. This is a vibrant sector that is willing create mutual benefits from cost sharing and network support.

The construction industry is the single largest source of waste within England. The combined impacts of the embodied carbon and use of building products (over £30bn worth a year) is estimated to make up one fifth of the national carbon footprint; with their transport alone making up a third of all road freight traffic. Reuse of building products reduces waste and maximises carbon savings. Yet an estimated 13% of all building products that arrive on site end up as waste (14 million tonnes a year). The greatest opportunities for reuse appear to be from the house building sector.

Legal Drivers and Wider Opportunities

The overall impact of current government waste incentives is to reduce the amount of building products that are reused in the UK. The landfill tax escalator is increasing incentives to avoid waste to landfill. Unfortunately, recycling incentives are making it more economic to crush, scrap and burn materials rather than reuse them as products. Perverse incentives are currently leading to a reduction in reuse.

Site Waste Management Plans, introduced in 2008, will help a change in culture by prioritising on-site waste segregation and monitoring of site waste movements. Incentives and opportunities for reuse must exceed the pressures within the industry to demolish and build faster and over order products to avoid the risk of project delays. The establishment of a BMRC will increase the opportunity for local reuse.

For an increase in the volume of construction product reuse to happen outside of the social enterprise sector, a change to the government policy is required to incentivise reuse ahead of recycling. Examples include larger reuse consolidation yards for business-to-business markets and reuse of non-DIY items like structural steel beams. However, these opportunities are beyond the scope of this particular business plan.

The BMRC will also increase the viability of providing specialist construction training opportunities based around gaining vocational skills and qualifications. This responds directly to a growing construction industry skill shortage; particularly focusing on sustainable aspects. Opportunities will be targeted towards long term unemployed and disadvantaged members of the community.

BMRC projects within a national network

This business plan provides a template, with key considerations and figures, targeted to assist in developing site specific business plans to initiative local Building Material Reuse Centres (BMRCs).

BioRegional and partners intend to facilitate the development of a national network/body to support local initiatives to access funding, set up and replicate initial successes. This plan draws on shared knowledge from existing reuse enterprises within the UK and one of the many successful BMRCs operating in the USA. This supporting information is presented as Appendices to the main business plan.

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1. Introduction

This business plan has been developed by BioRegional Development Group in partnership with Minchinhampton Architectural Salvage Company (MASCo) and WasteWISE Consultants (“BioRegional and Partners”) (details in appendix 7).

This work has been supported by the Centre for Remanufacturing and Reuse (CRR) from Defra funding. The centre aims to boost activity in remanufacturing and reuse in order to reduce environmental impacts whilst making a profit.

Project Goals

This project aimed to contribute to greater Reuse within the Construction and Demolition sector by:

- Producing a costed business plan and resources for a Building Material Reuse Centre (BMRC) to aid their establishment across the UK;
- Investigating the level of interest and scope for BMRCs nationally; and
- Making contact with and collating interested parties and potential supporters to initiate a national BMRC support network.

This is a generic business plan, intended as a template to be adapted by individuals and organisations. It presents a commercial opportunity based on the current widespread wastage of unused and reclaimable products within the building industry.

BioRegional and partners intend to develop a national network/body to support and assist with initial set up and running of individual operations, and further strengthen their ability to access funding.

A Building Material Reuse Centre (BMRC) is a retail-focused business with relevant wider services attached. They will generate core revenue by selling building products to both general public and trade customers at reduced prices. These are predominantly sourced from the building industry’s waste stream through a competitively priced site clearance and collection service. Main sources will include construction-site excess products (as new), retail end-of-line products (new) and demolition-site reclaimed products (second use).

The business structure is a social enterprise¹ staffed by a small employed management team and a larger trainee and/or volunteer workforce. This will generate significant employment and training opportunities for long term unemployed and disadvantaged candidates. It will also prevent the unnecessary waste of usable building products and the associated environmental impacts this incurs.

The core income streams are three-fold:

- Product sales to public and trade customers;
- Charged services including vocational training programmes, deconstruction and maintenance work; and
- Skip hire, site clearance and collection service.

Section 7 presents a financial model including based on set-up costs and projections for the first five years of operation (appendix 1). This business plan provides a worked template containing key considerations and figures required for the establishment of a local Building Material Reuse Centre in the UK.

¹ Legal structure options include not-for-profit Registered Charity or Community Interest Company (CIC). The structure will be chosen to ensure operations are driven toward environmental and social benefit. Profit generation will feed expansion through reinvestment.

1.1 Definition of terms

The following table sets out the intended meaning of the key terms used throughout this document.

Term	Definition	Examples
Reclaim	To recover a product, for reuse purposes, that was originally destined for waste or recycling.	Dismantle a steel frame building. Collect bricks/blocks from a demolition site.
Reuse	The use of a product, in its original form with minimal reprocessing, that was originally destined for waste or recycling.	Making a table from reclaimed floorboards. Building a wall from reclaimed bricks.
Recycle	To recover the constituent materials of a product for remanufacture or re-processing into a something of equivalent value.	New plasterboards reformed from plasterboard off cuts.
Downcycle	To recycle an original product into something of lower grade; in terms of either material or economic value.	Graded aggregate from crushed bricks. Panel products from chipped timber.
Product	Products are designed and manufactured for intended applications and can be made from one or more constituent materials.	Concrete curb-stone. Clay-fired aerated brick.
Material	The constituent of a product, which of itself has no imposed form or intended application.	Concrete. Clay. Glass. Wood.

Table 1 Definition of terms

1.2 Background context

This section presents a brief synopsis of the context in which the BMRC business plan has been developed.

UK Salvage Industry

The salvage industry is the current mechanism for reclamation and sale of used building products. It represents a significant and profitable market. In 1997 there was an estimated £1 billion in sales that diverted 4.7 million tonnes of material from landfill (BigREc, 1998). The industry is changing. The most recent survey (BigREc, 2007)², describes a more consolidated industry of fewer and larger operators. There are more specialists focused on higher value architectural products. There is also increased sales of new and reproduction alternatives to reclaimed products.

Consequently for the industry as a whole:

- turnover appears to have significantly increased; but
- it is handling much lower *volumes* of reclaimed products; and
- less focussed on lower value reclaimed products.

Waste Management in the Construction and Demolition (C&D) Industry

The C&D Industry produced an estimated 120 million tonnes of waste in 2006 (Wrap, 2007a). This makes it the single largest producer of waste in England. Only half of its waste is currently diverted from landfill³; achieved by screening and crushing for aggregate or soil (Defra, 2007b). Overall material consumption of the industry is an estimated 400 million tonnes per year (Defra, 2007b). The associated impacts create approximately one fifth of the national environmental footprint (WWF, 2003).

The industry is under increasing pressure to improve its environmental sustainability, particularly in waste management. Defra have identified, through the waste hierarchy, Waste Prevention and Reuse as the preferred techniques for waste management (Defra, 2007a). Whilst this provides an aspirational commitment, current initiatives and funding are focussed on increased recycling and material efficiency measures⁴. None the less, there is a very real government desire for opportunities to develop effective reuse solutions within the sector.

Legislative mechanisms to enforce more sustainable waste management include:

- The Landfill Tax escalator is designed to annually increase landfill costs. It has recently been further accelerated from £3 to £8 per tonne per year towards a target of £48/tonne by 2010/11.
- Mandatory Site Waste Management Plan (SWMP) will become a legal requirement from April 2008 for all building projects worth over £300k. These plans cover initial segregation, measurement and recording the final destination for outgoing waste from site.

It is increasingly uneconomical to send waste to landfill driving a demand for alternative solutions.

² This information is from a report indicating the early results. Collected data is still being processed and a full report is yet to be published.

³ In contrast, the German C&D recycling rate reached 70 per cent in 1996. This meant 58 million tonnes were recycled from 83 million of C&D waste (4Sight, 2002).

⁴ The Defra funded Waste & Resources Action Plan (WRAP) have until recently focused on increasing recycling capacity (WRAP, 2007b).

The need for a more sustainable approach

Currently, diversion of waste from landfill is overwhelmingly achieved through *downcycling*⁵ processes such as crushing for aggregate use on site or incineration for energy recovery. This fails to address the first and most preferable approach of the waste hierarchy (Defra, 2007).

Whilst this form of recycling is increasing, reuse is being neglected. This represents a lost opportunity for significant savings both in terms of the value of reusable products (see pricing in Sales section) and the significant carbon emission reductions possible (see environmental outputs section).

Direct substitution of reclaimed for new products in any construction or building work radically reduces environmental impacts. It removes the need for more raw material extraction, processing and manufacturing and can reduce transportation. For example, overall environmental impact reductions of 96% for reclaimed steel and 79% for reclaimed timber (BioRegional, 2006).

In order to achieve more sustainable waste management, there is a clear need for a simple and economically viable means to achieve product reuse.

⁵ Downcycling is the used here to distinguish the form of recycling where a higher value product is remanufactured into something of lower value, thereby down-grading its value.

Retail outlets in the US⁶

In the US, there is an integrated network of over 500 retail outlets (Habitat World, 2006) trading under the brand name of *Habitat ReStores*. These operate on behalf of international charity *Habitat for Humanity* (HfH)⁷. *Habitat ReStores* combine provision of a material disposal service and with retailing affordable reclaimed building products. The *Habitat ReStores* generate a significant income stream for the HfH charity.

The key lesson is that retailing lower-value reclaimed products to the general public can and does work. In the US, this is a mainstream, rather than niche activity. Furthermore, the stores are vibrant and exciting social enterprises that are financially successful enough to generate significant profit⁸. Many include deconstruction services and online inventory of stock.

The UK Reuse Possibilities

This business plan has adapted the ReStore model to the UK context. The approach aims to capitalise on existing demand and overcome barriers to widespread reclamation and reuse in the UK. This unlocks a potential resource that is currently untapped. The most efficient destination for building industry waste is for reuse as products in its existing form i.e. to reuse as products rather than remanufacture or recycle using the constituent materials. This is preferable both in terms of retaining economic value and minimising environmental impact.

The work of this report has identified the following factors:

1. There is an existing opportunity to increase reuse services within the construction industry.
2. The resale of reclaimed products can compete within the DIY market both on environmental credentials and on price.
3. Government policy indicates support for reuse, especially within the construction and demolition sector.
4. There are significant clusters of interested organisations and individuals across the UK who wish to support or pursue the establishment of new Building Material Reuse Centres.

The partners involved in developing this business plan (see appendix 7) have a broad base of experience. Learning from US ReStore examples has been integrated with existing knowledge from the salvage, social enterprise and waste management sectors. This UK-specific business plan provides a framework that is ready prepared for tailoring to a site-specific context.

⁶ On behalf of the UK reclamation industry, Steve Tomlin of MASCo attended the 2007 annual conference of the Building Material Reuse Association in the USA. A number of BMRCs were also visited across North America.

⁷ Habitat of Humanity build quality and affordable homes for families across the world who would otherwise not have access them. www.habitat.org, accessed 07/11/07.

⁸ Madison ReStore has generated sufficient profit in the first 5 years of operation to pay for 15 new homes to be built for homeless people (Voichick, J., 2006).

2 The BMRC Business Model

This section presents an overview of the potential UK BMRC businesses. This includes the business aims, the various set-up options and details of the core areas of BMRC operation.

2.1 Vision

The BMRC seeks to re-invigorate the important market for re-use of products within the building sector. It will achieve this by providing an affordable means to reduce landfilled waste and associated carbon and ecological footprints. Additional benefits will include:

- enabling general public and traders to make home improvement more sustainable;
- generating accessible vocational training and employment opportunities; and
- contributing to revitalising the local community.

2.2 Aims

A BMRC can generate important environmental and social benefits. The business will aim to maximise the following:

- the amount of material diverted from landfill;
- the amount of equivalent carbon emissions saved⁹;
- the number of jobs and training positions created, and
- the value generated from collection services and resale of products.

2.3 The model

The business model is based on a vibrant retail outlet that is run as social enterprise. Products will be sourced from the building industry's waste stream including reusable material from manufacturers and companies at all stages of the UK supply and use chain. This is expected to be mainly surplus products from construction-site excess (as new) and lower value products currently not reclaimed from demolition-sites (second use). Stock will be supplemented with end-of-line products and some new consumables. This will complement (or provide expansion opportunities for) the existing salvage industry by targeting low-value functional building products (see Sales section for anticipated stock range).

Products will be sourced from a combination of production and supply companies, larger construction sites, small builders and public sector, council and domestic donations where appropriate. The relative proportion will vary between businesses. Sales will be carefully managed through close monitoring (see sales section) and customer feedback. The results will drive proactive and selective product sourcing.

A strict sourcing policy will optimise the intake of products that are resalable; whilst minimising transport, rehandling and any unavoidable disposal costs. Those products accepted will be carefully inspected, given minor reprocessing where

⁹ Footprint savings are calculated from the estimated whole-life footprint of an equivalent new product minus the transport and processing impacts created in order to sell the reused product.

necessary, before being professionally displayed in a carefully monitored retail space. Products will be re-sold to the general public, community organisations and small-scale builders. Prices will be substantially cheaper than for new equivalents¹⁰. The environmental credentials (e.g. carbon saving) will be clearly displayed.

The BMRC will have targets for product intake, growth of sales, development of additional services and generation of accessible employment and training opportunities.

The enterprise will have the potential to:

- Reach breakeven point by second year of operation as a functioning BMRC;
- Assist others to replicate the model within three years of operation; and
- Obtain grant capital to assist with start up and initial costs, particularly in regeneration areas where higher capital and training-related funding may be available.

The intention is also to encourage the establishment a national BMRC network to support individual outlets, share best commercial practice and provide wider optional benefits, such as trading under a high profile national brand identity and logo.

2.4 Set-up options

Start-up options currently being developed include¹¹:

- Expansion of an existing reuse-focussed social enterprise (particularly wood recycling projects or NVQ training schemes);
- A not-for-profit venture for an existing salvage business or other business venture;
- Initiated as part of a major development project or housing association; and
- In partnership with a council-led initiative such as expansion of /new waste management facility or business park.

This is a major opportunity for cross-sector partnership between the building industry, housing organisations, salvage industry, local government and social enterprise.

2.5 Partners, Collaboration and Networks

The strength of each BMRC will to a large part depend on its ability to forge strong networks with key local and sub-regional partners. Individual stores will succeed through collaboration with partners relevant to their particular context and regional priorities.

Partnerships with other social enterprises

Partnering and collaboration can gain significant savings through co-marketing, co-sourcing and offering shared services to build a community presence, expand networks of customers, identify volunteers and clients (appendix 5 presents case studies of existing reuse organisations).

¹⁰ Although many of these products will be unused (construction site surplus) and all will be in good condition.

¹¹ BioRegional and WasteWISE are supporting ventures to establish BMRCs in each of these ways. Details of specific developments will be shared through the national BMRC network.

Existing representative networks of the social enterprise sector are well subscribed and organised (see the market section). Initial contact has been with these networks to build on existing knowledge and capacity in producing this business plan.

Wider partnerships

The government has stated increasing commitment to encourage third sector organisations to deliver public sector services (NLGN, 2007), particularly for sustainable waste management. The Defra Waste Strategy¹² commits the government to:

helping third sector organisations to win a larger share of local authority contract work, as well as making greater use of *third sector expertise*, particularly to prevent waste, raise awareness, segregate waste at source, and increase re-use and recycling of waste through capacity-building support;

p9 (Defra, 2007a)

To access and deliver on government programmes, strategic partnerships should be sought with the following organisations:

- ALMOs/ housing associations;
- Local Strategic Partnerships;
- Green education organisations;
- Architects/urban designers; and
- Job Centre plus and training organisations.

The BMRC may also be able to market itself to local authorities as a means to reduce flytipping. A 2001-2002 EnCams report found that almost three quarters of local authorities felt that flytipping was a significant problem. Many of the causes of flytipping, such as high costs for waste carriers licenses and poor accessibility / awareness of disposal sites (Webb, 2006), can be addressed through a BMRC approach. A service to reduce flytipping would provide a good means to access local authority funding, particularly as the majority of flytipping occurs in LA controlled land (Webb, 2006).

Many regions have a plethora of small skip companies; this presents an opportunity to develop partnering with them such as a joint venture that establishes a supply regime for specific products and materials. This approach has been proposed by a recent report for Greater Nottingham (May, 2006).

