PART 3 Community Green Deal

A framework for supply chain development



Foreword

Occasionally there comes along an opportunity to help shape the future of things to come, in this instance it is the chance to make a significant impact upon the future of housing within the UK.

The prototype 'Beyond Decent Homes' standard and now the 'Community Green Deal' are both designed to support the delivery of the Low Carbon Transition Plan, and by utilising the social housing stock at the vanguard of this activity we can deliver over and above the stated plans not only ahead of schedule but at a lower cost.

Brave words we agree but the framework encapsulated in this report underpins our objectives and lays out a compelling and practical model that seeks to steer a way through a morass of "if, buts and maybe's" associated with the retrofitting agenda.

As with any strategy supporting a proposed new performance standard the wider implications have to be addressed, in this case the Risk vs Reward argument is no different. The framework clearly identifies a range of specific requirements and places an increasing emphasis on the supply chain to deliver a wide range of products, services and support which if not developed in tandem with other elements of the Community Green Deal will serve to increase rather than minimise the risk.

This part of the Community Green Deal report clearly lays out the need for a collaborative approach to developing the wider supply chain, creating a framework of dialogue, confidence, commitment and above all added value for all.

We must recognise that this opportunity can deliver a substantial and positive impact on the economies in which it is undertaken, new skills, new products, new collaborative, innovative and profitable ways of partnership working will complete the vision and most certainly play an important part in delivering a Community Green Deal which will create a more energy efficient, sustainable and equitable society where our actions have made a difference not only to the homes in which we live, but our economy and our planet which as custodians we have a duty to protect and hand over for generations to come.

Travis Perkins has been directly involved in supporting SHAP to deliver this important report and the Steering Group would like to record its thanks for their generous funding and expert input.

Jon Cross

Chair SHAP Supply Chain Steering Group Director of Property, Orbit Heart of England

Richard Adams

Operations Director Managed Services Travis Perkins

Section 1 Introduction and background

This Companion Guide is intended to provide a supply chain development framework to deliver Building Blocks 5 of the Community Green Deal. Here we describe the need for a supply chain development framework and the methodology used to develop the framework.

1.1 The need for supply chain development

As we discussed in Part 1 of this report if the Community Green Deal is to achieve economies of scale then pro-active development of the supply chain will be essential. The maturity of EU companies in this market sector may mean that opportunities are missed to support our own industry and, as proposed by the Government, realise the potential for a 'rebalancing' of our economy.

The driver of creating a low carbon economy has been highlighted as key economic driver in the successful Local Enterprise Partnership (LEP) bids for the West Midlands. What is now needed is greater definition of what this may mean in practice in terms of creating real opportunities for industry and reskilling in each LEP area, and the processes that can be used to begin to define and shape what those opportunities might be.

A number of reports commissioned by Advantage West Midlands and the West Midlands Regional Observatory began that process. The reports '*Low carbon economy in the West Midlands*' and '*The building products industry – the competitive advantage for the West Midlands*' highlighted industry specialisms but greater intelligence will now be needed to inform local economic development initiatives. This is particularly important given that a typical whole home improvement might require between 20 and 30 main components.

If LEPs and their partners wish to maximise the potential of Community Green Deal programmes to generate local economic development then the approach to supply chain development will need to go much further. The emerging needs of Community Green Deal programmes with need to be matched up with the distinct specialisms of local industry. Forward planning will be needed to reskill the workforce to meet new needs.

If the right elements are in place the Community Green Deal could help to define how LEPs could work in order to support this sector and how the limited funding available through the Regional Growth Fund, as well as the Business Growth Fund and the startup funding for the proposed new Technology and Innovation Centres, could be used and focussed.

1.2 Methodology used to develop the framework

The Community Green Deal supply chain framework was developed with the input of over 40 stakeholders during a series of workshops and steering groups between June and November 2010. Representation included Local Authorities, Social Landlords, Lead Contractors, Builders Merchants and Architects (see Appendix 3 for a complete listing).

