

GENERAL INFORMATION

PETUS description of tool in use						
Name of the case	Llandarcy Urban Village					
Name of the tool	<ul style="list-style-type: none"> • Building Research Establishment (BRE) Sustainability Checklist; • A project based design code; • Financial viability assessment; • BREEAM (Building Research Establishment Environmental Assessment Method) on a site Building. 					
Country	Neath Port Talbot, South Wales					
City / region Total area (km2) Population Density (people/km2)	<p>The population of the Neath Port Talbot County Borough Council area is 135,000</p> <p>The population of the ward that the site is located within (Coedffranc West) is 2,066.</p> <p>The adjacent municipality of Swansea has a pop of 223, 293.</p>					
Tool user's profile a. Organisation name (municipality, NGO, national or regional department, company, etc.) b. Field of activity c. Detailed contact/feedback (project website, e-mail, address, tel., fax)	<p>a. The Welsh Development Agency (WDA) and BP (oil company) commissioned Parsons Brinkerhof (a consultancy specialising in planning, engineering, programme and construction management) as environmental consultants and have the responsibility of ensuring that sustainability issues are considered at all stages of the Environmental Impact Assessment.</p> <p>b. The Prince's Foundation is a charity seeking to improve the quality of people's lives by teaching and practicing timeless ways of building.</p> <p>c. John Cottrell, Design and Regeneration Manager (Wales), The Prince's Foundation, www.princes-foundation.org/foundation/rd-llandarcy.html</p>					
Reviewer, date	AL/JP Visit date: 12 th November 2003					
Short description of the case						
<p>The development at Llandarcy will be the UK's largest Urban Village. An Urban Village can be defined as <i>'a very well integrated mix use development – bringing homes, schools, shopping, work and other activities closer together within the context of a walkable neighbourhood and with good quality public transport links'</i> (Neath Port Talbot County Borough Council, 2003). The Prince's Foundation promotes Llandarcy as <i>"the first Urban Village project in Wales; ensuring quality of design and delivery and adherence to the principles of sustainability, mixed use and urban density. The aspiration is to meet all of the criteria promoted by the Urban Village Concept"</i></p> <p>The proposed development is a large scale regeneration project on 1,300 acres of land that was formerly the site of the first crude oil refinery in the UK. The urban village will include homes, commerce and industry, built on a vision of creating a place and community through the use of sustainable principles, a respect for the unique landscape, a relationship to the local architectural vernacular forming a connection with existing settlements and the creation of social prosperity. The project has been guided through a number of very effective and well functioning tools, especially the Building Research Establishment <i>Sustainability Checklist for developments: A common framework for developers and local authorities</i>, which the consultant adapted for the project.</p> <p>The case study is connected to the PETUS key problems:</p> <ul style="list-style-type: none"> • Land planning: sustainable balance between economic growth and a social and environmental sound development (from the building & land use planning sector), • Revitalisation of a derelict urban space and • (Re)development of a urban district. 						
Sector	Waste	Energy	Water	Transport	Green/blue	Building & Land Use
						X
Scale of project	Component	Building	Neighbourhood	City	Region	
			X			
Status of project	Starting up	Ongoing	Finished	Start date	End date (exp.)	

		X		2001	2026
Key words					
<i>Regeneration, reclamation, urban village, integrated, mixed use, community, aesthetic, checklist.</i>					
Project					
a. Object (building, city park, wind farm, etc.)					
b. Type of activity (regeneration, new development, etc.)					
c. Type of product (plan, scheme, design project, etc.)					
Tool					
a. Character (according to WP3final0704.doc)					
b. Benchmarks (qualitative or quantitative)					
c. Availability (paid/ free)					
Decision-making process					
a. Stage of the tool implementation (preliminary, midterm, etc.)					
b. Level (political, technical, etc.)					
c. Public participation					