Regional Centres for Excellence in the Built Environment may also provide a useful partnership; particularly on the issues of sustainable procurement (provision of low carbon materials and waste management), community involvement and developing local skills.

2.6 Phased growth

The recommended route to optimise new BMRC development from our analysis of relevant US projects and UK opportunities is via two-phased development.

Phase 1 (years 0-3)

This is a development phase with the main goal to achieve an operational profit. Initial costs and commitments are minimised with:

- minimum staff necessary (2 full time staff);
- minimum land rent required (e.g. temporary premises); and
- additional services and labour outsourced on per job basis.

Phase 1 staff profile:

Managing Director x 1 (full time)
Retail / Purchasing Manager x 1 (part/full time)
Driver x 1 (part/full time)
Trainees (3) - driver and two assistants
Volunteers

Product intake and sales concentrates on a core areas such as timber and/or basic inert products e.g. bricks and blocks and other products requiring minimal processing. This creates simpler processing requirements by effectively running effectively as an extended version of the existing UK timber reuse projects¹³. Sales income is supplemented by a small amount of training and services activity.

The initial income profile of the Madison Restore, USA has shown that timber can quickly achieve a sustainable income but needs to be complemented by other products/services for long term viability (see Madison case study in appendix 6).

Phase 2

This aims to increase income potential by initially taking on additional expenditure burdens including:

- Additional management/core team staff
- Larger/expanded premises
- Purchasing additional equipment/vehicles

The expansion may include a separate space for product consolidation and handling; whilst sales need to be predominantly in an interior/covered area (see sales section).

In doing so the operations will develop:

- An expanded product range to include more specialist and profitable items; and
- Increased service offerings including an extended training programme and deconstruction or maintenance activities.

Training becomes a core activity to support additional services (see social outputs). This can be done in house to generate additional income or as a partnership with an external organisation who share premises and operational costs.

¹³ For advice on establishing a Timber Reuse Project refer to Richard Mehmed, NCWRP, info@communitywoodrecycling.org.uk.

The second phase increases and diversifies income to create a more robust business with an increased capacity. See the financial section for a detailed financial model of growth from years zero to five.

2.7 BMRC Milestones

The following are indicative targets for the early stages of development. Each BMRC project will need to develop an approach suitable to the opportunities within the local context.

Year of Operation	Milestone activities and goals
Year 0	<ul style="list-style-type: none"> - Development funds secured. - Market research/feasibility study to identify potential suppliers and customers. - Site specific business plan prepared specifying the intended scale and range of products/services. - Start-up funds secured. - Secure initial site, essential infrastructure and staffing plan. - Recruit managing director and assistant. - Secure initial collection contracts with building sites. - Develop marketing and public profile.
Year 1	<ul style="list-style-type: none"> - Open doors – part time hours/seasonal operation. - Develop volunteer and training programme. - Develop retail sales base and monitor customer preferences/feedback. - Develop range of clients for waste collection services.
Year 2	<ul style="list-style-type: none"> - Recruit further volunteers and trainees - Purchase vehicle(s) - Expand publicity - Operate full time/all year round - Reach full stock - Reach financial break even point.
Year 3	<ul style="list-style-type: none"> - Generate Operating Profit - Consider expansion/widening of business activities - Publish achievements/ bid for awards - Support other start-ups/related projects that could contribute to income.
Year 4	<ul style="list-style-type: none"> - Expand site and operations - Expand service offerings - Revise product range for greater profitability - Consider wider partnerships
Year 5	<ul style="list-style-type: none"> - Expand paid staff - Develop remanufacturing and value-adding activities - Undertake wider publicity and become active in national BMRC network - Reach financial viability (paid back initial investments)

Table 2 BMRC Milestone activities and goals

2.8 BMRC boundaries of operation

The following diagrams set out the market of operation and highlight the opportunities for collaboration and co-location. Figure 1 presents the general case whereas figure 2 presents an example taken from the Tees Valley BMRC project.

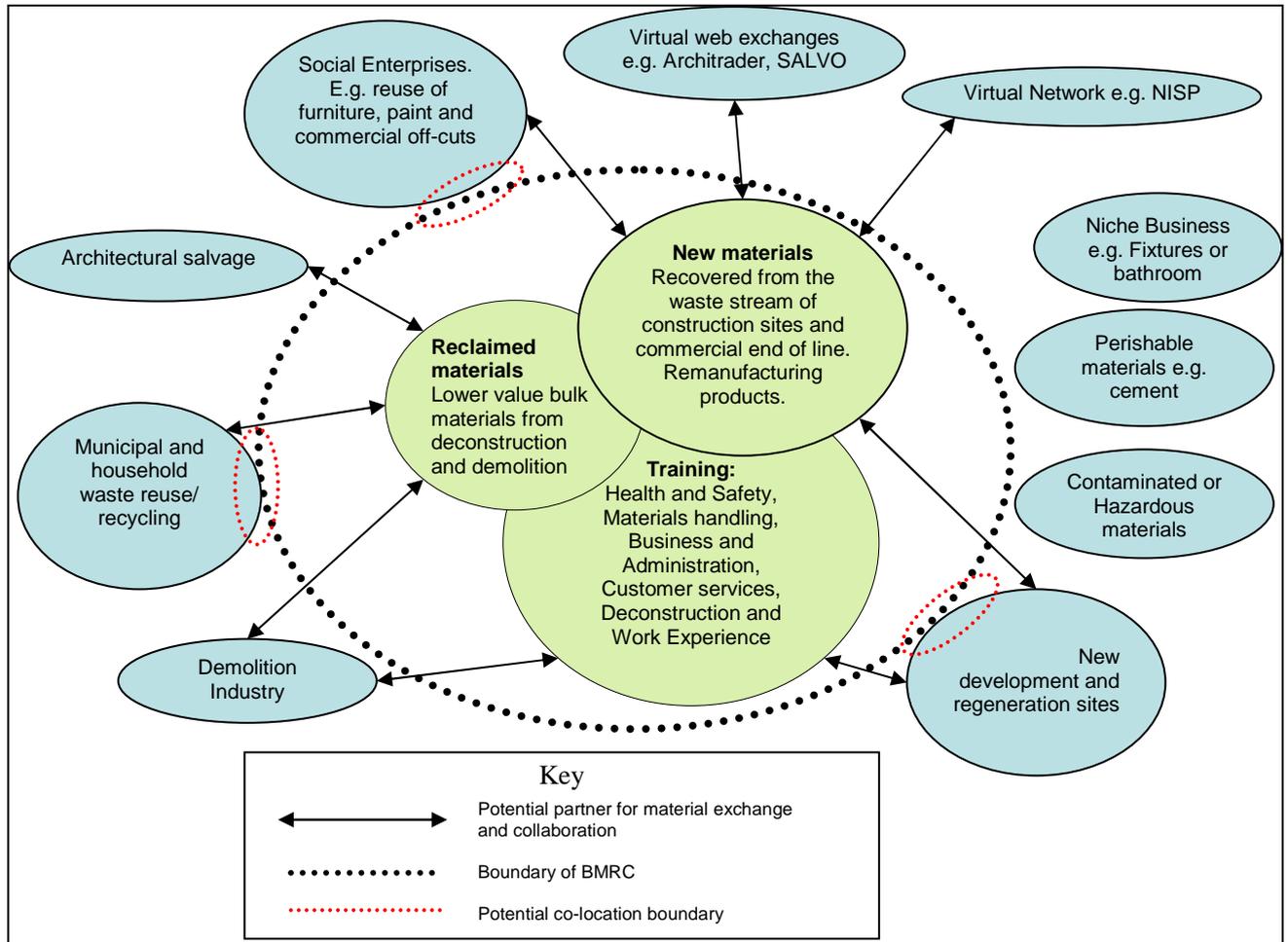


Figure 1 Influence diagram showing operational boundaries of the BMRC

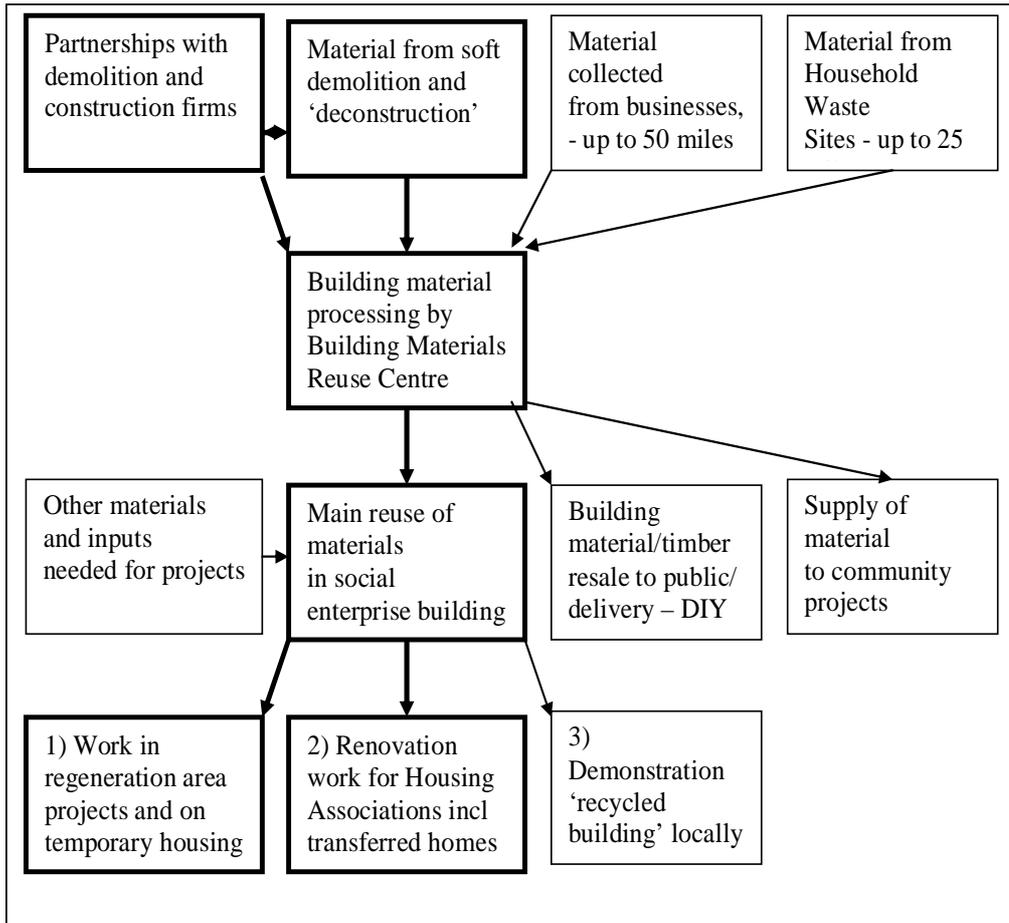


Figure 2 Example diagram of the potential material flow from Tees Valley BMRC project

3 The Business Case

3.1 Building Industry Drivers

The building industry is facing increasing regulatory pressure to improve environmental performance. These are driving the need for affordable and practical alternatives to current practice.

3.1.1 Legislation Drivers

Landfill Tax Escalator¹⁴

The Landfill Tax escalator is designed to annually increase landfill costs. It has recently been further accelerated from £3 to £8 per tonne per year towards a target of £48 per tonne by 2010/11 for active waste. Inactive wastes charges, whilst much cheaper, will rise by 25% from April 2008. The tax escalator is driving up the economic savings that can be achieved from alternative practice and incentivise the separation of waste.

The Landfill Tax Escalator improves the economic basis for developing the BMRC collection service. It allows charges to be set at increasingly higher levels whilst remaining more economic than landfill-based alternatives.

Site Waste Management Plans (SWMPs)¹⁵

SWMPs are now a legal requirement for all building projects¹⁶ worth over £300k. The legislation requires industry to measure and record the amount and types of waste generated on site. Segregation and logging material streams leaving the site will support consideration of opportunities to reuse and recycle. At the time of writing, there still remains a widespread lack of knowledge of, and means to find end users and uses for these products. Partnerships between construction companies and the BMRC offer a major route to demonstrate auditable waste reduction. As the SWMP framework distinguishes reuse as the most preferable end route; it will support the use of BMRC services as the best route solution after initial minimisation.

3.1.2 Opportunities to create value

Competitive tendering processes are driving the building industry to maximise cost efficiency and guarantee delivery times. Tight schedules put space and time at a premium. This creates a risk-averse environment that is reluctant to take on additional burdens.

A ready supply of “as new” products

Due to strict financial penalties for over-running a contract, the cost of over-ordering appears more affordable than the risking delays. A culture exists such that “the client has already paid”, so there is neither incentive nor means to recover the excess products¹⁷. On average thirteen percent of building products go to waste without ever

¹⁴ Further information is available from the Department for Environment, Food and Rural Affairs' (Defra) website - <http://www.defra.gov.uk/environment/waste/strategy/factsheets/landfilltax.htm> (accessed 5/12/07).

¹⁵ Further information is available from the Environment Agency's NetRegs website - www.netregs.gov.uk/netregs/legislation (accessed 5/12/07).

¹⁶ This legislation applies to England. Similar proposals are being developed for the rest of the UK.

¹⁷ Expressed in stakeholder comments during a BMRC event. Peterborough, July 2007.

being used (EA, 2007)¹⁸. This represents a significant untapped source of useable products.

Value in wasted products

The true cost of a skip is estimated to be sixteen times more than the just the hire charge; 80% of this is this true cost comes from the price paid for the products thrown away (Defra, 2007b). Reclamation and reuse is the most effective way to recover value from wasted products. The BMRC will recover maximum value with minimal reprocessing costs by retailing reclaimed products in their original form. Part of this saving will be passed back to the building industry in the form of the affordable and environmentally sustainable service provided.

Providing Space and time

The building industry is not generally supported with the space or time to store excess and reclaimable products on-site. This requires secure covered space, handling time and skills and a reverse logistics approach. The increased legislation creates a cost saving opportunity for a BMRC to setup on a large site/development to provide a reuse service.

A combined approach to enable material reuse

These factors outlined above combine to create a ready source of valuable reusable products. The BMRC will capitalise on this by combining a sustainable waste solution for industry with a vibrant retail outlet for the general public and independent traders.

The BMRC will combine the following in a single location:

1. a purpose-tailored space for storage of reclaimed products;
2. a low cost collection service with site-safety trained operatives;
3. a team of suitably trained staff to sort and display products;
4. a high profile public-facing retail operation; and
5. a regular customer base matched to the products available.

3.1.3 Identifying gaps in the market

Specialisation of the Salvage Industry

As discussed in the background section, the salvage industry is handling much lower *volumes* of reclaimed products; and is less focussed on lower value reclaimed products. There appear to be two key influencing factors.

Firstly, the market for building waste recycling has significantly grown in recent years¹⁹. There were an estimated 893 recycling crushers in England in 2005²⁰. Given the legislative pressures on the building industry, the ready available waste solution provided by recycling is currently the first choice option. The BMRC will not attempt to compete with the scale or volume of recycling within the UK. Activity will focus on a smaller proportion of this waste that is readily reusable in its existing form. The service will offer building companies the opportunity to target higher up the waste hierarchy at minimal costs. Within the emerging legislative context described above, this will become an increasingly attractive option.

¹⁸Head of waste minimisation, WRAP, has been quoted as saying 10-15% of materials are wasted unused - Specifier, Building Magazine, 16 November 2007. Our own work engaging with industry stakeholders has confirmed a similar figure of around 15%. Owen Lyttle for the Environment and Heritage Service (figures 2004-5) states 10-30% of the waste stream may be unused materials. Published p29 (Groundwork, 2007).

¹⁹ "Evidence from the surveys suggests that the population of recycling crushers has continued to grow... pointing to greater competition between recyclers." (DCLG, 2005).

²⁰ Table 4.3 *ibid*.

Secondly, a significant influx of both cheaper imported reclaimed goods from Europe and also of cheaper imitation reclaimed goods from Asia has competed with the economics for reclamation of lower-value products. Avoiding the unnecessary wastage of the excess of these products (through reuse) would reduce the UK import bill and help to reduce the considerable energy costs of their manufacture abroad.

The BMRC will aim to offer reusable products at a price discount over new. This will stimulate the market for second use products that are only available in small batches. This is possible due to the dual income stream from service and sales, combined with the profitability benefits that come with social enterprise status. The target of low-value essential building products will develop a complimentary service to the existing salvage industry.