The detailed evidence base for the framework is based on:

- A review of literature relating to low carbon economic opportunities and the construction supply chain in the West Midlands,
- Interviews with the lead contractors and/or architects from eight pilot retrofit projects (see Colour plate overleaf),

- Interviews and background research with over 20 specialist manufacturers, subcontractors and distributors selected as being representative of the retrofit 'kit of parts',
- The use of reports, contacts and industry listings such as Applegate and Kelly to identify companies with related competencies,
- Interviews and background research relating to four example economic areas which were chosen to relate to the four example housing areas,

The four example economic areas were developed with input from the following organisations – Walsall Council, Birmingham City Council, North Staffordshire Regeneration Partnership and the Rural Regeneration Zone.

Colour plate Pilot retrofit projects

High and low rise, Birmingham



Eco terraces, Staffordshire



Cussins houses, Staffordshire



Eco voids, Wolverhampton



Summerfield, Birmingham



Greenland Road, Sheffield



RfF, Rotherham and Wakefield





Section 2 **The Community Green Deal supply chain framework**

Here we provide an overview of the proposed framework for supply chain development. The framework has four key components:

- 1. The 'kit of parts': Defining the common components of whole home improvements.
- 2. Selection criteria for components: Defining selection criteria to inform procurement.
- 3. The framework for investment: Creating the processes and relationships to support supply chain development.
- 4. Supporting skills requirements: Identifying the key areas in which reskilling will be required to support Community Green Deal partners

Each component supports implementation of the Community Green Deal and its triple bottom line of proposed benefits.

2.1 The 'kit of parts'

As we discussed in Section 1.1 in order to develop the supply chain for whole home improvements a better understanding will be needed of the components that will be needed – a common 'kit of parts'. Evidence from stakeholders in Local Enterprise Partnership (LEP) areas across the West Midlands is that a better understanding of this 'kit of parts' is needed in order to identify and matchup local opportunities.

The archetype evidence base for the SHAP partner's Beyond Decent Homes standard has been used to inform the kit of parts analysed in order to develop this framework. This suggests that between 20 and 30 main components are likely to be needed in order to carry out a whole house improvement package. The kit of parts for a common archetype is illustrated by Table 2.1. We have sought to break down further the kit of parts into a number of tiers of supply so that it can be more readily used to map onto the specialisms of local industry:

- Installation: Value added by specialist subcontractors and installers who are accredited to distribute, install and maintain specific products.
- Tier 1: Building fabric or fit out elements that directly save energy such as external wall insulation and energy technologies that supply energy such as solar thermal panels or tubes.
- Tier 2: Energy storage systems such as thermal tanks, essential related control systems such as inverters, and composite elements of Tier 1 building fabric elements such as fibre boards or renders.

 Tier 3: All related fixings and sealants for Tier 1 building fabric elements and ancillaries relating to the installation of Tier 1 energy generation technologies such as pipes, pumps and ducts. We have then taken all the main components from the kit of parts and attempted to sort them into the supply tiers. The result of this exercise is presented in Table 2.1 below.

Table 2.1 Indicative Community Green Deal supply chain

| Category | Tier 1 | Tier 2 | Tier 3 |
|--------------------------------|--|---|--|
| 1. Fabric improvements | Internal and external insulation walls, floors and loft Window units Doors | Rainscreens and renders Cladding rails and fixings Window thermal breaks Warm edge spacers | Window and door junctions and sillsSeals and tapesDrainage goods |
| 2. Fit-out | Appliances Light bulbs Water saving sanitary ware Ventilation heat recovery | Light fittings and systemsVoltage regulatorsDucts and filters | LED/CFL shades and recesses |
| 3. Energy supply | Solar thermal collectors Solar photovoltaic modules Biomass boilers and stoves Air and water heat pumps | Module frames and casings Thermal storage tanks Inverters and power regulation | Ancillaries and control systems Roof mountings and fixings Ducts and filters |
| 4. Monitoring and awareness | Smart meters and monitors Home energy management systems | Sensors and remote monitoring Software and user interface | |

2.2 Selection criteria for components

Procurement decisions made by Community Green Deal partners will shape the supply chain for large-scale retrofit programmes. These decisions may create risks through the supply chain. These could include health or environmental risks arising from specific products or materials. This has particular implications for organisations seeking EMAS or ISO 14000 accreditation.