	<p>simply gives the legal authority.</p> <p>c. There has been some public involvement in this project, mainly with residents who live very near the site. BP have a regular resident liaison group which is attended by residents living nearest to the site. Residents were also invited to the launch of the project in January 2003. The Unitary Development Plan (land use plan for the local authority area for a 15 year period) process has also afforded the opportunity for comment by the public at large.</p>
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DETAILED INFORMATION

A. Detailed description of project and tool	
<p>1. Description of context (existing strategies, laws, policy, action plans, etc.): EU, national, regional, municipal</p>	<ul style="list-style-type: none"> • Section 121 of the Government of Wales Act made it a legal duty for the National Assembly for Wales to pursue sustainable development in all it does. • Neath Port Talbot County Borough Unitary Development Plan (UDP) – Deposit Draft (January 2003) identifies that the land for Llandarcy Urban Village is part of the Objective 1 strategic site known as Swansea Bay Arc of Opportunity. Neath Port Talbot County Borough Council (NPTCBC) have an initiative to regenerate the area and communities as a growth point which it hopes will act as a stimulus to the whole of South West Wales. The aim is to create “a thriving high quality sub-region with an emphasis on raising the quality of life through the area and key regeneration sites”. (http://www.neath-porttalbot.gov.uk/downloads/udp/02_thevision.pdf). The Llandarcy Urban Village proposal has been included in Neath Port Talbot Council’s Deposited Unitary Development Plan. Outline planning permission for an early ‘stand alone’ phase, consisting of 5 hectares of mixed use development was approved in August 2003. • The UDP contains a number of policies that apply to the land e.g. the designation of a Green Wedge around Crymlyn Bog/Crymlyn Burrows/Llandarcy; a protection policy for the existing Llandarcy Village and outlines the existence of a number of environmentally sensitive areas (Sites of Special Scientific Interest, candidate SAC and RAMSAR designations) of the site.
<p>2. Description of project</p> <p>a. Background (What caused the initiation of the project?; What was the problem? Who initiated the project?);</p> <p>b. Objectives/aims (sustainability statement – what issues of sustainability were attacked);</p> <p>c. Time interval and stages of project realization;</p> <p>d. Financing – amount, sources, institutions involved, partnerships, levels.</p> <p>e. Other sectors involved in the</p>	<p>a. The site of the proposed Llandarcy Urban Village is approx. 1,300 acres. It is set close to the South Wales coast and adjacent to the M4 motorway and close to the protected wetlands of Crymlyn bog (candidate Special Area of Conservation and Ramsar) and Crymlyn Burrows (Site of Special Scientific Interest). It is hoped the Llandarcy Urban Village development will create a strong link between the towns of Neath and Swansea.</p> <p>An oil refinery opened on the site in 1917 and over the years employed up to 2,600 staff. Development of North Sea Oil and the closure of a local oil terminal resulted in the announcement in 1997, that Llandarcy Oil Refinery was to close. A small bitumen plant is the only operational facility remaining at the site.</p> <div data-bbox="783 1691 1241 2027" data-label="Image"> </div> <p style="text-align: center;"><i>Figure 1 – Historical aerial photo of Llandarcy Oil Refinery in operation</i></p>

particular project/problem (conflicts and/or links)

Currently the site comprises mainly derelict buildings and overgrown land. Some of the remaining office buildings date from the 1930's and 50's and the refurbishment of these have been incorporated into plans for the site. Llandarcy Garden Village is located near the site which was developed by the D'arcy Family in the 1920's for employees of the refinery.

Due to the nature of the industry, the site was contaminated with hydrocarbon products and in need of remediation.