Taking a retail-led approach

The home improvement or DIY retail industry has reinvented it self over the last 30 years to create a strong market worth £8bn in 2007. The scope reaches across a broad base of consumers. Growth has slowed since 2004, reflecting both a maturing market and a decline in spending generally. There are important lessons to take from the DIY retail approach. These include a recognisable brand, vibrant interior for a broad base of customers and careful monitoring of sales to synchronise stock allocation with consumer preferences.

Leading retailers currently compete on price and green reputation (see marketing section). The BMRC will focus on the specific segment of customers driven by price and/or ethical considerations i.e. environment and community benefit. The BMRC will be able to offer lowest price for the reasons above. On environment, every product sold is not only rescued from the waste stream but also replaces the need for a new equivalent to manufactured, avoiding considerable environmental impacts. Creating accessible employment opportunities as a social enterprise secures the ethical status of the operations. In this way the BMRC will take a retail-led approach to access a key segment of customers within the well established DIY customer base.

3.2 Viable Model

The BMRC business model has been developed from the experience of well established and relevant precedents in both the US and UK context.

Successful enterprises in North America

The approach is already proven by the network of over 500 *ReStore* (Habitat World, 2006) in the US and Canada. These stores sell used or excess building products sourced entirely from construction and domestic waste streams (Voichick, 2003). The profits generated are shared between reinvestment and supporting *Habitat for Humanity*²¹, the international house building charity. The approach has also been successfully adopted by other independent social enterprises. For example:

“We talk a lot about environmental sustainability...but my job is to create a sustainable business...few organisations are ready to absorb large quantities of used building materials. So the challenge, as I see it, is to move salvaged materials to markets where they can be reused.” Ted Reiff, co-founder, The ReUse People of America Inc.

p175 Falk and Guy (2007)

²¹ www.habitat.org , accessed 07/11/07.

Reuse-based social enterprises in the UK

There is already a wealth of social enterprises across the UK, successfully retailing reusable products such as timber, furniture and commercial off-cuts (see appendix 5). Up until now, none have focussed on the huge opportunity presented by reusable building products.

BioRegional and partners have begun to engage the well-subscribed networks that link across these enterprises. There is a great willingness to share information and collaborate. This will allow a newly set-up BMRC to link to and benefit from existing networks and customers.

Profitability

The BMRC business model enhances profitability in the following ways:

- Reduced wage expenses and potential additional income through trainee and volunteer workforce.
- Dual income from each product through collection charge and sale price.

Not-for-profit status adds the following benefits:

- Facilitates working for and receiving assistance from local authorities²²
- Negotiating reduced costs for rent and other expenditure
- Motivates staff and customer loyalty
- Encourages business to use the waste collection service
- Exemption from corporation tax, but VAT non-reclaimable on grant funded spending.
- Exploring potential for “gift aid” equivalent for material donations by business.

The market opportunity

In summary there is:

- readiness in the building industry for a reuse-focused waste service;
- demand for vocational training particularly in sustainable construction; and
- a receptive DIY retail market for ethical/environmental products.

Together these will ensure a steady supply and demand for the BMRC operations.

²² The government is pushing for greater use of social enterprise for providing public services. This includes efforts like the Procuring Social Enterprise programme in London, <http://www.lcrn.org.uk/images/1906.pdf>. ECT have written a helpful account of their own experiences available from www.ectgroup.co.uk/, accessed 12/11/07.

3.3 Environmental Outputs

The BMRC aims to address current unsustainable construction and demolition practises by saving significant tonnes of material from being wasted. This volume will grow as the business develops.

Industry impacts

The demolition and construction sector for England as a whole accounts for around:

- 19% of the total national ecological footprint (WWF, 2003).
- 120 Million tonnes per year of waste production (WRAP, 2007).
- 420 Million tonnes of material consumption or 7 tonnes per person (BioRegional, 2002).
- 30% of all road freight on UK roads (DfT, 2006).
- Approximately one fifth of the national carbon footprint (BioRegional, 2006).

The industry is the single largest contributor to the UK's national waste stream²³. Nearly a third of this currently ends up in landfill.

“Crushing to aggregate” and burning of timber are not the solutions. These approaches may reduce waste going to landfill, but valuable resources are being “downcycled” towards lower grade products such as crushed bricks and low value fuel. This wastes significant embodied energy²⁴ and wastes employment and skills opportunities. It also produces a lower value product and causes further environmental impacts.

This analysis is backed up by figures from WWF's Living Planet Report (WWF, 2004). These show that if everyone on the planet consumed as much as the average person in the UK, we would need three planets to support us.



Instead, the UK building sector needs to reduce its consumption of fossil fuels and virgin materials by at least two-thirds to be environmentally sustainable. To achieve this reduction, we need to develop practices that are consistent with ‘one planet’ living.

We need to reverse the fact that the volume of reclaimed products sold by the salvage industry has been declining over the last 10 years. Negligible quantities of construction products are currently being reused in their existing form; worse still, an estimated 13% of products go to waste without ever being used; bought in excess to ensure that construction and re-build projects are delivered on time (EA, 2007).

All building products sold for reuse by the successful BMRC will replace the need to manufacture these as new. This saves the impacts associated with both manufacture and disposal, whilst creating employment, training and second-use affordable building products.

²³ Aggregate waste alone is estimated at 33% of total waste arising in England, with a further 15-20 million tonnes of non-aggregate waste estimated by WRAP (Defra, 2007b).

²⁴ The embodied energy of a building product is the amount of energy used in order to quarry/extract, manufacture and transport it to site.

3.4 Social Outputs

Increasing viability by combining BMRC with training

The financial model presented in this business plan (section 7) demonstrates that the reuse of building products is more viable when combined with complementary activities, including training. This is the case as training providers receive government funding when qualifications (such as NVQ levels 1-3) are awarded.

The sort of training that may be provided could include WAMITAB NVQ levels 1-3 from operative to management levels, and the Construction and the Built Environment Diploma Foundation to Advanced level.

There is mutual benefit in combining a Building Material Reuse Centre with sustainable construction training projects. This includes developing charged services, such as deconstruction and building maintenance, around a training programme to provide further income and practical opportunities for trainees. This approach is being used to establish a BMRC in the North East by Community Campus 87 and Renew Tees Valley.

Wider Outcomes: Community Benefits of BMRC

The BMRC will provide both direct and indirect benefits to the local community, as follows:

1. ***Volunteering and vocational training***, especially for long-term unemployed and disadvantaged members of the community. The venture will provide opportunities for volunteers to establish experience and skills, with the potential to gain useful ***local employment***. Local analysis of skills shortages can be presented in support of development of a BMRC (e.g. from the regional Learning and Skills Council).
2. ***Increased sustainability of the local construction industry*** through developing skills and business opportunities for deconstruction, handling and processing reclaimed products, waste segregation and use of affordable, low carbon building products. It is particularly important; as noted by Dainty et al (2004) through a study on the East Midlands, that the growing construction skills shortage can be bridged through local and regional initiatives.
3. ***Benefit the local economy*** as spending will tend to be within the local community, which has a multiplier effect on the local economy (NEF, 2007). It also aims to act as a centre to generate respect ***and pride in the local community***, through engaging local people and reusing locally significant building materials.
4. Potential to ***reduce flytipping*** by providing an accessible building waste disposal route with collection services. Flytipping is associated with the attraction of other crimes to affected neighbourhoods including increased fear of crime, substantial clear-up costs and discouragement of inward investment.

4 The Market

The BMRC will have two core areas of operation; building waste collection for reuse and building products retail. The relevant existing market providers for these are:

1. DIY Retailing and Builders Merchants (new products)
2. Salvage Industry (reclaimed products)
3. Social Enterprise recycling and reuse
4. Waste Management and Demolition Industry

The salvage industry has been covered in previous section. Deconstruction services can be considered as additional services to the core operation, to be developed in phase two of operations.

The following section begins with an industry analysis of construction to better understand the potential supply of products. This is followed by a retail focus on the current market sectors of DIY retail and Social Enterprise recycling and reuse. Whilst these are presented as potential competitors, the BMRC will operate in an underdeveloped market and seek collaborative partnerships wherever possible.

4.1.1 Construction Industry sector analysis

In 2003, an estimated £92 billion was spent in the construction sector. Nearly half of the value of the contracts awarded within the industry was for repairs and maintenance to existing infrastructure. The other half were for new build and major refurbishment. According to WRAP, the construction industry spends around £22 billion each year on products and materials for new build. This equates to half the contract values in this category. Repairs and maintenance contracts will have a higher proportion spent on labour. So the total spend on products and materials is estimated at around £30 billion per year (BioRegional, 2005).

Quantity of products from waste

The Construction and Demolition Industry is estimated to produce 120 million tonnes of waste (Wrap, 2007a). Of this total, there are various estimates for how much is reusable. The reusable segment is made up of both construction excess purchasing and demolition.

If broken down by material type, a potential 12% of the waste stream has the potential to be reusable products (Groundwork, 2007)²⁵. This would make a potential supply of 14 million tonnes of reusable products and materials per year nationally. An estimated 6m tonnes of this is likely to be unused products²⁶.

²⁵ Based on a breakdown of the total waste stream, the categories of Brick, Block and Wood are assumed to have reuse potential. "Managing Demolition and Construction Waste" HMSO, 1994 as reported by Groundwork (2007). This is based on the categories of Brick, Block and Wood as reusable from waste stream.

²⁶ Calculated by assuming a 13% wastage of new materials purchased (EA, 2007), using the breakdown of 2003 spending on materials (DTI, 2004) and only focusing on likely reusable material categories as displayed in table 2.

Material	%	UK Consumption of material 2003 '000 tonnes	Estimated unused Product '000 tonnes
Slate	0	78	10
Concrete building blocks	10.2	34,644	4504
Concrete roofing tiles	0.8	2,568	333
Bricks	2.2	7,409	963
Timber	0.6	1,925	250
Total			6060

Table 3 Estimating the total volume of "as new" products currently going to waste

The BRE (2008)²⁷ are currently developing data on the exact composition of waste from construction work nationally. The early indicative data indicates timber and bricks/ceramics at around 10% of the waste each and a further 5% for the inert category. These results are aggregated for all construction types, whereas housing is expected to yield greater proportions of reusable blocks, bricks and timber (Groundwork, 2007).

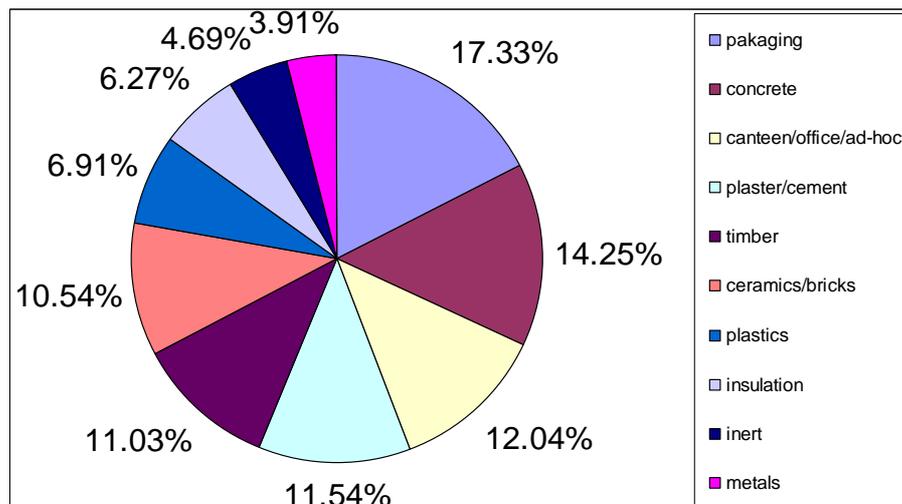


Figure 3 Breakdown composition of construction waste (BRE, 2008)

Small and Medium Sized Enterprises (SME)

The occurrence of reusable products in the waste stream of the SME building sector is also thought to be much higher than the rest of the sector, at up to 56 % (Groundwork, 2007)²⁸.

In 2006, SME builders (<250 employees) won approximately 60% of the total value of new orders of work in the C&D industry (BERR, 2007); the majority of these are small business of less than 50 employees.

²⁷ Data supplied by BRE Smartwaste team on request. <http://www.smartwaste.co.uk/>, accessed 28/02/08.

²⁸ Data presented by Groundwork (2007), derived from "Waste managing plan", Simons Construction Ltd, Barry Walker 2006. This is based on Hard Material and Timber assumed to be reusable products.

Lower value works make up a significant element of all works in the industry. For example in 2006, 53.9% of private new housing work was for jobs valued under £300,000 (BERR, 2007). This means that more than half of private new housing work is unlikely to be affected by SWMP regulations. The total value of repairs and maintenance work is only slightly lower than new build work and this is likely to be at least as dominated by SME firms as new build.

The SME building sector is by its nature widely dissipated and often working at a scale that is under the radar of regulations and doesn't immediately demand a resource efficiency approach. None the less, the SME sector receives the largest number of new orders in the industry; and hence a significant proportion of the waste. In contrast, rising landfill costs will become a significant element for smaller operations. There should be great receptivity to an affordable waste solution.

SMEs represent a core target market for offering a waste collection service.

In addition, the SME sector is most likely to benefit from the scales of products available for resale. Affordable products will be particular attractive given the rising costs of new products²⁹.

This makes for a potential double dividend from both services and sales.

Housing Projects

Of the total value of industry work in 2003, housing related work represented 39%; made up of refurbishment and maintenance as 23% and new build 16% (Bioregional, 2005). The waste from housing construction is likely to be most suitable for BMRC resale into domestic DIY and small trade customers.

4.2 Retail Competitor Analysis

Individual BMRC projects will need to analyse their own local competitors and any other relevant parties to decide which customer bases to target and which strategies would be most effective.

4.2.1 DIY retail

The DIY retail market is thought to be worth £8bn in 2007. It has shown continued growth over the last 30 years reaching its peak in 2004. Whilst there has been a slight slowing of growth since then; both traditional DIY and new sales opportunities are continually developing³⁰.

Within the market there are two main players; DIY outlets, such as B&Q and Homebase and Builders Merchants such as Travis Perkins and Buildbase. Whilst these are primarily focused on general public and trades people respectively; there is a degree of cross over, especially for the largest brands.

The major brands have become trusted one-stop shops for any home improvement activity and provide easy access to an extensive range of products 7 days a week. The interior space of DIY warehouses permits impressive stock display to create a more interesting retail experience. This approach can be used to attract a wide range of customers and make the stores more appealing.

²⁹ Between 1995 and 2006, materials costs have risen 32% and 35% for housing and non-housing projects respectively (BERR, 2007).

³⁰ Reported by market research company GfK in DIYweek - www.diyweek.net accessed 02/02/08.

Marketing often concentrates on low prices. This can often be created through lost leaders on a particular product. They are not always cheaper than specialist merchants or independent outlets. Whilst the DIY market is dominated by the top brands; there are numerous independent and smaller retailers.

Consolidation pressure for independent stores

The successful expansion of chain-store DIY retailers has been equally matched by the fall in independent retailers. This has driven the establishment of a voluntary trading group called Mica³¹. This is a member owned network of independent stores that have joined forces for the benefits of co-branding and co-buying. According to Mica, numbers of independent retailers have fallen from 25,000 in 1970 to below 6500 more recently. The Mica network now has 190 stores. Each independent store is owner managed and run. The stores aim to provide genuine know how with experienced staff. Through group buying, product prices can compete with the major chain-stores. Mica's £70m group turnover puts it within the top ten of DIY retailers. Whilst this represents a small fraction of the overall market, it nonetheless demonstrates the power of a strong network.

Environmental Credentials

Due to growing public awareness of environmental issues, retailers are having to adopt strategies such as greener products (e.g. Forest Stewardship Council (FSC) certified³²) and improving operational practices. Demand for eco-products and greener practice is likely to increase with the growing scientific evidence base and political activity reinforcing issues such as global warming and habitat destruction. This will affect the home improvement market; especially as government (central and local) commitments to reduce the carbon emissions of existing housing stock start to take effect.

DIY retail activity has begun to reflect this. The largest chains are competing for custom on the basis of environmental products such as sourcing of timber³³ and energy saving products³⁴.