In order to manage and anticipate these risks there is therefore the need for an agreed approach to the selection criteria for key components of the kit of parts. A decisionmaking process has therefore been developed based on the prioritisation of a number of criteria.

The process is intended to be dynamic, linked to long term partnering arrangements – such as the proposed Community Green Deal Delivery Bodies – and KPI's that may be incorporated into contracts. The key decisions and steps are as follows:

Criteria 1 **Preliminary criteria**

These are criteria that would be considered and potentially established as requirements at the stage before procurement. Clients may wish to develop their own policies and procedures related to specific criteria. The following two criteria were identified:

- Toxicity: The use of specific materials could lead to offgasing into internal environment or run-off into the external environment. Decision making should be made on a precautionary principle based on the latest evidence relating to specific identified risk factors to occupants or the environment e.g. dioxins, isocyanates, Volatile Organic Compounds (VOC's).
- Building fabric performance: The selection of fabric solutions or specific details could create future liabilities. Decision making should be evidence based and related to specific archetypes and construction systems

Criteria 2 Evaluation criteria

These are criteria that would form the basis for evaluation at the specification, tendering and procurement stage. Whole life costing would be used as an overall approach and guide decision-making. Four related criteria would be considered as part of the whole life cost evaluation:

- Price: The upfront capital cost of components procured as part of a planned programme of investment.
- Performance: The overall performance of the product which could encompass a range of criteria including energy saving or revenue generated, ease of installing and maintaining, design aesthetics, user friendliness. This would draw upon UK/EU testing of the product in the field.
- Durability: Components which deliver longer term benefits may have a higher upfront capital costs. This would need to be evaluated using whole life costing methods as well as drawing upon UK/EU experience and testing of the product.
- Tipping points: If sufficient orders of a product or component are enough to trigger significant cost reductions or investment by a supplier in local production or local sub-component suppliers or contractors.

Criteria 3 **Performance criteria**

These are criteria that relate to environmental impacts that may arise through the supply chain. They should be established as a KPI's in all contracts in order to drive improved performance.

So, for example, at the beginning of a programme the price might appear to preclude using a product with a better environmental performance. However, partnering arrangements by a contractor with a manufacturer or builders merchant could bring costs into parity over time, enabling the product to be used – potentially even at the pilot stage if there is to be a long-term relationship which will deliver cost reductions. Better alternatives might also be brought forward by contractors and builders merchants.

The following criteria were identified at this stage:

- Embodied energy: The quantum of energy used in manufacturing and transporting components.
- Sustainable resource use: The environmental impacts that arise from obtaining the raw materials to make a component such as forestry or raw material extraction.
- Recycled content and recyclability: The market signals sent by specifying a product with recycled content, and the potential for the product itself to be recycled at the end of its life.

Decision-making tools such as the Natural Step and Life Cycle Assessment (following BSI PAS 2050 guidance) could be used to support decision making .

2.3 The framework for investment

The Community Green Deal is proposed as a means achieving greater economies of scale, thereby driving down the costs of delivering Community Green Deal programmes. This creates a number of challenges in seeking to build a supply chain that can respond at the scale that will be required:

- Creating enough certainty and confidence to support investment,
- Ensuring there is access to products that meet quality standards,
- Reskilling and diversifying local industry to respond to the opportunity.
- Identifying and developing new products to meet specific programme needs,

The business model that underpins the Community Green Deal will be fundamental in creating certainty.

However, in order to realise the potential benefits to LEP economic areas a co-ordinated approach is needed, working at a number of different levels to match up demand for products and services with local industrial know-how.

A framework is therefore proposed that brings together partners at three different levels, each with specific roles and responsibilities:

Client level

Creating certainty and confidence

Here it is the role of Local Authorities and social landlords working together to create certainty that there will be future demand. A local and sub-regional response to carbon reduction targets would be the first step, triggering the development of asset management plans and investment programmes.