Figure 2 – Aerial photograph of the Llandarcy Urban Village site

The development of the urban village follows on from the establishment of 'BP Darcy Development Ltd' in 1987 which to date has supported over 80 local organisations, created over 1,000 new jobs, loaned £1.8M to over 400 local employers, redeveloped BP Sports & Social Club and constructed Glamorgan Health and Racquets Club, a local restaurant and hotel. A number of new businesses have been attracted to the site including the Environment Agency (UK public body for protecting and improving the air, land and water in England and Wales) whose regional headquarters building are located at the site.

b. The vision for Llandarcy Urban Village involved the creation of a place and a community:

- built around sustainable principles,
- respect the unique landscape,
- relates well to the local architectural vernacular,
- properly connected to existing settlements,
- where there is social prosperity.

The Masterplan for the site was produced by Alan Baxter & Associates, an engineering practice, completed in September 2002 and includes 4,000 houses, 65,000m² of commercial/industrial space, a primary school, playing fields, parks and community facilities, 3,200 job opportunities, substantial brownfield regeneration and a total economic impact of £1.2bn. Neighbourhoods will be interconnected by walkable streets and will be supported by public transport links. There is an existing freight line that runs through the site with the potential to be converted into a passenger link between Neath and Swansea in the future.

Urban structure and street layout are the main sustainability credentials of the urban village development though this is supported by the incorporation of sustainable design aspects such as energy efficiency and water saving measures. The development strategy for the project is:

"To provide a distinctive approach to the reuse of brownfield land to create inclusive, sustainable mixed-use neighbourhoods, not only to facilitate locally

based regeneration, but to strengthen the health and economy of a much wider area– Llandarcy Urban Village”.



Figure 3 – Phase 1 layout plan of Llandarcy Urban Village (Alan Baxter & Associates)

c. The time stages of the project have been:

- Nov 1997 - Closure announced of crude oil refinery,
- Sep 1998 - Consultants commissioned to complete a Feasibility Study,
- Feb 2000 - NPTCBC propose housing for the site,
- Apr 2000 - Prince’s Foundation propose urban village,
- May 2000 - Formation of Client Team / Board,
- Oct 2001 - Sign off to Urban Village Concept,
- Sept 2002 - Master Plan Completed,
- Sept 2002 - Outline Planning Consent for 5 Hectares of the site,
- Sept 2002 - Unitary Development Plan Submission included Llandarcy Urban Village.
- 2004 - Building work is due to begin.

The development of Llandarcy Urban Village will take place over 25 years in a series of phases.

d. The project is to be funded through land sales, investment and public sector contributions including Objective 1 European Funding and The Welsh Assembly Government. As the project is still in the planning stage the cost of the project is currently unknown. Private sector investment has been estimated to be around £450 million.

3. Description of tool

a. Character (according to WP3final0704.doc) - calculation tools, process tools, assessment methods, generic tools, simulation tools, guidelines, framework tools, schemes, indicators and monitoring, checklists, case-

BRE Sustainability Checklist

a. This tool is a detailed and comprehensive checklist for ensuring the sustainability of developments. *BRE Sustainability Checklist for Developments* tool is designed to be used by those involved in planning or building sizeable developments from estates to urban villages and regeneration projects. It focuses on the sustainability aspects relating to buildings and infrastructure, giving guidance on standards and indicators. Developers are provided with a method of demonstrating to planning authorities that sustainability has been systematically addressed in proposals and guides planners to specify ‘sustainability’ in supplementary planning guidance/development. This provides a method of assessing the sustainability aspects of development proposals consistent with UK Department for Transport, Local government and the Regions requirements. The *BRE Sustainability Checklist for Developments* is an active management