The BMRC Retail Market

The BMRC will predominantly sell into the existing DIY retail market. Stores will utilise the warehouse retail approach to create a mainstream and welcoming environment. They will predominantly target general public customers and small traders, who are looking for domestic volumes of functional building products. The BMRC approach to sourcing products will mean there is some variability in the range and quantity of stock. This will make it less appealing to larger trade customers.

General public DIY customers are very receptive to reduced prices, ethical values and a community based approach. The BMRC will offer a local community based and ethically oriented alternative to the "big box" chain stores. The BMRC will be most focussed on lower income groups and specialist interest customers driven by environmental or local community issues.

³¹ www.micahardware.co.uk/public/aboutus/ accessed 13/12/07.

³² <http://www.fsc.org/en/> accessed 13/12/07.

³³ B&Q are founding members of the FSC and Homebase have based advertising on stocking FSC products.

³⁴ "Homebase's new 'Eco Home' campaign, includes 900 products that reduce environmental impacts under the categories of water, energy and sustainability. There are eco-points included on the customer loyalty card. Reported by Home Retail Group, 2007, www.homeretailgrouphalfyearresults.com/, accessed 15/12/07. See also B&Q's Energy Efficiency Online tool and product booklet, www.diy.com, accessed 15/12/07.

The minimised overheads (see material sourcing) and not-for-profit status (see business case) will allow product retail prices to be very low. This will help avoid being hit by the general downturn in DIY sales by focusing on the essential DIY products at a fraction of the retail price.

4.2.2 Community Waste Management and Social Enterprises

There are a range of social enterprises that focus on diverting waste for environmental benefit. This an effective means of income generation (appendix 2). Well-subscribed networks have established to connect and represent these enterprises. The network membership listings reflect the current base of activity within the sector.

Community Recycling Network (CRN)³⁵ is a national umbrella organisation for not-for-profit waste management organisations. It has over 275 organisations listed. The following priority areas for waste management are currently addressed across the UK:

- Recyclable materials collection e.g. organics/paper/metal/plastics
- Household goods for refurbishment e.g. Furniture, Tools, Vehicles, White goods, ICT
- Paint (Repaint Projects)
- Commercial scraps e.g. Textiles Paper/card (Children's Scrap Stores)
- Wood (National Community Wood Recycling Project)

There is no evidence of any enterprises currently specifically targeting the same range building of products for reuse as this BMRC model. Some key product specific networks that have been identified include:

- The National Community Wood Recycling Network
- The Furniture Reuse Network
- The RePaint Scheme

Initial contact has been made with each of these to identify best ways for collaboration and knowledge/capacity sharing.

The **London Community Recycling Network (LCRN)**³⁶

The LCRN network directory displays 170 London-based organisations using the same categories as CRN; none are listed as handling construction and demolition waste. A dialogue is also under way with the Scottish CRN and Cylch – the Welsh CRN both of whom have confirmed interest, on behalf of members, to support/pursue BMRCs.

The regional CRN clusters of reuse organisations are displayed on the **Community Waste Network Directories**. These also confirm the absence of organisations currently focusing on building material for reuse or recycling.)

BMRC service market

There are no social enterprises currently focussed on building industry waste as a resource for reuse. The closest comparison is the National Community Wood

³⁵ CRN is the national umbrella organisation for community based waste management. CRN provide regular newsletters, coordinate events, disseminate information and undertake lobbying. www.crn.org.uk accessed 10/12/07.

³⁶ LCRN is a registered charity that works with local authorities and social enterprises to support, promote, represent, provide training and consultancy for community recycling. They also administrate funding streams such as the Enhance. www.lcrn.org.uk/ accessed 10/12/07.

Recycling Project (NCWRP)³⁷ (see appendix 5). BioRegional and Partners have made initial contact members of the NCWRP network. This has revealed a strong interest amongst individual projects to either collaborate with or expand operations to include building products. This represents a valuable source of experience and contacts to benefit from.

Building Material Reuse is an open market with a number of interested parties emerging. A collaborative approach and working within the existing networks will allow the BMRC to benefit from the experience and linkages that already exist within the sector.

4.2.3 Market Size

Individual stores will need to quantify the potential level of demand and supply within the local context.

4.2.4 Market Penetration

Individual stores will need to develop realistic targets for the relative impact they can make on the available customer, volunteer and supplier base in the local area.

³⁷ For details see www.communitywoodrecycling.org.uk/, accessed 10/12/07.

4.3 Marketing and Branding

4.3.1 Marketing

Aims-

- Develop an active client base providing products
- Develop regular customer base purchasing of products
- Maintain and expand relationships with funding partners and LA

Strategy

- Media adverts and case studies (through local TV/radio/papers)
- Client/customer recommendations (word of mouth)
- Articles in selected journals/magazines
- Attendance of selected events
- Face to face site visits
- Alliances and co-branded activity with strategic partners e.g. regional Builders organisations/business advice services/DIY and other domestic market retailers/- local builders cafes.
- Profile raising stunts and events e.g. toolbox talks

4.3.2 Brand Name

Individual stores will need to develop an appropriate and recognisable brand name that clearly communicates with the targeted customer, volunteer and supplier base in the local area.

It is very important to have a strong brand presence for attracting both customers and clients. None the less maintaining the concept term of Building Material Reuse Centre (BMRC) is helpful in communicating the general principle and connecting operations with other branded operations such as the ReStore network in the USA/Canada.

There are potential benefits from establishing a consistent national brand identity:

- Engendering sense of trust and reliability to customers/clients
- Sharing reputational benefits/profile regionally/nationally (word of mouth)
- Sharing in professional brand development and marketing process

Use of a national network logo and brand identity will include a franchise license agreement. The license conditions will ensure consistency of ethos and operating principles across all network branded stores.

4.3.3 Positioning

The BMRC will focus on the un-developed market of retailing reclaimed building products for home improvement and (SME) independent/small scale builders.

Target positioning:

- Below the high value of architectural salvage niche by providing lower priced essential and functional items i.e. not heritage or period features.
- Below the volume and price of building merchants. Providing single unit and low volumes i.e. domestic scale.

- Below the prices of existing DIY retailers. Offering a greener and more community-based local alternative i.e. a more sustainable and ethical choice.
- More mainstream and public facing than niche salvage yards. Providing a vibrant retail layout with regularity of core stock and product updates and marketing to create high public profile.

4.3.4 Unique Selling Points

The stores will enter a previously untapped market in the UK and offer the following benefits:

- Financial: Lowest price around for purchases, affordable waste management solution for unwanted products.
- Environmental: Greenest products available, with in-store product labelling and advertising the carbon savings or tonnes of landfill avoided by the store.
- Social: Training and work experience opportunities and community events

4.3.5 Target Customers

Individual BMRC projects will need to develop more detailed customer profile based on the local population, context and model chosen.

The likely volume and range of products stocked are directed towards small scale jobs for home improvement by homeowners, independent builders and local property managers and landlords.

Target customers groups will be:

- Ethical/Environmentally motivated home improvers (public)
- Low budget home improvers (public)
- Small local/regional domestic focussed builders (trade)
- Small house builders/developers where appropriate (trade)
- Training colleges (trade)
- Landlords/estate managers(trade)

Target client-customers include:

- Housing Associations or others for renovation work
- Organisations undertaking regeneration or local conservation work
- Sustainable building demonstration projects

The products for client customers will be required in larger quantity and ranged toward more structural elements. This is compatible with public facing retail so long as sufficient space and sources have been established. Such opportunities are to be sought through joint delivery partnerships such as those listed in the business case section above.

The ongoing difficulties in meeting demand for the UK housing market make it increasingly unaffordable for first time buyers. The government driven house building programme will take time to affect the market. In the short-term this means the proportion of rented properties is likely to increase. The demand by landlords and property managers (including housing associations/social housing schemes) is likely to increase and can be targeted as a growing market.

It will be important to plan for decreasing first time buyers as customers. To target established homeowners, a reputation will be developed for supplying:

- ongoing repair needs;
- odd jobs in established houses; and
- energy efficiency improvements.

These factors will equally appeal to landlords and independent property developers.

Efforts will be made to ensure the BMRC appeals to both female and male customers. This will be implicit in the messages and image communicated. This may include establishing community links and provision for children entering the store.

4.4 Sales

4.4.1 Stock Range

Stock will be continually managed between customer preferences and available products from waste streams. The stock range will develop as the BMRC grows capacity and skills. Figure 8 shows the intake policy for Madison ReStore, USA which has been operating successfully for over 5 years.

Acceptable used and surplus building products	The ReStore cannot accept
<ul style="list-style-type: none"> • Cabinets, clean, up-to-date and not damaged • Plumbing, usable fixtures, current parts and supplies • Electrical, usable lighting fixtures, parts and supplies, and ceiling fans. • Windows, insulated glass, seals intact, no sashes accepted. • Hardware, knobs, hinges, locks, nails, cabinet pulls, nuts, bolts, screws. • Timber, at least 6' in length, nail free • Doors, in good condition • Roofing, 3 bundles of shingles minimum • Carpet, no used carpet, minimum 30 sqft • Tools, hand, garden, no power tools • Flooring, wood, ceramic tile, vinyl • Millwork/trim, wood casing and base (clean), vinyl base, • Miscellaneous, masonry, sheathing, drywall supplies 	<ul style="list-style-type: none"> • Single pane or storm windows • used carpet • appliances • toilets • paint, stain, varnish • toxic materials • blinds • wallpaper • furniture materials • lead based paint materials • fluorescent lighting • tub surrounds • power tools

Figure 4 Example intake policy from the Madison ReStore, USA

The stock range for the UK BMRC will consist of:

a) Unused Building Products

Sourced from construction excess, commercial off-cuts and retail end of lines.

b) Second Use Building Products

Sourced from building demolition and refurbishment projects.

These sources will provide at least the following products:

Core product range	Unused	Second Use
Bricks	x	
Carpet	x	
Cladding	x	
Doors and windows*	x	x
Fencing	x	x
Plumbing and bathroom supplies	x	x
Roofing materials	x	x
Stone setts and paving	x	x
Structural Timber - (joists)	x	
Non-structural Timber (lengths, studwork)	x	x
Timber floorboards*	x	x

Some incoming products may require access to a waste licensed area for sorting and a waste carrier's registration for the collection service. Consequently some waste management competency is also required. None the less, exemptions for the majority of the target products are possible to obtain.

The starred products are explicitly exempted from waste handling licenses³⁸. Other products for reuse may well be exempt from regulations so long as:

it is put to that use without further treatment; and
that use of the waste does not involve its disposal.

Paragraph 15, Schedule 3 to the Waste Management Licensing Regulations 1994

Wider products will be considered if offered or are in demand. It may also be profitable to consider discrete intake of larger-scale structural elements such as timber and steel beams, where space is permitting and a list of buyers (3rd party suppliers) have already been identified. This is an opportunity to collaborate with existing salvage industry who are better placed to handle these products.

New products

Sales of relevant new stock have proved successful for similar reuse enterprises³⁹. This should focus on some basic consumables and hardware required to install the reused products sold. This negates the need to have to visit another retailer to complete a job. A line in green building products such as light-bulbs and insulation would also compliment the stock and reaffirm the core vision and ethos. This could stem from relationships with Energy Saving Trust and LA energy efficiency officers and form the subject of hosted events.

Possible Exclusions

³⁸ Environment Agency Guidance on low risk waste activities, Version 17, December 2006.

³⁹ See for example the www.uniquescrapstore.com.

Wired electrical goods should be avoided unless there is a suitably qualified electrician within the team to certify that they are safe and functional for resale.

Un-used modern bricks are a core product. However, heritage bricks, i.e. reclaimed from demolition works are often already dealt with by the local salvage industry. Where sources of these bricks are found, exchange agreements with existing local dealers could be sought to avoid competing with existing industry and developing expertise in an established segment. Any agreements made should be reciprocal so that sources of unused modern bricks are offered back in return.

Stock Display and sales monitoring

Stock will be displayed at the same high standards as the major DIY retailers. Adopting special offers, spacious aisles/ trolleys, clear layout and regular update of the items in stock. Careful monitoring of sales will drive floor space allocation to optimise sales/sq m. Care will be taken to ensure basic level of staple purchases and sufficient range/volume of slow but bulk bought products such as doors and windows.

For example, Madison ReStore USA monitor sales to ensure each product is maximising the profitability of the allocated shop floor area (see figure 5).

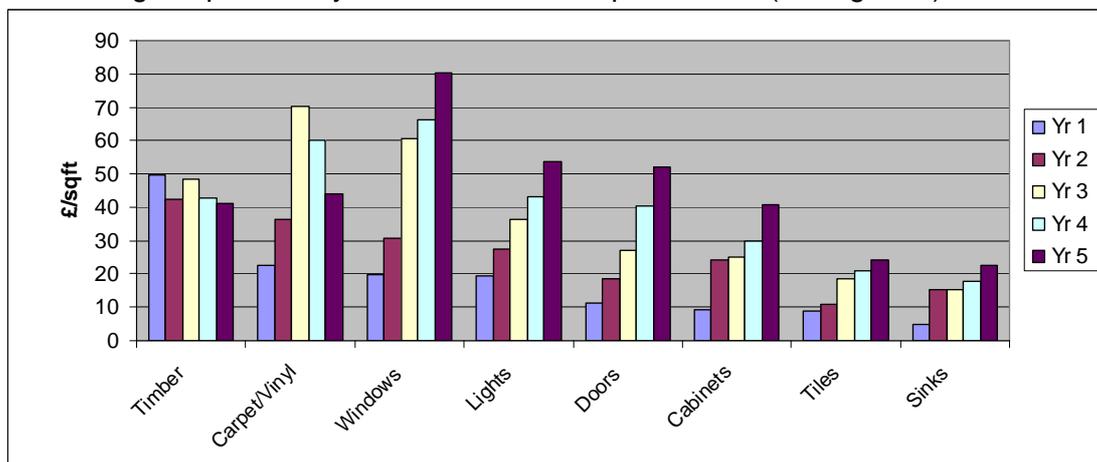


Figure 5 Shop floor sales returns for best selling products - Madison ReStore, USA

4.4.2 Pricing

Individual stores will need to establish a detailed pricing policy based on sourcing contracts and floor space rent.

The pricing structure will be targeted to ensure products are significantly cheaper than buying the new equivalents⁴⁰. Exceptions exist where the particular quality may increase the value e.g. floorboards or ceramic ware. Below is a table of indicative costs for typical stock items. The indicative prices have been extracted from existing examples⁴¹.

⁴⁰ The Habitat Restore in Dane County has uses the basic rule of a 50% discount for new products and 75% reduction on reclaimed products.

⁴¹ These figures have been adapted from the Reclaimed Building Products Guide, WRAP, Unpublished.

Sales Category	Product	Typical Reclaimed Price (per unit unless specified)	Typical New Retail Price (per unit unless specified)	Possible savings for BMRC customers
Wider Reusables	Carpet tiles	£0.50	£1.50	65%
Wider Reusables	Composite cladding panels	£9	£20	55%
Bricks and Inerts	Concrete paving slabs (600 x 600 x 35mm)	£2.50	£5	50%
Bricks and Inerts	Concrete tiles	£0.20	£1	80%
Bricks and Inerts	Crazy paving	£20/m ²	£70/m ²	70%
Timber	Doors	£10-100	£50-250	60-80%
Timber	Joists	£1.45/m	£3.70/m	60%
Bricks and Inerts	Machine made tiles	£0.45	£1	55%
Timber	Pine Floorboards	£30/m ²	£35/m ²	25%
Timber	Timber floorboards strip	£17.5/m ²	£25/m ²	30%
Bricks and inerts	Roof Slates	£1.75	£3	40%
Timber	Studwork (50 x 100mm)	£1.40/m	£2.80/m	50%

Table 4 Indicative values for reclaimed building products

4.4.3 Advertising and Promotion

Individual stores will need to develop local advertising and promotion strategies.

- The approach for customers will consider local radio, TV and newspaper media coverage alongside collaboration with suitable bodies such as the local authority and social enterprises.
- The approach for supplies will also include networking, direct mail, and participation in relevant associations.
- The approach for volunteers will harness existing volunteer organisations, schools, websites, local radio and community groups.

Reputation for “eco-building” products

The rapidly growing consumer interest in environmental issues is a strong means to differentiate from larger DIY retailers.