The next step would be the establishment of a Community Green Deal 'delivery body' which would effectively act as a purchasing consortium. A local precedent for this approach is the Central Housing Investment Consortium (see case study below).

Partners: Local Authorities, social landlords, Community Green Deal Associations, private landlords

Key steps:

- Response by Local Authorities and social housing providers to 2020 and 2050 carbon reduction targets,
- Development of asset management plans based on a kit of parts for different archetypes and construction systems – as demonstrated by the SHAP Beyond Decent Homes standard,
- Establishment of a Community Green Deal delivery body which will contract programmes of work and act as a purchasing consortium,
- Setting up the procurement arrangement for programmes as this will determine how much risk/certainty is shared with contractors.

Figure 2.1 **The Community Green Deal supply chain investment framework**



Clients perspective Central Housing Investment Consortium

The Central Housing Investment Consortium brings together nine Registered Providers across the West Midlands, including several SHAP partners.



The Consortium is putting together a 10 year contract frameworks for construction and maintenance services with a value of £380m. The aims of the Consortium are to:

- Make procurement more efficient
- Achieve economies of scale
- Compare costs and performance
- Deliver training and employment initiatives

The Consortium wishes to emulate the success of other procurement clubs claim to have achieved cost savings of between 10% and 30%.

Contractor level Specifying and meeting programme needs

Here it is the role of Community Green Deal Delivery Bodies and/or private sector partners to actively engage with the supply chain to find, specify, test and develop what they need.

Delivery Bodies and contractors would actively work with LEP's and local economic partners to engage with industry. Formal procurement routes such as OJEU could incorporate competitive dialogue in order to create a lead-in time to develop supply chain relationships.

The best arrangement would depend on the contractual arrangement and where risk lies. Key functions would be to:

- Scan the market for new/existing products,
- Identify whether the product has a UK/EU track record,
- Arrange testing and accreditation for products if required,
- Develop existing partnerships with suppliers and manufacturers,
- Partner with manufacturers to develop new products to fulfil needs,

Testing and accreditation requirements can take a number of different forms. For example, basic requirements to access the market such as compliance with a British Standard. Their cost can create a barrier to market entry for manufacturers. However, it may be possible to assist preferred suppliers and provide re-assurance to partners by arranging interim testing with selected Universities or private laboratories. In some cases the track record of a product on actual buildings may be used as evidence to reassure partners.

Where there are existing partnerships with suppliers or manufacturers these could be developed further to support Community Green Deal programmes. Partnering could be used to influence future investment decisions such as the use of locally manufactured components or the manufacturing of new products.

Partners:

Community Green Deal delivery bodies, Purchasing Consortia, architects, lead contractors, builders merchants, specialist sub-contractors, Universities, Testing Institutes, independent supply chain specialists

Scenario 1 Public sector partners share the risk

The Community Green Deal delivery body decides that it will be directly involved in the development and specification of the kit of parts for investment programmes. This will be reflected in the form of contract used to let works.

The delivery body could establish its own supply chain development team and 'observatory', the work of which could initially be linked to pilot projects, but could be disseminated via a local knowledge hub for architects and smaller contractors. Knowledge sharing would be encouraged between members on an open source basis.

The overall approach should include scope to use specialist suppliers and contractors that are new to the market but would benefit from risk sharing to bring new products and services to the programme (and wider market) and to support new local enterprise.

Key steps:

- Establishment of a supply chain development team led by public sector partners, working closely with Architects, Professional teams, University partners and selected independent advisors,
- Development of a members 'observatory' function to scan the market for new and existing products, gather UK/EU monitoring evidence for products and to specify R&D to meet needs,
- Risk sharing between the delivery body and prospective suppliers in order to stimulate investment or even to license manufacturing.

Scenario 2 Private sector partners share the risk

The Community Green Deal delivery body favours Design & Build contracts, with responsibility for supply chain passing to the lead contractor. A framework agreement would be required to provide them and supply chain partners with certainty.