<p>specific tools;</p> <p>b. Availability of the tool (web-based / paper, paid / free, etc.)</p> <p>c. Based on existing tool or newly elaborated;</p> <p>d. Adaptation of the tool to the local context (are there local experts involved in tool's development?)</p> <p>e. Other tools implemented to support the project development</p>	<p>tool that pinpoints where best practice is/is not being reached. For example, with regards to proximity to fixed public transport nodes, if 50% of a development footprint is within 1km of a major fixed transport node, best practice has been met, if 50% of the footprint of the proposed development is within 2km of a major fixed transport node, good practice has been met. The tool recognises how a project is sustainable and provides evidence. It is hoped that the tool will help provide a sustainability objective that will be used by all partners to keep the project on track in terms of sustainability. The tool is used to help prioritise actions, as well as to continually assess and review the project.</p> <p>b. The version of the tool used was an adapted form of the original paper version rather than the new downloadable version from the internet. Paper versions can be purchased from BRE at a cost of £50 or downloaded for free from the internet http://www.sustainability-checklist.co.uk/.</p> <p>c. The checklist is based on research undertaken at BRE, and it is intended to be refined as new knowledge becomes available and in response to feedback from users.</p> <p>d. The form of the tool used in this case study was an adapted version of the original hard copy format, into a more user friendly computer based checklist based in Excel with columns identifying the level of performance that is achieved. Each row, representing a sustainability aspect, is shaded according to the level of performance achieved with green representing best practice, yellow for those aspects that are good practice and red for those that are the minimum acceptable where improvements should be considered. Poorly performing aspects of the development can be clearly identified. Parsons Brinkerhoff, the projects environmental consultants adapted the tool;</p> <p><i>Project based design code -</i></p> <p>a. The design code consists of design guidelines for the development in the urban village.</p> <p>b/c. A specific design code was drawn up for the project, for information on availability contact "The Prince's Foundation". The code is based on a "Centre to Edge transition" that occurs in most good urban settlements; underpinning this are the fundamental principles of traditional urbanism, something that the design team have unparalleled experience of. The design code is not yet in the available for public viewing.</p> <p>d. The design code is place specific in that it seeks to reinforce local distinctiveness.</p> <p><i>Financial viability assessment</i></p> <p>a. A Financial viability assessment is an economic calculation tool. This is simply a straight (but complex) valuation exercise comprising costs vs income analysis.</p> <p>b. This is a BP document containing commercially sensitive information and therefore cannot be made available.</p> <p>c. The financial viability assessment is a form of the generic tool based on cost-benefit analyses.</p> <p>d. The structure of the tool is applicable to many projects, but will vary when applied to a particular project, with regards to the information that is relevant.</p> <p><i>BREEAM</i></p> <p>a. This tool is an assessment method.</p> <p>b. Information about BREEAM is available from BRE, but application of an assessment is at a cost. In addition, a BREEAM has to be completed by a BREEAM assessor in order to the assessment to be valid.</p> <p>c. The BREEAM on the Environment Agency building was based on the existing BREEAM assessment.</p>
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	d. The tool considers the local context.
B. Tool implementation	
<p>1. Argumentation for choosing the tool</p> <p>a. What were the reasons for the implementation of the tool? (voluntary or requested by what local, national, etc regulation)</p> <p>b. Who took the initiative for choosing /elaboration the tool?</p> <p>c. What were the criteria for choosing the tool?</p> <p>d. Was there knowledge of other tools and were they considered?</p>	<p><i>BRE Sustainability Checklist for Developments tool</i></p> <p>a/b. An external consultancy Parsons Brinkerhoff (PB), who specialise in planning, engineering, program and construction management, were employed to ensure that sustainability issues were considered at all stages of development. For Llandarcy Urban Village, PB were looking for a toolkit that gave a final score in order that the toolkit would provide a measure for comparison to other projects.</p> <p>c. A number of tools were considered to ensure sustainability would be taken account of throughout the development of the project, these included:</p> <ul style="list-style-type: none"> • SPeAR (Sustainable Project Appraisal Routine) tool (ARUP), • Prism (a tool under development by Parsons Brinkerhoff), • Eco Compass - World Business Council for Sustainable Development, • Building Research Establishment (BRE) Sustainability Checklist for Developments tool, • Danish Eco Span Tool. <p>The BRE Sustainability Checklist was found to be the most appropriate to the project as it provides a final ‘score’ of sustainability. This tool was considered to be the most helpful to answer Welsh Assembly Government questions on sustainability of the project. The tool provides a “sustainability” score for land use, transport, energy, buildings, natural resources, ecology, community and business and provides reference material for benchmarks. The tool has been peer reviewed by relevant experts in the field, which provides confidence at all decision making levels of the project.</p> <p><i>Project based design code</i></p> <p>a. To ensure an overall standard of design through out the development, a design code was developed voluntarily (not required by regulation).</p> <p>b/c. “The Prince’s Foundation is leading the renaissance in the UK of the use of urban codes and pattern books” (http://www.princes-foundation.org/projects.html) .The Prince’s Foundation is a strong advocate of design.</p> <p><i>Financial viability assessment</i></p> <p>a. The use of the tool involved detailed cost estimates, predicted values and the development of each plot which formed the bases for calculating the long term viability of the project. The model was very structured and detailed and based on a 25-30 year predicted build, which in turn was based on a phasing strategy that involved splitting the site into 82 different plots.</p> <p>b/c. This was a Management Team led exercise but a collaborative process which sought to consider all perspectives.</p> <p>d. Various financial assessments have been made since.</p> <p><i>BREEAM</i></p> <p>The project team agreed that all new buildings should pass the BREEAM assessment to ensure a certain level of sustainability. BREEAM, despite its shortcomings, was, at that time, regarded as the most suitable criteria based assessment tool for attaining sustainable buildings. It is a standard assessment for buildings – with transferable benchmarks.</p>
<p>2. Barriers for the tool implementation</p> <p>What were main problems with tool implementation?</p>	<p>Too early to be able to state what the main problems with tool implementation are as yet.</p>