The BMRC will establish as the green option, as well as being more affordable, socially-minded and local than the large scale DIY and Builder Supplies.

A recent Defra survey found that “most people claimed that being ‘green’ is now the socially acceptable norm rather being an alternative lifestyle” (Defra, 2007c).

Major DIY stores have begun to stock eco-products and provide green information. A labelling scheme⁴² or shop from display indicating the carbon and eco-footprint savings of stock would help to properly differentiate reuse products from eco-products sold elsewhere.

⁴² See the “Recycled Wood Marque” developed by the National Community Wood Recycling Project. www.communitywoodrecycling.org.uk accessed 07/11/07.

With the assistance of the national network, the BMRC can consider commission comparative research to establish their green credentials in comparison to major retailers⁴³.

Drop-in customer workshops / events

Public training sessions help to raise profile, entice in customers, spread the word and communicate the core principles and brand identity of the store. Sessions can be advertised through local community groups and in consultation with local authority objectives and programmes for the area. The local authority or Energy Saving Trust office should be approached for staff and resources to run sessions⁴⁴.

These should relate to incoming products and any new stock; covering:

- Topical maintenance e.g. repairing windows, hanging a door
- Green building issues e.g. choice of products, wildlife protection
- Energy efficiency measures
- Regeneration + renovation issues – for local authority/building industry

Website

Having a web presence can be a powerful tool for maintaining awareness amongst both supplier clients and customers.

There is potential to develop online inventory and purchasing. This may be more effective as customer sales tool, rather than for the construction industry which, especially at the local level, remains dominated by mobile phones and contact networks.

The architectural salvage industry has developed online exchanges such Salvo and Architrader, and BRE have attempted to generate a geographical directory of operators. Whilst these tools are useful, they do not have extensive uptake and do not drive the volume of products that the BMRC will target.

⁴³ Research by environmental firm Trucost has found that, based on theoretical 'green costs' of £12.40 per tonne of carbon released into the atmosphere and £20.50 per tonne of landfill rubbish disposed of, the Co-op is the greenest major high street retailer (£324 per £1 million of turnover)...In second to ninth places of the ten stores examined were Marks & Spencer, Tesco, Boots, Home Retail Group (Argos and Homebase), Sainsbury's, Next, Asda and Morrisons." Daily Mirror, 28-06-2007.

⁴⁴ Such as the Green Doctor programme run for Leicester City Council by Groundwork LL, Groundwork Leicester and Leicestershire (GLL) (2007), The Green Doctor Project A Review, http://www.groundwork.org.uk/upload/news/29_document1.pdf, accessed 07/11/07

5 Operations

This section describes the key requirements for personnel and store location.

5.1 Paid Staff

All the positions are hands on and require combination of self motivation, initiative and hard work. This will require team players, prepared to get involved in daily operations. Operators will also require a strong sense of common sense.

As a social business there will be an unpaid board directors/trustees operating as a steering committee. These will provide a strategic overview and direction on financial decisions.

The following are the core roles that will need to be addressed. Individual stores will need to decide how best to assign these with their available resources; there is room for creating part-time positions and role sharing.

1. Managing Director / founder:

Person: Self-starter entrepreneur, business minded/know-how, strong commitment and enthusiasm. Prepared to get involved in daily operations. Solutions oriented with a can-do approach.

2. Warehouse and Purchasing Manager:

Job: Directly liaise with construction industry and other delivery partners. Source and assess products, negotiate supplier contracts, manage logistics process from source to storage and volunteer operatives. Closely work with Retail manager to develop buying strategy and shop layout.

Person: Background in construction/building good knowledge in handling and logistics for products and management of staff, site safety/asbestos trained and experienced.

3. Retail and Marketing Manager:

Job: Directly liaise with customers and delivery partners. Monitor and evaluate stock movement. Oversee stock layout and interior of store. Develop customer base and marketing strategy. Close working with Purchasing manager to develop buying strategy. Manage shop sales, layout and voluntary staff.

Person: Experience of managing shop floor and stock, benefit from experience of third sector or social enterprise. Good manner with customers and volunteer staff.

4. Training/Volunteers programme manager

Job: Identify and manage vocational training opportunities. Implement volunteer recruitment programme. Ensure in-house staff training.

Person: Strong communicator. Familiar with identifying funding streams and vocational training areas.

5. Administration and office manager

Job: Manage central office systems and products inventory. Produce reports and projections for other managers. First line of contact for incoming communications.

Person: Comfortable with human resources, finance and administration tasks.

5.1.1 Volunteers/ Trainees

Recruit from job training schemes, ex-offenders seeking employment, dedicated community and environmental volunteers, work experience.

It may be necessary to hire labour/operatives on demand to support operations until sufficient volunteer/trainees established.

Volunteers are incentivised both by the access to work experience and training and also “sweat equity” schemes, whereby hours worked can earn credits to spend within the BMRC.

5.2 Training and skills

Individual stores will need to carefully plan for the range of skills that they will need and the wider training opportunities that they are able to deliver.

The following is an essential list to build upon depending on specific staff skill levels and the range of services offered. These requirements should be built in to the training programmes offered.

5.2.1 In-store skills

A health and safety trained manager to

- supervise stock displays
- carry out risk assessments weekly prior to opening to public
- train up all staff on issues with stock display and product handling

The health and safety role will also need to ensure that the facilities and signage are suitably designed and maintained. This is an essential role and sufficient funds and time must be made available to properly fulfil the required duties.

A first aid trained member of staff needs to be onsite at all times⁴⁵.

Material handling –

- Train all staff and volunteers in lifting loads, using lifting devices, avoiding breakages and the careful storage requirements to keep each type of material in good saleable condition.

5.2.2 Advanced skills for deconstruction and pick up services

Deconstruction -

⁴⁵“DIY retailer [B&Q](#) has been fined almost £50,000 after an accident in a store in Worthing, West Sussex left four people injured. The incident occurred at the Lyons Farm superstore on 5 June 2004 when kitchen doors fell on three customers, leaving one man with a broken leg and broken ankle. A paramedic treating the injuries was the fourth person to be hurt when another door fell on him, injuring his spine. The company were ordered to pay £33,641.14 in costs and a £15,000 fine at Chichester Crown Court on 15 October 2007, after pleading guilty to a breach of the Health and Safety at Work Act” Daily Star 16-10-2007.

- Working at a height
- Asbestos awareness

Site safety –

- Train all operatives collecting from or visiting sites to CPCS red card with incentive to achieve blue card status or equivalent.

Lead

- In-store access to tester kits and training staff of their use.
- Consider HEPA vacuuming store regularly.

5.2.3 Location Requirements

The local authority will be approached for usable land; potentially derelict or held for future development. The site must include covered spaces for retail and storage of certain products. This request can be made attractive by offering to measure and report on waste reduction and social benefits achieved and potentially offering these towards local authority quotas/targets such as reduction in flytipping and/or offering commercial collection services. The BMRC can also offer to fulfil contract work.

In parallel to the local authority, disused sites earmarked for private development will also be targeted. This includes the offer to occupy and maintain security on a site.

The site will also need to be made secure to prevent stock theft and unauthorised access. The cost of achieving this should be borne in mind when finding a location.

The first phase requires an initial temporary/smaller site to establish and prove the model; phase two expansion could be in same location but requires a larger space and longer term rent to allow a more permanent infrastructure. The phases need to be within close proximity to maintain client/customer links after moving. The BMRC could use a split site; with a consolidation area to handle deliveries and processing of products and a covered retail space for customer browsing and sales.

Location will balance the need for proximity to sources of products, with the public facing requirements of the retailing. The following factors will be considered:

- Proximity to/locate in industrial park, suburban shopping district and /or visible from busy road.
- Suitable access roads for heavy vehicle deliveries;
- Ease of access for general public; including car parking and public transport.
- Proximity to complementary stores for passing trade e.g. household/trade recycling centre or a DIY/Builders Merchants.
- Proximity to long term construction development project to filter exiting products (waste) to recover those suited to resale and wider reclamation.
- Proximity to like minded enterprises (for co-location and cost savings).

6 Logistics and Service delivery

6.1 Sourcing Surplus Products

6.1.1 Target Sources for Products

The primary source is building industry waste, with household only considered where minimal additional effort is required (i.e. delivered to store). Highlighting the environmental and social benefits of the service should help to incentivise companies to become associated with the enterprise.

To this end BMRC will develop strong links and partnerships:

- Regional building, demolition and deconstruction businesses.
- Council contractors
- Private developers and site owners and
- Major construction companies where appropriate

6.1.2 Active buying policy

Sales driven floor space allocation will be adopted to maximise return per square foot, given that rental will represent a significant operational expense. Where incoming products prove low-value and slow moving these will no longer be accepted from suppliers.

The Retail and Marketing Manager will work alongside the Purchasing Manager to actively seek suppliers and sources for best selling products and ensure a stable range of bulk purchase /slower selling products such as doors and windows.

6.2 Processes

6.2.1 Distances

In keeping with the environmental vision, products will only be sourced within a reasonable radius to ensure that impacts from total transport emissions generated do not exceed those associated with the product sold as new.

Material	Distance
Reclaimed tile	Local
Reclaimed bricks	Neighbouring Regions
Reclaimed slate	Inter-Regional
Reclaimed timber	Inter-Regional
Reclaimed steel	National

Table 5 Adapted from maximum transport distances for reclaimed products (BRE, 2000)

Certain products should only be moved in larger quantities as costs outweigh prices achieved at low volumes. The table below gives estimates of the price per tonne per journey of an average of 100 miles for various differing load sizes. This includes staffing as well as vehicle and fuel costs.

Load Size	£/tonne/100 mile
1 tonne transit load self-organised	300
1 tonne transit load by courier	150
1 tonne load by pallet company	60
3 tonne by haulage contractor	66
10 tonne load by haulage contractor	40
20 tonne load by haulage contractor	25
30 tonne load by haulage contractor	20

Table 6 Estimated costs for transporting products

6.2.2 Material Handling

The BMRC will adopt a logistics led approach to minimise handling from pick up to shop front and tracking inventory with a searchable database.

The Purchasing Manager will select products and oversee transfer from site to loading/external storage. Stock entering covered/retail area will need to involve the Retail manager to ensure high quality public facing display. Operatives will need to be well trained in handling products to minimise breakages and health and safety to avoid accidents.

6.2.3 Pick-up service/Clearance/Transport

Waste collection service predominately targeted at construction and demolition industry. Service charges will undercut skip or landfill charges (as discussed business case section). To win over clients, it will be important to match the convenience and reliability of those provided by existing waste operators⁴⁶. The service should include direct pick-up and delivery where these coincide.

As the landfill tax escalator and Site Waste Management Plans (SWMP) affect the industry, this service will become increasingly valuable and charges will increase accordingly.

Pick-up can be run using rented vehicle (per day required) for first year of operation or until sufficient cash flow and regularity of donations justify purchase. There is a good potential for commercial sponsorship or grant funding to support this.

6.2.4 Deconstruction service

There is evidence, from ReStore experience and elsewhere⁴⁷, that this can generate significant revenue. This must not distract from core operations or overload the start-up phase. This service will only be developed once a customer base and basic operations have been established. The target will be to develop this service by end of year two of operation. This may require a transition phase; initially undertaking soft strip operations and developing industry contacts and market profile; followed by training up/recruiting for full deconstruction.

⁴⁶ "Contractors always receive free pickup within 48 hours" (E. Kruger, 2007) Starting a Used Building Materials Store, presentation at the 2007 Building Material Reuse Association conference, 14-16th May 2007, Madison, USA

⁴⁷ Deconstructing a typical London Victorian house can yield over 100 tonnes of valuable reclaimed materials. See case study p12, Reclamation Led Approach to Demolition, BioRegional Development Group, July 2007.

7 Financial Model

This section presents a financial model that provides indicative estimates for the potential sales and expenditure of a BMRC over the first five years of operation. The model assumes that sufficient supply can be sourced from construction activity and other sources within the local economic area⁴⁸ (see appendix 1c for a full list of notes and assumptions).

Please note that individual projects considering the establishment of a BMRC will need to undertake their own detailed market research, prepare cost projections and investigate the particular opportunities relevant to the local context in order to identify in which way a local operation may be most financially viable. The intention here is to provide an outline methodology in an adaptable format. All liability for detailed business plans and their deliverability will be the responsibility of individual projects, not of BioRegional or any contributors.

This model is estimated for a site within a medium to large conurbation outside London and the South East⁴⁹. Estimates draw on experiences of similar businesses currently in operation. These are the Madison ReStore, USA; MASCo, UK, TRUCE, UK, Bristol Wood Recycling Project, UK, and Tiger Enterprise, UK (appendices 5 and 6) and the Tees Valley BMRC project undertaken by Community Campus 87.

The financial projections

Detailed cashflow sheets for the BMRC in year two and five are displayed in Appendix 1a and 1b respectively. The growth and seasonal profile of sales income has been developed from the performance of the Madison ReStore, USA, and has been checked against UK operations. Across this period, the model describes an 80% increase in total income whilst keeping a similar weighting for expenditure categories. This is based on expanding remanufacturing (new product sales), wider services and training, and the breadth of the product range⁵⁰. See appendix 1e for analyses of income and expenditure for years two and five.

Financial performance figures for years one to five have been interpolated from the detailed cashflow sheets (see appendix 1d). These include an initial deficit for start-up capital expenditure requirements (appendix 1e) but do not include the operational costs of the development worker needed to develop a specific business plan in Year 0. Stock, debtors and creditors are all assumed to balance at the end of each year. Interest and inflation are not included. Financial performance is modelled with and without grant income and donations. Gross profit increases across the period from -12% to 17% of turnover with grant income and from -19% to 10% without. The level of funding included in the model allows the BMRC to reach break even point by year two and to have paid off upfront costs and losses by year five. From this point forward the BMRC would be financially self sustaining.

Conclusions

⁴⁸ A suitable area to establish a BMRC will preferably have significant planned construction activity adjacent to a concentration of population and economic activity.

⁴⁹ For London and the South East, higher sales and service pricing are required to support an expected doubling of premises costs and fifth higher staff costs.

⁵⁰ This financial model presents training provision and wider reusables sales as in-house activities. Alternatively, these can be handled by separate organisations, under concessions within the store. The sales income would then be replaced by reduced operational and premises costs.

The financial model estimates that a successful BMRC is dependent on the provision of training and wider services. Sales of reusable products alone are not predicted to cover total expenditure within five years of operations. Training provision also contributes to achieving sufficient numbers of staff. Grant income and donations assist the model to survive the initial growth period and reach financial sustainability by year five.

As a social enterprise, there are opportunities to reduce a number of the expenditure items, compared to comparable private or public sector organisations. These include cost sharing with an existing organisation and reduced rent from the local authority or regional development agency (section 3). There are opportunities to switch revenue costs to capital costs where suitable funding can be sourced. For example, upfront purchase of skips would remove rental costs. Waste disposal costs could also be reduced through the addition of recycling activities⁵¹.

⁵¹ No in-house recycling activity has been included in this model because it requires additional waste management functions and potential costs of regulatory requirements (or application for exemptions) that go beyond the scope of this business plan. These include a site waste license, registered carrier charges by the Environment Agency and Certificates of Technical Competence (COTCs). See www.circleliverpool.co.uk for an example of a recycling-led approach.