Private sector partners across a sub-region could come together to meet the needs of Community Green Deal programmes. They would pool resources to carry out supply chain development and research & development in exchange for a members fee and would be bound by a confidentiality agreement to protect the market intelligence gathered.

Key steps:

- Establishment of a supply chain development team by private sector partners, bringing together Builders Merchants, specialist sub-contractors and selected manufacturers,
- Development of a members 'observatory' function to scan the market for new and existing products, gather UK/EU monitoring evidence for products and to specify Research & Development to meet needs,
- Investment by builders merchants in stock and logistics in order to support contractors.
- Risk sharing between the private sector partners and prospective suppliers in order to stimulate investment or even to license manufacturing.

Contractors perspective Retrofit for the Future, Rotherham and Wakefield

Bramall Construction, with design advice and support from URBED, have completed a Retrofit for the Future project in Rotherham and Wakefield.

The project has implemented a full range of specifications to achieve an 80% reduction in carbon emissions for 10 properties, drawing upon and expanding on the SHAP Beyond Decent Homes specification digest.



The project has led to a range of lessons in relation to supply chain management and skills development in seeking to move towards large-scale roll-out:

- Specifications had to change a number of times due to cost, availability and quality issues
- Delays caused by the availability of certain products added weeks to the programme
- The complexity of the servicing mean that it took longer then expected to agree, specify and fit
- The reliability of some orders and language barriers led to co-ordination and purchasing problems
- Earlier involvement of the site team and tenant liaison would have streamlined the process

Local economy level Matching up the opportunities

Here it is the role of local economic development partners, drawing upon their knowledge and relationships with local industry, to broadcast the needs and opportunities created by Community Green Deal programmes.

A number of channels would be used to match up potential opportunities for investment and to provide support:

- Use of the 'meet the buyer' format to match-make opportunities for local companies to supply into Community Green Deal programmes,
- Use of local knowledge to identify clusters or specialisms that may overlap with the Community Green Deal supply chain,
- Provision of business support and access to finance to companies that wish to diversify in order to supply Community Green Deal programmes,
- Brokering of Knowledge Transfer Partnerships where research & development is required to develop a new product from scratch or refine an existing product.

Partners:

WMCCE, Local Enterprise Partnerships, Chambers of Commerce, Business Link, Job Centre Plus, Local Authority economic development teams, Trade Associations, Universities. Economic development perspective Passivhaus windows, Wood Knowledge Wales

Industry bodies Wood knowledge Wales and Coed Cymru Windows have worked with a number of Welsh joinery companies to develop a triple glazed timber window design that performs to Passivhaus standards.

The new window design is intended to respond to a gap in the market for timber framed windows that respond to higher standards of thermal efficiency.



The project has supported the rapid development and prototyping of window designs and timber specifications, as well as identifying new requirements such as thermal breaks and warm edge spacers.

The project has in turn supported investment in a new window factory by one of the partners and identified how lower grade UK timber can be used.

2.4 Supporting skills requirements

The delivery of Community Green Deal programmes creates a significant challenge in terms of the range of skills that will be required in order to get it right. This comes at a time when evidence shows that there are skills shortages not just in the construction industry but across the manufacturing base and its ability to diversify into new sectors.

Evidence from Decent Homes programmes, as well as the retrofit pilots we have reviewed, is that with the right leadership, project management, supplier and sub-contractor relationships and training systems in place on-site skills have the potential to be quickly addressed.

It is important to emphasise that this approach, which clearly has potential in order to deliver Community Green Deal programmes, has been driven by contractual requirements and the certainty provided by a large programme – triggered at a scale of between 300-500 properties per annum.

However, if the overall aim is also to realise the potential for a low carbon economy the challenge is much wider. At this point an assessment of the skills requirements needs to extend to all parts of the supply chain. Based on the findings from this study we have mapped these onto the supply chain framework introduced in Section 2.3.

Client-side Creating certainty and confidence

At this level the main skills requirements relate to the knowledge base of the client group to implement the Beyond Decent Homes standard and the reskilling requirements of maintenance and tenant liaison teams.