C. Influence of the tool on the decision-making process

<p>1. Description of the decision-making process/ procedures</p> <p>a. Stages</p> <p>b. Levels (political, technical, etc.)</p> <p>c. Sources of information used during the dmp;</p> <p>d. Who are the decision-makers?</p> <p>e. Who made the final decision for the project implementation? Was it political or technical decision?</p>	<p>In 1987, BP established BP D'Arcy Development Ltd to help develop and deliver a sustainable regeneration solution for the future of Llandarcy following the closure of the main operations at the crude oil refinery.</p> <p>In 2000 an informal partnership was created between BP, the local authority, Welsh Development Agency (WDA) and the Prince's Foundation to look at future options for the former Refinery site.</p> <p>The project's principal partners are the Welsh Development Agency, BP, NPTCBC and The Prince's Foundation. Within the project are between 20 and 30 key decision makers, and approximately 73 stakeholders including residents associations, Members of the European Parliament, Members of the UK Parliament and Welsh Assembly Members.</p> <p>Three levels of management exist within the project,</p> <ul style="list-style-type: none"> • The Development Board, • The Management Team, • Technical Working Groups, <p>that consist of people from the project partners and their consultants. The Board comprises senior officials from each of the partner organisations and is the forum for key decisions. However, most major milestone decisions are also referred back to the respective partner organisations for their own approval. The Management Team take most day-to-day operational decisions.</p> <p>Due to the size and complexity of the development a whole raft of specific technical, financial and political considerations inform every decision.</p>
<p>2. Tool in decision-making process</p> <p>a. At what stage was the tool implemented? By whom? (experts, politicians, etc.)</p> <p>b. How did the tool output influence the process (added or skipped levels/stages in the existing decision-making process, etc.)?</p> <p>c. Quantitative goals or benchmarks defined? (If YES, which – and what were they compared to?)</p> <p>d. Was the tool used to support argumentations?</p>	<p>a. The <i>BRE Sustainability Checklist</i> has continuously been used during the project, while the <i>Financial viability</i> was carried out at the start of the project. The BREEAM assessment was made after the design stage of the EA building. Developers and designers are encouraged to consider these issues at the earliest opportunity to maximise their chances of achieving a high BREEAM rating. The <i>project based design code</i> although produced at the start of the project will be continuously influential throughout the development of the village. The tools have been implemented by consultants, including the design code, which will all be implemented and adhered to by the architects, developers and constructors of the village.</p> <p>b. It was revealed through use of the <i>BRE Sustainability Checklist</i> tool that no energy strategy had been considered for Llandarcy. As a result, a sustainability and renewable energy expert from Oxford Brookes University was employed to look at the energy impact of the project. This was too late for Phase 1 of the development, as plans had already been completed, but will be incorporated into future phases of the entire development.</p> <p>The <i>project based design code</i>, through its prescriptive nature will influence the design of the whole project development, and ensure that the different areas within the development, in the centre, within housing blocks in neighbourhoods, at the neighbourhood edge, in rural open space, on the ecological reserve and within the employment district, will be developed upon with a common theme.</p> <p>c. There are a number of goals for this project, focusing on the statement contained within the development strategy: <i>"To provide a distinctive approach to the reuse of brownfield land to create inclusive, sustainable mixed-use neighbourhoods, not only to facilitate locally</i></p>