List of Appendices

- Appendix 1 Financial Projections**
- Appendix 2 Risk Analysis**
- Appendix 3 Regulatory Guidance**
- Appendix 4 Potential Funding Streams**
- Appendix 5 Case Studies of existing UK Reuse Enterprises**
- Appendix 6 Madison Habitat Restore case study**
- Appendix 7 Partners Profiles**

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Appendix 1a

YEAR 2 CASHFLOW FORECAST

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Total
EXPENDITURE													
Management salaries (i)	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	35,000
Staff salaries (ii)	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	36,000
Volunteer & trainee expenses (iii)	667	667	667	667	667	667	667	667	667	667	667	667	8,000
Travel and expenses (iv)	150	150	150	150	150	150	150	150	150	150	150	150	1,800
Warehouse & retail rent (v)			5,000			5,000			5,000			5,000	20,000
External storage rent (v)			1,500			1,500			1,500			1,500	6,000
National business rates (vi)	325			325			325			325			1,300
Building maintenance (vi)	70	70	70	70	70	70	70	70	70	70	70	70	840
Telephones incl mobiles (vi)	167	167	167	167	167	167	167	167	167	167	167	167	2,000
Gas (vi)		150		150		75		75		75		75	600
Electric (vi)		100		100		100		100		100		100	600
Water (vi)	33	33	33	33	33	33	33	33	33	33	33	33	400
Staff Training (vi)	250	250	250	250	250	250	250	250	250	250	250	250	3,000
Conferences and events (vi)	75	75	75	75	75	75	75	75	75	75	75	75	900
Computers and support (vi)	250	250	250	250	250	250	250	250	250	250	250	250	3,000
Stationery and office supplies (vi)	100	100	100	100	100	100	100	100	100	100	100	100	1,200
Accounts and payroll (vi)	200	900	900	200	200	200	200	200	200	200	200	200	3,800
Legal and professional (vi)	167	167	167	167	167	167	167	167	167	167	167	167	2,000
Publicity incl job adverts (vi)	200	200	200	200	200	200	200	200	200	200	200	200	2,400
Insurance - building and business (vi)	1,200						1,500						2,700
Bank charges incl chip & pin (vi)	58	58	58	58	58	58	58	58	58	58	58	58	700
Vehicle depreciation fund (vi)	333	333	333	333	333	333	333	333	333	333	333	333	4,000
Insurance - two vehicles (vi)	1,500						1,500						3,000
Vehicle fuel (vi)	400	400	400	400	400	400	400	400	400	400	400	400	4,800
Vehicle tax, service & hire (vi)	375	375	375	375	375	375	375	375	375	375	375	375	4,500
Equipment depreciation fund (vi)	167	167	167	167	167	167	167	167	167	167	167	167	2,000
Tools, racking & wrapping (vi)	125	125	125	125	125	125	125	125	125	125	125	125	1,500
Skip lease charges (vi)	450	450	450	450	450	450	450	450	450	450	450	450	5,400
Consumables & miscellaneous (vi)	208	208	208	208	208	208	208	208	208	208	208	208	2,500
Bought in new product (vi)	833	833	833	833	833	833	833	833	833	833	833	833	10,000
Bought in used product (vi)	400	400	400	400	400	400	400	400	400	400	400	400	4,800
Parts for fixing product (vi)	283	283	283	283	283	283	283	283	283	283	283	283	3,400
Unavoidable waste disposal (vi)	150	150	150	150	150	150	150	150	150	150	150	150	1,800
Donating to others budget (vi)	167	166	167	167	166	167	167	166	167	167	166	167	2,000
TOTAL EXPENDITURE	15,220	13,144	19,395	12,770	12,194	18,870	15,520	12,369	18,695	12,695	12,194	18,870	181,940

INCOME**Sales income**

Bricks tiles inerts (vii)	1667	1500	1667	1833	1500	1500	1833	2167	1667	1667	1500	1500	20,000
Higher value inerts/ceramics (vii)	417	375	417	458	375	375	458	542	417	417	375	375	5,000
Timber lengths (viii)	1667	1500	1667	1833	1500	1500	1833	2167	1667	1667	1500	1500	20,000
Timber doors (viii)	833	750	833	917	750	750	917	1083	833	833	750	750	10,000
Timber fittings (viii)	833	750	833	917	750	750	917	1083	833	833	750	750	10,000
Timber flooring (viii)	1250	1125	1250	1375	1125	1125	1375	1625	1250	1250	1125	1125	15,000
Cabinets, shelving units and windows (ix)	833	750	833	917	750	750	917	1083	833	833	750	750	10,000
Electrical & lighting fittings and/or plumbing and fittings (x)	417	375	417	458	375	375	458	542	417	417	375	375	5,000
Sanitaryware (xi)	417	375	417	458	375	375	458	542	417	417	375	375	5,000
Carpet tiles and flooring and/or Paint and coverings (xii)	417	375	417	458	375	375	458	542	417	417	375	375	5,000
Tools and consumables	417	375	417	458	375	375	458	542	417	417	375	375	5,000
Miscellaneous reusables	833	750	833	917	750	750	917	1083	833	833	750	750	10,000
New product sale (xiii)	833	750	833	917	750	750	917	1083	833	833	750	750	10,000
Reuse skip rental charges	833	750	833	917	750	750	917	1083	833	833	750	750	10,000
Collection and delivery charges	1250	1125	1250	1375	1125	1125	1375	1625	1250	1250	1125	1125	15,000
Sales subtotal	12,917	11,625	12,917	14,208	11,625	11,625	14,208	16,792	12,917	12,917	11,625	11,625	155,000

Additional Income

Training income (xiv)	417	375	417	458	375	375	458	542	417	417	375	375	5,000
Deconstruction business (xiv)	666	600	666	740	600	600	733	866	666	666	600	600	8,000
Building maintenance (xiv)	500	500	500	500	500	500	500	500	500	500	500	500	8,000
Donations - Individuals (xv)				1,000		1,000		1,000		1,000		1,000	5,000
Trust & other funding/grants (xv)			2,000			2,000			2,000			2,000	8,000
Council/public sector grants (xv)		2,000					3,000					2,000	7,000
Additional income subtotal	1,583	3,475	3,583	2,698	1,475	4,475	4,691	2,908	3,583	2,583	1,475	6,475	41,000

TOTAL INCOME

TOTAL INCOME	14,499	15,100	16,499	16,907	13,100	16,100	18,900	19,699	16,499	15,499	13,100	18,100	196,000
NET MONTHLY BALANCE (xvi)	-721	1,956	-2,896	4,137	906	-2,770	3,380	7,330	-2,196	2,804	906	-770	14,060
ONGOING BALANCE (xvi)		1,235	-1,660	2,476	3,382	612	3,992	11,322	9,127	11,931	12,837	12,069	

Appendix 1b

YEAR 5 - CASH FLOW FORECAST

EXPENDITURE

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Totals
Management salaries (i)	5,417	5,417	5,417	5,417	5,417	5,417	5,417	5,417	5,417	5,417	5,417	5,417	65,000
Staff salaries (ii)	4,667	4,667	4,667	4,667	4,667	4,667	4,667	4,667	4,667	4,667	4,667	4,667	56,000
Volunteer & trainee expenses (iii)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
Travel and expenses (iv)	250	250	250	250	250	250	250	250	250	250	250	250	3,000
Warehouse & retail rent (v)			7,500			7,500			7,500			7,500	30,000
External storage rent (v)			2,500			2,500			2,500			2,500	10,000
National business rates (vi)	624			624			624			624			2,500
Building maintenance (vi)	83	83	83	83	83	83	83	83	83	83	83	83	1,000
Telephones incl mobiles (vi)	167	167	167	167	167	167	167	167	167	167	167	167	2,000
Gas (vi)		200		200		100		100		100		100	800
Electric (vi)		200		200		200		200		200		200	1,200
Water (vi)	33	33	33	33	33	33	33	33	33	33	33	33	400
Staff Training (vi)	250	250	250	250	250	250	250	250	250	250	250	250	3,000
Conferences and events (vi)	75	75	75	75	75	75	75	75	75	75	75	75	900
Computers and support (vi)	292	292	292	292	292	292	292	292	292	292	292	292	3,500
Stationery and office supplies (vi)	100	100	100	100	100	100	100	100	100	100	100	100	1,200
Accounts and payroll (vi)	300	1,200	1,200	300	300	300	300	300	300	300	300	300	5,400
Legal and professional (vi)	167	167	167	167	167	167	167	167	167	167	167	167	2,000
Publicity incl job adverts (vi)	250	250	250	250	250	250	250	250	250	250	250	250	3,000
Insurance - building and business (vi)	1,500						1,500						3,000
Bank charges incl chip & pin (vi)	58	58	58	58	58	58	58	58	58	58	58	58	700
Vehicle depreciation fund (vi)	333	333	333	333	333	333	333	333	333	333	333	333	4,000
Insurance - two vehicles (vi)	1,500						1,500						3,000
Vehicle fuel (vi)	583	583	583	583	583	583	583	583	583	583	583	583	7,000
Vehicle tax, service & hire (vi)	375	375	375	375	375	375	375	375	375	375	375	375	4,500
Equipment depreciation fund (vi)	167	167	167	167	167	167	167	167	167	167	167	167	2,000
Tools, racking & wrapping (vi)	125	125	125	125	125	125	125	125	125	125	125	125	1,500
Skip lease charges (vi)	600	600	600	600	600	600	600	600	600	600	600	600	7,200
Consumables & miscellaneous (vi)	208	208	208	208	208	208	208	208	208	208	208	208	2,500
Bought in new product (vi)	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	30,000
Bought in used product (vi)	833	833	833	833	833	833	833	833	833	833	833	833	10,000
Parts for fixing product (vi)	458	458	458	458	458	458	458	458	458	458	458	458	5,500
Unavoidable waste disposal (vi)	200	200	200	200	200	200	200	200	200	200	200	200	2,400
Donating to others budget (vi)	150	150	150	150	150	150	150	150	150	150	150	150	1,800
TOTAL EXPENDITURE	23,265	20,941	30,541	20,665	19,641	29,941	23,265	19,941	29,641	20,565	19,641	29,941	288,000

INCOME

Sales income													
Bricks tiles inerts (vii)	2,083	1,875	2,083	2,291	1,875	1,875	2,291	2,708	2,083	2,083	1,875	1,875	25,000
Higher value inerts/ceramics (vii)	625	563	625	687	563	563	687	812	625	625	563	563	7,500
Timber lengths (viii)	2,500	2,250	2,500	2,750	2,250	2,250	2,750	3,250	2,500	2,500	2,250	2,250	30,000
Timber doors (viii)	1,667	1,500	1,667	1,833	1,500	1,500	1,833	2,167	1,667	1,667	1,500	1,500	20,000
Timber fittings (viii)	1,250	1,125	1,250	1,375	1,125	1,125	1,375	1,625	1,250	1,250	1,125	1,125	15,000
Timber flooring (viii)	2,083	1,875	2,083	2,291	1,875	1,875	2,291	2,708	2,083	2,083	1,875	1,875	25,000
Cabinets, shelving units and windows (ix)	1,250	1,125	1,250	1,375	1,125	1,125	1,375	1,625	1,250	1,250	1,125	1,125	15,000
Electrical & lighting fittings and/or plumbing and fittings (x)	625	563	625	687	563	563	687	812	625	625	563	563	7,500
Sanitaryware (xi)	1,250	1,125	1,250	1,375	1,125	1,125	1,375	1,625	1,250	1,250	1,125	1,125	15,000
Carpet tiles, flooring and/or Paint and coverings (xii)	625	563	625	687	563	563	687	812	625	625	563	563	7,500
Tools and consumables	625	563	625	687	563	563	687	812	625	625	563	563	7,500
Miscellaneous reusables	1,250	1,125	1,250	1,375	1,125	1,125	1,375	1,625	1,250	1,250	1,125	1,125	15,000
New product sale (xiii)	3,750	3,375	3,750	4,124	3,375	3,375	4,124	4,875	3,750	3,750	3,375	3,375	45,000
Reuse skip rental charges	1,250	1,125	1,250	1,375	1,125	1,125	1,375	1,625	1,250	1,250	1,125	1,125	15,000
Collection and delivery charges	1,667	1,500	1,667	1,833	1,500	1,500	1,833	2,167	1,667	1,667	1,500	1,500	20,000
Sales subtotal	22,499	20,252	22,499	24,746	20,252	20,252	24,746	29,250	22,499	22,499	20,252	20,252	270,000
Additional Income													
Training income (xiv)	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	15,000
Deconstruction business (xiv)	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	20,000
Building maintenance (xiv)	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	15,000
Donations - Individuals (xv)				1,000		1,000		1,000		1,000		1,000	5,000
Trust & other funding/grants (xv)			2,000		2,000		2,000		2,000		2,000		10,000
Council/public sector grants (xv)			2,000		2,000		2,000		2,000		2,000		10,000
Additional Income subtotal	4,167	4,167	8,167	5,167	75,000								
TOTAL INCOME	26,666	24,419	30,666	29,913	28,419	25,419	32,913	34,417	30,666	27,666	28,419	25,419	345,000
NET MONTHLY BALANCE (xvi)	3,401	3,478	125	9,248	8,778	-4,522	9,648	14,476	1,025	7,101	8,778	-4,522	57,000
ONGOING BALANCE (xvi)		6,880	7,005	16,252	25,031	20,509	30,157	44,633	45,658	52,759	61,538	57,006	

Appendix 1c Financial Model - Assumptions and Notes

The following assumptions and notes refer to the expenditure and income items of the Cashflow Forecast Sheets in appendix 1a and 1b. The roman numeral indicates which specific item is being referenced (please refer to cashflow sheets).

- i. Based on one full time manager for year two and two full time managers for year 5.
- ii. Based on two full time staff for year two and three for year 5.
- iii. Estimate for supporting a number of volunteers and trainees.
- iv. Estimate for staff travel activities.

NB. This model has assumed an absolute minimum number of staff and is reliant on recruiting a large number of trainees/volunteers.

- v. Based on the following estimated requirements: a year two floor area of 1000 sqm of warehouse and 500 sqm of external yard and a year five floor area of 1500 sqm of warehouse and 750 sqm of external yard. These are exclusive of car parking. Rental costs have been estimated as halfway between those of an existing reuse project in the South West and the lowest London rent available. Reasonable product prices (based on a 50% discount on new prices) were used to estimate the sales turnover and check that the space allocations are sufficient to accommodate the stock. Products are assumed to be sold within six months creating an estimated material throughput of 1000 tonnes for year two rising to 1500 tonnes for year five.
- vi. Operational costs have been estimated in collaboration with the Community Campus 87 Tees Valley BMRC project team and in consultation with an existing reuse enterprise in the East of England.
- vii. This is in line with the performance of Tiger Enterprise Ltd (Reuse Business) in Newhaven and estimated in consultation with MASCo (reclamation business). Bricks are assumed to be stacked four pallets high. Higher value inerts/ceramics such as tiles are assumed to yield higher return per sqm of stock.
- viii. Sales are based on sales of softwood lengths at £10 per cu.m stacked at 3-4 m high. These sales are in line with the turnover achieved by the two UK wood projects consulted. Timber fittings include door handles, locks, catches and hinges.
- ix. This represents a significant sales line for the Madison Restore, USA, but has been scaled down for UK market.
- x. These are specialist products and require in-house knowledge. Wired-up electrical products must be tested and certified by qualified professional.
- xi. These can be highly profitable but older (second-use) products are already well handled by the reclamation industry.
- xii. This product range may be best handled in partnership with existing Reuse Enterprises. This model considers carpet tiles only rather than carpet in

general. Sheet carpet is a more specialist area with particular challenges. Further information is available from info@carpetrecyclinguk.com.

- xiii. New Products includes end-of-lines from retailers and manufacturers; purchased new stock such as consumables (e.g. nails, drill bits) and eco-build products (e.g. insulation) and products remanufactured in-house such as tables made from reclaimed timber. Remanufacturing activity expands significantly by year five.
- xiv. Deconstruction and maintenance services provide opportunities to run hands-on vocational training. This income has been estimated in collaboration with the Community Campus 87 Tees Valley BMRC project.
- xv. This level of grant funding has been estimated as a realistic minimum necessary to achieve break even point by year two and pay off accumulated debts by year five. This is in addition to assumptions of a low rent agreement and an interest free loan of £100k at the start of operations.
- xvi. The cash flow is presented as a snapshot. The monthly bank balance does not include the balance carried from the previous year. A cumulative balance is presented for years one to five in appendix 1e.