- Knowledge sharing, training and mentoring to support investment decisions by Local Authorities, ALMOs and Registered Providers as they move to develop asset management plans.
- In-house maintenance team reskilling in order to provide ongoing maintenance and aftercare for the new technologies and specifications used. The provision of training by contractors could be stipulated in contracts.
- Community engagement and customer care skills will be particularly important if services are to be delivered across tenures. This requirement also applies to contractors.
- Marketing and media relations skills will be required by Community Green Deal Associations, Local Authorities and social landlords as they will be seeking to engage owner occupiers and private landlords.

Client side

Planning future investment, Sandwell Homes

Sandwell Homes commissioned specialist support to better manage SAP and Energy Performance Certificate performance and plan for improvements across their stock.

A comprehensive database was established to provide accurate information on the performance of every property. A target was set to reach an average performance of SAP 77.



Cost models were developed in order to plan for the delivery of future carbon reductions across the stock, with the potential to benefit from strong partnerships with contractors and a single supply chain to drive down prices.

Contractor side Specifying and meeting programme needs

At this level the main skills requirements relate to the project management of whole home improvements and the re-skilling of directly employed teams and sub-contractors to deliver the work on-site.

- Architects, service engineers, surveyors and contractors will need to upskill in order to develop their knowledge in a number of key areas:
 - Knowledge of different building fabric products and solutions as they apply to different archetypes and construction types.
 - Knowledge of how to specify remedial works to properties that may need to be carried out before other works can commence.
 - The detailing required to achieve air tightness and minimise cold bridging.
 - The integration and appropriate sizing of new forms of servicing as part of works contracts.
- The project management skills to coordinate and sequence whole home contracts will be fundamental to achieving cost reductions. Training and mentoring may be required in how best to manage and co-ordinate multiple sub-contractors;
- Directly employed teams and subcontractors working on-site will need to be re-skilled to install specific elements of whole house retrofit, including building fabric elements, plumbing and M&E.

Contractor side Eco-voids project, Wolverhampton Homes

Wolverhampton Homes working with the All Saints and Blakenhall New Deal for Communities programme and its three Decent Homes contractors – Thomas Vale Construction, Frank Haslam Milan and Bullocks – have delivered pilot whole home improvements to 15 terraces in the All Saints area.



The project has led to a range of lessons in relation to supply chain management and skills development which can inform large-scale roll-out:

- Budget and programme timings may need to allow for remedial works to the existing building fabric
- Performance requirements should be used to inform the components required
- Decent Homes systems for training site teams and apprentices, and coordinating different skilled trades, under are directly transferable
- Specialist sub-contractors can be used to train up site teams to install more complex services
- There is a need to train in-house maintenance teams to deal with aftercare and specialist servicing requirements

Economic development side **Matching up the opportunities**

At this level the main skills requirements mainly relate to companies and their potential to develop and manufacture the products needed by investment programmes, now and into the future.

Examples could include the management of research & development, business planning to diversify into the low carbon sector and obtaining accreditations such as quality management in order to be able to tender.

- Prospective entrepreneurs who are looking to set up new enterprises may require support and mentoring in order to develop their business and to bring prototype/preproduction products to the market.
- Existing SMEs who have identified an opportunity to diversify may require skills to be developed in a number of areas:
 - Support and mentoring in order to bring prototype/pre-production products to the market.
 - Support and mentoring in order develop a business plan, carry out market research and obtain finance.
 - Retraining of their existing workforce in order to use new production lines or install new equipment. This may also include new accreditations from trade bodies or the Government.
 - Training and mentoring in how to engage with the public sector and access opportunities to get onto supplier frameworks. This could include putting in place management systems to satisfy client requirements, such as ISO9000 and 14000

Innovative startup Wattbox home energy control system

Wattbox is a new startup company based in Coventry. It was started by a former aeronautical engineer. It has developed a novel system for controlling domestic heating and low carbon heating sources.

To date the development of the company has been driven by its Directors. The Retrofit for the Future programme has given them the opportunity to refine their product and deliver over twenty installs.



Now that the product has been developed and tested they are planning to move to full production. With certainty of demand and access to finance it would be in a strong position to expand further.

Section 3 Realising the economic potential

Here we provide an overview of the potential role of different partners in taking forward the Community Green Deal supply chain framework. For each partner we have provided examples of how they might work to support the framework.

3.1 Local Enterprise Partnerships

With the loss of the strategic overview for supply chain development that was provided by Advantage West Midlands the development of the new Local Enterprise Partnerships has become crucial.

The Government is placing LEPs at the heart of it's approach to the creation of growth, enterprise and employment so it is vital that the Community Green Deal is aligned with, and is able to harness the potential of LEP's. As we discussed in Section 1.1 they will also be key partners in seeking to access the Regional Growth Fund and Business Growth Funds to support supply chain development.

Each of the six nascent LEPs proposed for the West Midlands corresponds to areas with distinct industrial expertise as well as distinct opportunities:

- Greater Birmingham: The city has taken the lead in promoting science and technology, working with Birmingham and Aston Universities to identify new opportunities for diversification by traditional industry, including low carbon technologies and construction sectors such as window manufacturing.
- Black Country: The areas traditional
 expertise in metal fabrication for a range of

markets could fit with a number of Tier 1 and 3 opportunities, as demonstrated by automotive specialist Sertec Energy which has developed a new solar thermal panel. The area also has an expertise in thermal storage, power control systems, air filter systems and the manufacturing of products from recyclates.

- Coventry and Warwickshire: Formerly designated as part of a high technology corridor by AWM this area has expertise in high technology manufacturing and R&D which could fit well with opportunities such as next generation photovoltaic manufacturing and associated inverter products as well new products such as LED lighting and nanotechnology.
- Stoke and North Staffordshire: The area has traditional expertise in ceramics and refractory products could create a number of opportunities relating to cladding, fixings and high performance insulation.
- Herefordshire, Shropshire and Telford & Wrekin: Much of the area is off the gas grid, creating the need for alternative energy supply technologies in place of oil, coal or electricity. A number of local manufacturers have expertise in biomass stoves and boilers, as well as distributed control systems. The Telford area also has a distinct expertise in electronics and control systems.

The Worcestershire LEP would also play a role - being a key manufacturing location for Worcester Bosch.

LEP's could therefore have a strong role to play in identifying strategic opportunities and working with partners such as WMCEE, Summit Skills, Chambers of Commerce, Business Link, Local Authority economic development teams and Trade Associations to support local industry – as demonstrated by the Build Up programme in North Staffordshire.

LEP case study Build Up programme, North Staffordshire

Build Up is a partnership between Stokeon-Trent City Council, RENEW Housing Market Renewal Pathfinder and the Learning and Skills Council.

It aims to ensure that regeneration programmes create opportunities for local construction industry and support employment of a local labour force.

An online database has been established that has already been populated with 490 suppliers and the programme is supported by nearly 40 contractors.



Eco-net – the programmes low carbon business network – has begun to identify local opportunities. Build Up is also working with the BRE to establish the Centre for Refurbishment Excellence.

3.2 Local Authority economic development teams

Although the picture is by no means consistent there is clear evidence that economic development teams within Local Authorities could play a significant role in matching up local firms with new opportunities. This requires good local knowledge of industry within an area, its distinct specialisms.

A number of Local Authorities have established databases and web tools – some using the 'Find it in Sandwell' model - to assist contractors in meeting local procurement requirements. Birmingham City Council and North Staffordshire Regeneration Partnership have taken this a step further by developing supplier frameworks for projects and by actively investigating opportunities for investment.

Local Authority case study Energy Savers, Birmingham City Council

Energy Savers is Birmingham's programme to deliver the Green Deal to households across the city. The initial phases of the programme will focus on installing solar photovoltaics. A team has been setup with the aim of maximising the potential for local companies to supply the programme.