Appendix 1d Cash Flow Model Years 1- 5

Table - BMRC Cashflow Model for Years 1 to 5 without grant income

	Cash at start	Total Expenditure	Collection and Retail income	Wider Services income	Grant income	End of year cash position	Profit before Tax	Profit as % of Turnover
	£s	£s	£s	£s	£s	£s	£s	
Year 1	-97,000	163,746	124,600	13,500	0	-122,646	-25,646	-19
Year 2	-122,646	181,940	155,000	24,000	0	-125,586	-2,940	-2
Year 3	-125,586	230,400	210,750	29,000	0	-116,236	9,350	4
Year 4	-116,236	259,200	238,850	34,000	0	-102,586	13,650	5
Year 5	-102,586	288,000	270,000	50,000	0	-70,586	32,000	10

Table - BMRC Cashflow Model for Years 1 to 5 including grant income

	Cash at start	Total expenditure	Collection and Retail income	Wider Services income	Grant income	End of year cash position	Profit before Tax	Profit as % of Turnover
	£s	£s	£s	£s	£s	£s	£s	
Year 1	-97,000	163,746	124,600	13,500	8,500	-114,146	-17,146	-12
Year 2	-114,146	181,940	155,000	24,000	20,000	-97,086	17,060	9
Year 3	-97,086	230,400	210,750	29,000	20,000	-67,736	29,350	11
Year 4	-67,736	259,200	238,850	34,000	25,500	-28,586	39,150	13
Year 5	-28,586	288,000	270,000	50,000	25,000	28,414	57,000	17

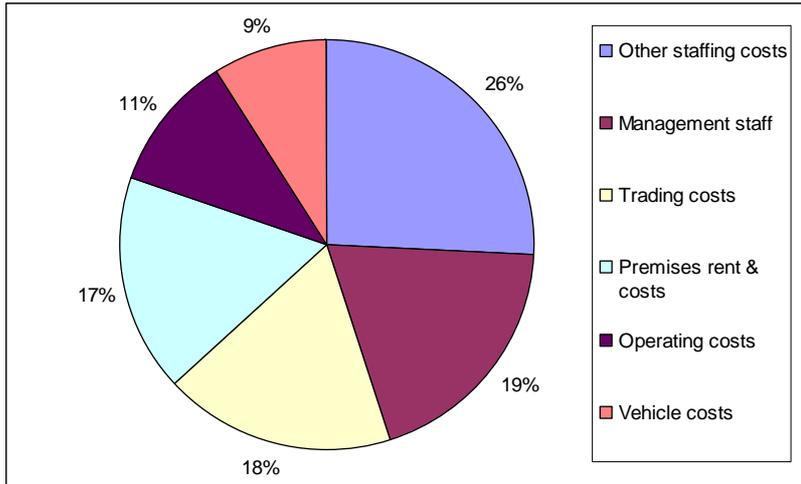
Note: Both tables assume that creditors and debtors and other elements including stock levels are in balance each year.

Appendix 1e Financial analysis tables and figures for years 0-5 of operation

Table displaying the start up requirements for Year 0

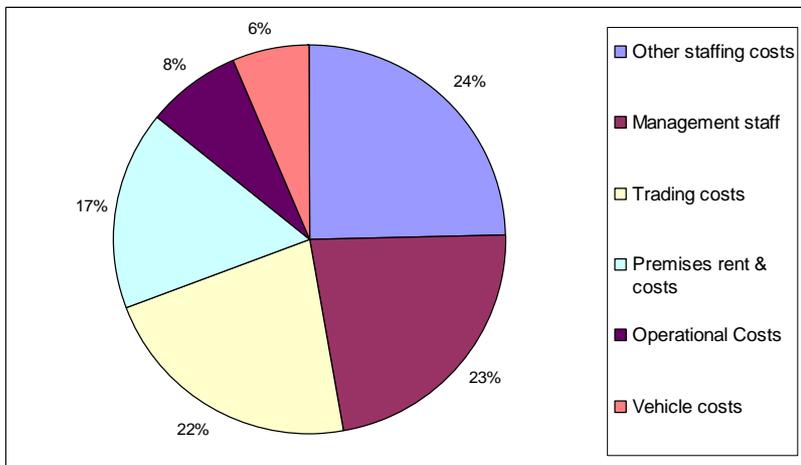
	Estimate (£)	Range	Type
capital items			
Building modifications/additions	12,000	£0 to £30,000	capex
Other one off site safety/security costs	8,000	£0 to £20,000	capex
Racking and other removable fittings	10,000	£5,000 to £15,000	capex
Pallet truck – on site material movement	15,000	£10,000 to £20,000	capex
Tools and other equipment	12,000	£10,000 to £15,000	capex
Two vehicles	40,000	£30,000 to £60,000	capex
sub total	97,000		
operational items			
Development worker	45,000	£20,000 to £50,000	opex
Start-up cash float	10,000		opex
sub total	55,000		
Total start up requirement		152,000	

Table - Year Two Expenditure Analysis		
Expenditure categories	Subtotal (£)	% of expenditure
Other staffing costs	45,800	26
Management staff	35,000	19
Trading costs	33,400	18
Premises	31,740	17
Operating costs	19,700	11
Vehicle costs	16,300	9
Total Expenditure	181,940	



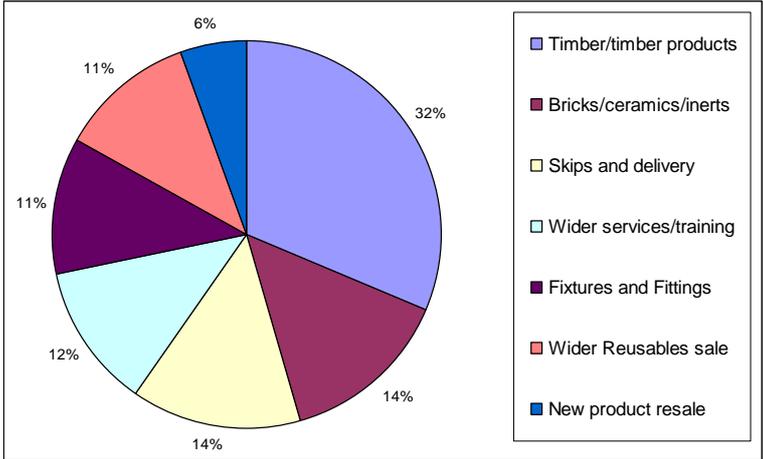
Pie chart for Year Two Expenditure Analysis

Table - Year Five Expenditure Analysis		
Expenditure categories	Subtotal (£)	% of expenditure
Other staffing costs	71,000	25
Management staff	65,000	23
Trading costs	62,900	22
Premises rent & costs	47,900	17
Operational Costs	22,700	8
Vehicle costs	18,500	6
Total Expenditure	288,000	



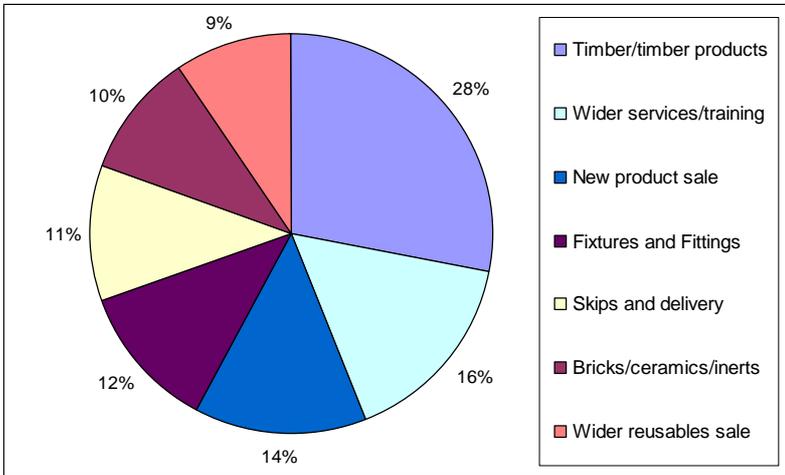
Pie chart for Year Five Expenditure Analysis

Table - Year Two Income Analysis		
Income Category	Subtotal (£)	% of income
Timber/timber products	55,000	31
Bricks/ceramics/inerts	25,000	14
Skips and delivery	25,000	14
Wider services/training	21,000	12
Fixtures and Fittings	20,000	11
Wider Reusables sale	20,000	11
New product resale	10,000	6
Total Income	176,000	



Pie chart for Year Two Income Analysis

Table - Year Five Income Analysis		
Income Category	Subtotal (£)	% of income
Timber/timber products	90,000	28
Wider services/training	50,000	16
New product sale	45,000	14
Fixtures and Fittings	37,500	12
Skips and delivery	35,000	11
Bricks/ceramics/inerts	32,500	10
Wider reusables sale	30,000	9
Total Income	320,000	



Pie chart for Year Five Income Analysis

Appendix 2 Risk Analysis

Identified Risk	Potential Consequence	Risk Level	Mitigation Strategy
<p>Insufficient reusable products within economic catchment area e.g. due to slump in construction sector</p>	<p>Shortage of products would damage viability of project if turnover is significantly affected.</p>	<p>Medium</p>	<p>The project needs to survey the catchment and secure potential sources with formal agreements before start-up.</p> <p>National shortage of homes, and number of development opportunities mean high construction volume should continue, though industry profit margins may fall</p>
<p>Potential regulatory compliance issues including need to comply with detailed trading standards obligations to purchasers</p>	<p>Business damaged if any faulty product sold and/or customer makes inappropriate use of product. Avoidable risks added to business if obligations on suppliers and purchasers are not made clear to both groups.</p>	<p>Medium</p>	<p>No shortcuts. Documented quality control checks needed for all products handled. Clear and careful product descriptions needed on all reused products sold. Agreements for product sale needs to clearly state obligations on purchaser. Acceptance agreement also needed with sources of product, on who carries risk.</p>
<p>Project fails to achieve health and safety, or fails to properly train all staff and trainees, or fails to implement safety for customers/visitors</p>	<p>Potential of injury to staff or trainee if inadequate risk control. Wider risks of prosecution, litigation and damage to business.</p>	<p>Medium</p>	<p>Full health and safety policies, procedures, budget and training essential component, including monitoring/review</p>
<p>Project unable to obtain capital start up funding and/or cover</p>	<p>Financial analysis identifies need for project to obtain grant</p>	<p>Medium</p>	<p>Capital and initial funding needs priority in business attention. Potential capital</p>

initial deficit to Year 5 – or fails to apply sufficiently early given potential for funding/other delays	funding for capital and/or initial deficit, or find other funding routes, from an existing host project's reserves/loan.		funding sources are available in most UK regions.
Construction industry and supply chain rapidly becomes resource efficient – cutting out supply of reusables.	Would cut supply of material, project income, and capacity of income to cover project overheads	Low	Likely to be slow change, allowing BMRC to adapt and target opportunities where resource efficiency worst, and retain healthy margins on throughput material. Additionally; diversification of product range to new “eco-products” to match market demands.
Income per unit of product sales fails to match projections.	Potentially damaging to finances and viability, including if prices fluctuate too much and regular customers are lost	Low	Reusables need to be marketed on price comparison not based on being cheap. Pricing needs to be set to maximise revenue and achieve marginal undercutting. Detailed two monthly price reviews needed
Project fails to control costs and re-budget to make cuts to compensate for any additional unpredictable costs.	Also potentially damaging to ensuring financial viability.	Low	Budget needs careful construction. Cost control essential for structure BMRC to operate on lower cost base than most alternatives, giving it competitive edge.
Excess competition locally, including from existing/new waste and recycling companies in area, or if similar project to BMRC	Waste/recycling companies or other competitors could aggressively target the BMRC and undermine its viability.	Low	BMRC needs to undertake market research & engage key local companies as partners.

reduces operating territory.			Strategy needed to ensure that 2 BMRCs are not set up too close to each other – there are plenty of suitable UK locations to tap before this becomes a risk
Potential for projects to be damaged by unforeseen environmental or other regulatory legislation	Unforeseen extra costs to project.	Low	Expected to also equally impact on material sources, and on local market competitors, increasing their costs. and the ability of BMRC to increase its charges. Likely to be neutral and/or improve supply of material sourced or margins.

Note: Risk Level - Risk calculation combines Likelihood and Severity of Impact for project.

Appendix 3 Notes on Regulatory and Risk Management Issues

Waste Regulation

Enforcement/Guidance - Environment Agency

Not required for:

Items that are specifically provided by the source for re-use, e.g. material 'donations' that are not waste.

Required for:

Material requiring processing after transport, or delivery of mixed loads including recyclables. Material or objects that the holder considers they are discarding as waste.

Companies/organisations who insist that the material is waste to ensure that the recipient exercises specific care, ensuring that the source organisation can demonstrate they clearly meets their legal 'Duty of Care' obligations.

Exemptions available for reuse operations that may include:

operations where virtually all waste material is specifically processed at the source site before transport, enabling it to be reused without further processing, and/or

operations that create less than a de minimus level of 'waste' per year, often set at several tonnes.

Types of licenses required:

Formal Exemptions in writing from the Environment Agency or;

Several stages of licensing where required:

- Waste Carrier's Licence – costing about £200 every 3 years, may be needed without all the other requirements
- Waste Transfer Notes – covering the movement of waste material, linked to 'Duty of Care' requirements
- Waste Management Licence (WML) for the reception/processing site - potentially costing £10,000 for a full licence
Other than storage areas for re-usable material, mixed material processing and reception areas of any significance can be expected to need a WML
- Certificate of Technical Competence – that there is a qualified manager in overall charge of the site e.g. WAMITAB level 4

More information:

Located at www.netregs.gov.uk including:

Guidance for Community Groups, Charities and Not-for-profit Organisations.
<http://www.environment-agency.gov.uk/netregs/sectors/287956/610756/?version=1>

Reuse and Refurbishment Guide
www.environment-agency.gov.uk/commondata/103599/ld1_reuse_refurb_631037.doc
2003 guidance which consider re-usable material collected by community organisations

Trading Standards

Enforcement/Guidance - Local County/Unitary Council Trading Standards Department

Obligations regarding safety of product sold, description accuracy, fitness for purposes described.

Health and Safety

Enforcement/Guidance - Health and Safety Executive

Includes:

- Health and Safety policy
- Appropriate Risk Assessments
- Manual Handling
- Specific prescription of hazardous materials or operations

Appendix 4 Funding Options for a BMRC

For social enterprises, examples are provided below of funding sources and routes to find out more in relation to the two funding gaps.

Capital Funding

Regional Development Agencies (RDAs) - www.englishrdas.com/visit_rdas provides links to the 9 English RDAs. RDAs oversee:

- European Regional Development Funding
- regional delivery of European Social Funding (ESF) www.esf.gov.uk
- their own capital funds, with some having a specific additional focus on social enterprises.

National funding opportunities that include:

- Adventure Capital Fund www.adventurecapitalfund.org.uk
- Future Builders www.futurebuilders-england.org.uk
- The range of large trusts who make environmental and/or training their priority e.g. www.esmeefairbairn.org.uk

Regional funds include regional trusts including several operated by major construction companies. Various regional funds also come and go e.g.

www.enhancelondon.co.uk/capital_funding.aspx

European funding partnerships e.g. Interreg but EU funding requires patience and time, not always available for potential BMRC projects.

Revenue (and start up development) Funding

Funding for feasibility studies is available via RDAs and local authorities, particularly in regeneration regions.

National sources include lottery and major plcs, examples include:

- Awards for All (up to £10,000) www.awardsforall.org.uk
- Lloyds Foundations - www.lloydstsbfoundations.org.uk

Loans are an option for revenue (and even capital). After detailed business analysis, loan or secure overdraft funding may be appropriate. Several banks focus on assisting social enterprises and ethical operations and offer less rigid management and/or better interest rates than the wider market. Some early years funding may also be available via sponsorship with a regional or national construction company.

Related funding opportunities in regeneration areas for training and/or employing trainees, include:

- New Deal
- LSC
- LEGI and deprived communities funding

Appendix 5 Case studies of UK Reuse based social enterprises, projects and businesses

This following section presents brief case studies of the story behind some relevant reuse based social enterprises.

Case Study 1 Building Product Reuse

Community Campus 87 BMRC project, Tees Valley¹

Following a regional event in April 2007, a BMRC is being planned in the Tees Valley. This is led by Renew Tees Valley (part of the REMADE network) and Community Campus 87, a social enterprise based in Stockton on Tees. The organisations have co-funded the appointment of a Project Development Officer supported by a cross sector Steering Group. Renew Tees Valley is a near to market delivery organization which capitalizes on existing and emerging opportunities in the waste/recycling and renewable energy sectors. Community Campus 87 (CC87) aims are to:

- To carry on for the benefit of the community, the business of providing housing accommodation facilities and amenities for homeless persons in particular young homeless persons in conditions of need, hardship or distress.
- To provide advice to those in conditions of need in relation to homelessness, housing provision and related issues.

CC87 trading provide services in building maintenance, decorating and appliance testing. They also provide training and employment opportunities in construction skills.