The team have run a series of meet the buyer type events in conjunction with Find it in Birmingham and a database has been established of potential suppliers which it is intended will grow and develop over time.

3.3 Universities and Colleges

New knowledge, innovation and skills will be required to develop the Community Green Deal supply chain. Universities and Colleges have the potential to support the framework at three distinct levels:

- Colleges can support contractors to reskill the workforce to deliver on-site works

 as demonstrated by the Construction
 Skills College which has been established in Wolverhampton and Stoke.
- Universities can support monitoring programmes for both pilot stage and fullscale Community Green Deal installations

 as demonstrated by the University of Wolverhampton's support to Wolverhampton Homes.
- Universities can carry out research and development to develop new products and/or refine existing products for industry

 as demonstrated by the Warwickshire Manufacturing Group.
- Universities can carry out testing and accreditation for new or existing products in order to provide re-assurance – as demonstrated by Sertec Energy's new solar thermal panel (see case study below).

Collaborative working with higher education institutions in the UK has traditionally suffered from a disconnect between academic research and practical application of knowledge. This would need to be addressed when working relationships are established and defined and in how work is steered. A good model is the Knowledge Transfer Partnership approach which is very much client focussed. This approach is to be taken a step further with the Government's recent announcement that it will fund the establishment of a series of new Technology and Innovation Centres, to be overseen by the Technology Strategy Board.

Knowledge transfer case study Sertec Energy

Sertec Energy is a new division of the Sertec Group which specialises in presswork and welded assemblies for the car industry.

It has applied its metal forming and welding capabilities to the development of a new 'Heatwave' solar thermal panel product.

The core component of the product are thin gauge stainless steel heat pipes that carry the heat collected to heat exchangers.



The panel has been submitted for testing by the German Fraunhofer Institute and has been shown to outperform most other panel and tube products.

3.4 Contractors and builders merchants

Contractors and builders merchants play an important role as an intermediary between clients and manufacturers. The Community Green Deal supply chain framework could see contractors and builders merchants working collaboratively to identify products, partner with manufacturers and develop the logistics to help programmes run smoothly.

Major contractors and builders merchants also have the potential to use the certainty that may be created by Community Green Deal programmes to invest in the supply chain – either in the form of inventory or risk sharing with manufacturers to support expansion plans.

Builders merchants that have moved into partnering arrangements to support Local Authorities could also have a role to play in supporting ongoing maintenance and aftercare.

Industry perspective **Travis Perkins**

Travis Perkins is investing in an integrated response to the UK sustainable building agenda, utilising its in-depth knowledge and the expertise of its eight specialist businesses to deliver solutions and supply chain efficiencies to the public sector and its partners.

The company intends to establish a Technical and Product Development Panel accessing industry experts and academics, to ensure that it's commercial solutions are achieving best practice in the industry.

Through their Managed Services Division, they have established relationships with public sector bodies in the West Midlands. This has included providing technical support and establishing consortia arrangements.



The Group only approves suppliers and products which satisfy the Groups criteria in the disciplines of Business Management, Supply Chain, Corporate Social Responsibility, Product and Health & Safety.

The Group are committed to true costs (rather than prices) through open book accounting and "profit share" arrangements.

3.5 Industrial networks

Trade Associations and industrial networks could have a significant role to play in identifying and taking up opportunities. This is because they provide access to a range of companies and specialisms, as well as often carrying out joint research and development to support their members in pursuing new opportunities.

A good example is the Midlands Assembly Network which has ten members located in Birmingham, the Black Country and Telford (see case study below).

Industrial network case study Midlands Assembly Network

The Midlands Assembly Network (MAN) is a group of ten companies with complementary mechanical, electrical and electronic engineering capabilities employing over 600 people.

MAN was established in 2005 with support from the Accelerate initiative which aimed to support the diversification of the automobile supply chain. MAN co-ordinates joint marketing and product development for its members and clients.



By working together MAN have been able to diversify into a range of other markets at a domestic and international level, including the aerospace, electronics, white goods and medical sectors. It is now looking to target low carbon technologies.