The project development officer is currently working with the Community Campus 87 and Renew Tees Valley to identify a site and undertake a detailed feasibility study for the establishment of a BMRC.

Tiger Enterprise, Newhaven, East Sussex

Tiger Enterprise Ltd was established by Cheris and Dan Hill on small piece of land in Peacehaven on the South Coast for £20 a week in November 2006. The business quickly flourished and has now relocated to a 3000 sqft site yard in Newhaven, that is open all week is operated.

The basic business model is to provide a free waste collection service to the local building industry; focussed mainly on unused/excess products. These products are then displayed a the yard for sale to local trade and general public. Prices are set cheaper than DIY or Builders Merchants and only good condition items are sold. Leftover building products collected include bricks, tiles, kitchen units, window frames and doors. The business has found that the cheaper items such as modern bricks and concrete tiles have proved the best sellers. Dan explains the story behind the business:

" I used to work for my dad in the building trade in Surrey and it was there I realised just how much stuff was being chucked away. It really was staggering. We wanted to come up with a business model that would make it easier for project managers to get rid of their waste in a more environmentally friendly way...We felt if we could create the right scheme we could reduce fly-tipping, save money for local companies and help councils reach their recycling targets."

Brighton Argos, 07/08/2007

¹ Contact Chris Kemp, RE-BUILD Tees Valley c/o Community Campus 08701642 357 364, cmk42@hotmail.com.

Tiger Enterprise is working with Lewes District Council to raise awareness in the building trade of the service it offers and to prevent unnecessary waste. To date, the business has diverted over 300 tonnes from landfill saving an associated 220 tonnes of embodied CO₂ emissions.

This has led to being shortlisted for two awards in the first year of operation:

- SEEDA Young Entrepreneur of the Year, 2008 – finalist
- South East Centre for the Environment, Green Business of 2008 - finalist

Currently, the majority of sales are to the general public as the quantities aren't generally large enough for the building trade. Dan and Hill are currently working to scale up operations to meet this larger scale market demand.

More information is available from Daniel Hill, Director, Tiger Enterprise Ltd - 07766 568684, dhillrecycling@yahoo.co.uk , www.reuseitdontloseit.co.uk .

Case Study 2 Timber Reuse

National Community Wood Recycling Project (NCWRP)²

The NCWRP was founded in 2003 to assist and support the setting up of community wood projects based on the experience of the Brighton and Hove outlet. The aims are to reduce resource waste and landfill and create community jobs. The project has over 20 affiliated-recycling schemes throughout the UK. Current funding is two fold:

- 70% Esmee Fairbairn Foundation (private trust) (£90k over 3 years)
- 30% charged services

The general business model is based on the following factors:

- Not-for-profit, financially self-supporting, profit reinvested.
- Low capital intensive, low tech, labour intensive processes.
- Win business by undercutting other waste disposal options
- Collect all wood based waste (need to establish a prior outlet for low grade)
- Volunteer labour force (long term unemployed)
- Motivated with potential future paid positions and/or training
- Clients (supply)
 - small scale (skip, van), builders are a key supplier
 - Can't compete with large scale disposal
- Customers (sales)
 - Focus on general public
 - Avoid high volume e.g. builders
- Space
 - Accessible, secure, power, water.
 - Low grade – awaiting development
 - Local authority owned

Examples of individual wood focussed Reuse Enterprises:

TRUCE – Timber Reuse Community Enterprise³, West Somerset

The project collects timber and wider building materials, provides a machining process and a range of remanufactured products. They have also provided high performance joinery services such as for the Great Bow St. Yard, Somerset using reclaimed timber. The training and volunteers programme offered is targeted around building vocational qualifications and experience. Training generates additional income for the project. Products and prices are displayed on the website. In 2007, the project diverted 150 tonnes of timber from landfill. The project's income is rapidly growing, having recently tripled sales turnover. The operation runs with three full time and one part time paid staff and one apprentice. They rent roughly 500 sqm of space on a low rent agreement. The project is currently looking for opportunities to expand and has strong links with other reuse organisations within the South West.

Brighton and Hove Wood Recycling Project⁴

Opened 1999, this was a pioneering project established and initially run entirely by volunteers. This project formed the basic model used by the NCWRP. The project uses a grading system to channel collected wood towards its highest possible use. Of the 450 tonnes of wood collected a year only 1 % ends up back in the waste stream. The project is housed in a temporary site that is earmarked for development, hence rent is kept low. Wood is sourced from domestic, commercial (furniture workshops + packaging) and builder clients. Products sold range from unprocessed timber lengths to

² This information comes from the NCWP website where further extensive information and support is available - www.communitywoodrecycling.org.uk. Contact Richard Mehmed for further details - 01273 49 50 60.

³ Contact Ian Pope, 01643 707 397, www.timber-reuse.org.uk

⁴ www.woodrecycling.org.uk

high quality hand made furniture. The project has established collection client relationships with major house builders in the area as well as handling some domestic collections.

Bristol Wood Recycling Project⁵

The project is a self-funded not for-profit social enterprise. They have been running for nearly four years. They became self financing within three years and benefit from a minimal rent agreement. Turnover has now reached £100k and the yard is fully stocked. The team has five paid staff and four-five volunteers daily and two vans. Roughly a fifth of the wood collected is sold for reuse either with minimal processing or remanufactured into furniture. The remainder is recycled. They collect between 25 and 30 tonnes of timber waste a month. Collection charges create about a third of our income; sales two-thirds. The waste collection service is within 48 hours and waste transfer notices are provided. Timber stock is stored in covered scaffold racking on an external yard of roughly half an acre. The project has good links with other reuse social enterprises in the area.

Case Study 3 Wider Reuse

Scrapstores and Resource Centres

These are independent, self sustaining registered charities or not-for-profits. There are numerous Scrapstores across the UK. They offer free collection of commercial off cuts and excess materials resold as very cheap arts and crafts materials to local schools and community groups. Some also stock new resources such as paints/scissors etc. Generally, membership is required to purchase, products often priced by trolley load.

The stores are currently looking at forming a Federation to provide information and support (best practice) and to secure funding and supplies. A full 90 page report is available from Bristol Children's Scrapstore⁶.

Examples include:

Children's Scrapstore, Bristol

- Warehouse/ superstore situated in area of industrial suppliers
- members access only
- swap with other scrap stores
- separate "Artrageous" shop open to public with new supplies (books, scissors, paint, instruments) profits fed back into scrapstore
- Activities e.g. roadshow – mobile scrapstore, Saturday craft sessions, action research into play for learning

Suffolk scrapstore⁷, Suffolk

- Operating since 1994, 400+ members (groups)
- Provides vocational work training to adults with learning disabilities
- Partnered with county council social care services (originally European social fund)
- Recycling service for cans (crusher onsite) and cartridges

Unique Scrapstore⁸, Nottingham

The scrap store is run as a social enterprise, set up to generate financial support to the youth focussed charity; Unique Coffee bar. They recently won both the ICT hub award 2007 for their website and the Green guardian award environmental business 2006 for their operations. An online mail order service is provided through an award winning

⁵ Contact Ben Moss - 0117 972 3219, www.bwrp.org.uk

⁶ Contact Jeff Hill, www.bristolchildrensscrapstore.com

⁷ www.suffolkscrapstore.co.uk/

⁸ www.uniquescrapstore.com

website offers a full inventory of categorised materials with price and volume available and is regularly updated. A new service is the Unique co-buy, a collective buying service for consumables (currently paper only) whereby a maximum price is paid, then reduced as a greater number of customers place an order. The stock range includes new arts and crafts products to complement the reusable materials.

Appendix 6 Case Study of the Madison Habitat ReStore, Dane County, USA

Habitat for Humanity ReStores

The national Habitat ReStore network now numbers some 500 outlets (Habitat World, 2006); with the first store opened in 1992 (Falk and Guy, 2007). The stores are charitable retail outlets selling reclaimed building products to the general public and trade. They are run on a predominantly volunteer workforce and often provide collection and deconstruction services. Profits and excess products are channelled back to the Habitat for Humanity (HfH) charity¹.

Madison Habitat Restore

The Madison Habitat Restore was established by Jen Voichick in 2001. Jen's background included international Ice Hockey player, apprentice carpenter and supervising a project working with at-risk youth to build affordable homes. When Jen approached the local HfH office with the idea to set up establish the store, she was surprised to find out many already existed elsewhere. Jen's entrepreneurial approach and strong drive must play a significant role in the success the store has achieved; having tripled its turnover within the first five years of operation (see figure 1 below) to reach an annual turnover of over £300k. The store consists of 5400sqft of area and operates an average of 17 days a month, leaving some days clear to process incoming products and attend to stock display. To date, this success has created over £75k of funds for the HfH. The initial costs included £180k of operational expenses for first two years; which was more than covered by the £380k worth of grants raised over the same period (Voichick, 2003).

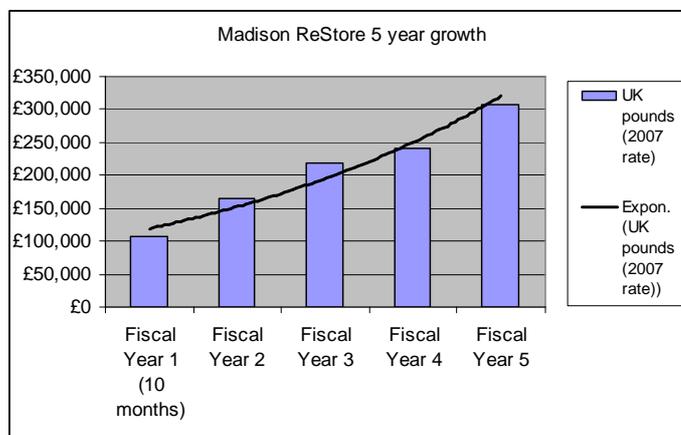


Figure 1 Madison Habitat ReStore growth in turnover (converted to UK£)

¹ Habitat of Humanity build quality and affordable homes for families across the world who would otherwise not have access them. www.habitat.org , accessed 07/11/07.

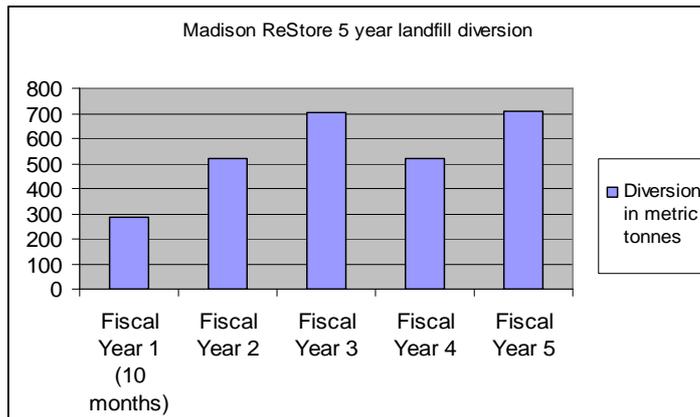


Figure 2 Madison Habitat ReStore Landfill diversion

The close monitoring of sales on the shop floor has created a highly efficient retail approach. Each year, stock range and quantities are adjusted to match customer preferences (see figure 5 from main business plan figure 2 above); for example year four appears to show the product range change to higher value per tonne (turnover rose whilst tonnage fell).

In terms of marketing, the Madison ReStore presents itself as beneficial to a wide range of parties (Voichick, 2006):

Market positioning:

Unique in the area, offering the public low prices whilst diverting materials from landfill.

Key unique selling points:

- Makes home improvement more affordable
- Offers an ever-changing, wide variety of products
- Is a local alternative to chain “big-box” retailers
- Prevents useable building materials from going to landfill
- Helps Habitat for Humanity build more homes

Customer benefits:

Affordable materials, help to divert landfill and support worthwhile cause.

Supplier benefits:

Affordable materials disposal route, tax reduction on donations made, improved reputation.

Volunteer benefits:

Access to employment experience and training, contributing to environmental and social goals. Work to benefit local community. Potential to gain paid employment and housing.

When it come to explaining the success, Jen Voichick pays tribute to the phenomenal commitment of the volunteer workforce:

“ We are very fortunate in Madison to have such a dedicated, talented, and fun volunteer workforce...The people who work here truly believe in the mission of the HfH, and the dedication and community spirit apparent at our store is something that has promoted goodwill...”

The store is very much community oriented; hosting regular events for all the family to attend and acting a focus for those interested in both the HfH charity and environmental issues.

The Madison Habitat Restore has also benefited from the national network; for example adapting the Texas ReStore's method for converting sales to tonnage to develop their own model (Voichick, 2006). The learning has been reciprocated; with Jen's store sharing knowledge for the establishment of several new Midwest ReStores (Falk and Guy, 2007).

There are a number of differences between the context of the Habitat Restores in the USA and the UK market. These have been reflected in the financial model (section 7) of the UK business plan. Most notably the UK product range has had to reflect the different building products available and a greater emphasis has been placed on training to improve profitability and ensure sufficient trainees. What does translate across is that by combining of a high quality retail environment with a materials collection service; reclaimed building products can and do sell. The addition of an entrepreneurial founder and strong environmental and ethical values has ensured the impressive successes achieved by the Madison Habitat ReStore. This presents a huge opportunity to adapt this approach within the UK context.

Further information on the Madison ReStore including detailed operational data and marketing plans is available from BioRegional Development Group on request.

Appendix 7 Introduction to Project Partners

BioRegional Development Group

BioRegional Development Group is an independent environment organisation dedicated to developing solutions for sustainable living. The Group has 8 years experience of working in sustainable materials. BioRegional reclaimed materials work began in 2000 to broker the sourcing and reuse of a range of reclaimed materials, including 100 tonnes of steel and 54km of timber studwork, these materials were used in the building of the Beddington Zero Energy Development (BedZED), and resulted in up to 96% savings of environmental impact at no extra cost.

BioRegional recognise a considerable potential for the substitution of reclaimed materials for new, on almost any type or size of building project and continue to demonstrate how the use of reclaimed products can bring about enormous environmental benefits at no significant cost. This work is currently funded through Defra's Business Reuse Fund to increase the level of reclamation and reuse of building materials. www.bioregional.com

Minchinhampton Architectural Salvage Company (MASCO)

MASCO is one of Britain's largest suppliers of reclaimed architectural and traditional building materials with an industry renowned dismantling team. Steve Tomlin, founding director, has over 20 years experience in the reclamation industry and is keenly focussed on addressing the unsustainable wastage currently widespread throughout the UK construction and demolition industry. www.catbrain.com

MASCO and BioRegional are currently working together to develop the concept of a megayard consolidation centre, initially focusing on the Thames Gateway redevelopment area of London. Such a yard would process, store and redistribute commercial volumes of unused and reclaimed construction and demolition (C+D) materials, to address the huge volumes of wastage currently present throughout large scale C&D operations in the UK. There is an acceptance of around 13% wastage on new materials, with very little regard to deconstruction and reclamation options.

WasteWISE Consultants

WasteWISE are waste consultants developing recycling and reuse partnerships between commercial organisations and community organisations. Lewis Herbert, lead consultant, has been independently researching the US ReStore model for some time. WasteWise have met with a range of groups, across England, who are interested in addressing construction and demolition waste through the reuse of materials. www.wastewise.org.uk

A specific business plan has already been written to create a Building Materials Reuse Centre (BMRC) in the Tees Valley. The enterprise plans to set up in collaboration with council regeneration partners, housing associations and the local construction industry. The project has considerable interest from local social enterprises working in fields of housing and employment training.

In parallel to this, WasteWise are working with Eastex to explore a "Building Materials Depot for Reuse" for Peterborough. This is based on a similar social enterprise led approach, and primarily targeting construction waste from excess materials. The Eastex model is driven by the huge supply opportunity that the extensive new developments in area will generate. The key stakeholders engaged to date have

demonstrated a high level of interest, with an anticipation to quickly replicate the model to multiple sites across the region.

Centre for Remanufacturing and Reuse (CRR)

The CRR promotes remanufacturing and reuse and is funded by Defra. The aim is to develop policies and strategies that boost remanufacturing and reuse, helping businesses (both consumers of remanufactured goods and remanufacturers), governmental policy makers, OEMs and trade bodies to deliver more remanufactured goods and thus reduce our impact on the environment, and at a profit.

www.remanufacturing.org.uk