	<i>based regeneration, but to strengthen the health and economy of a much wider area– Llandarcy Urban Village”.</i>
3. Transparency of decision-making process a. How was the information of the dmp disseminated? - directly (decision makers – public) or indirectly (public); sources of dissemination used b. How was the public involved? c. Was there a public discussion over the project and at what stage of the project development?	Information on the project has been disseminated by a Communications Group which is comprised of representatives of the partners, aided by PR consultants, good relations from press releases from the range of organisations involved, including the WDA, Neath Port Talbot County Borough Council, The Prince’s Foundation, BP Darcy etc.. There has been some public involvement in this project, mainly by meetings with residents who live very near the site. BP have a regular resident liaison group which is attended by residents living nearest to the site. Residents were also invited to the launch of the project in January 2003. The Unitary Development Plan process has also afforded the opportunity for objections and comment by the public at large as this document is available for public viewing and response.
D. Expert assessment/analysis/comment of the tool effectiveness	
1. Assessment by tool users a. Were there measurable improvements as a result of the tool implementation? If YES, what? If no: why not? b. Were there any spun-off’s or unintended consequences? c. General view on the tool? Lessons learned? d. Potentials for further use of the tool? e. Will the actors recommend it or use it in other cases - why / why not?	<i>BRE Sustainability Checklist;</i> a. The use of the tool raised the following issues, that might not have been otherwise considered: <ul style="list-style-type: none"> • bus routes and timing of buses, • the project as a whole did not have an energy strategy, an issue that has now been rectified through using the tool, • density - Llandarcy will be below the UK development density levels, but with the help of this tool this can be verified. The use of the <i>BRE Sustainability Checklist for Developments</i> ensures that sustainability aspects are constantly managed and reviewed. By using the tool in management meetings it ensured that all partners are aware of the sustainability aspects that were falling short of best/good practice encouraging discussion on how to improve the project. b. The use of the tool has helped to put forward a sustainability statement/framework for the project, that might not have existed otherwise. The Prince’s Foundation traditionally focuses more on concepts of traditional urbanism and construction rather than issues such as passive solar heating, pipe lagging, energy strategies etc.. c. Consultants for Llandarcy believe that the BRE tool is very effective at revealing requirements that need to be fulfilled which may have been overlooked, and for providing a strong sustainability framework and strategy to a project. Consultants Parsons Brinkerhoff, and those involved in the project would recommend this tool for use on other projects. <i>A project based design code;</i> a. The development of the project has not yet begun so the improvements as a result of this tool are unable to be measured yet. It is too early to comment on the real impacts of the use of this tool. <i>BREEAM (Building Research Establishment Environmental Assessment Method) on the Environment Agency Building.</i> a. Use of BREEAM has ensured that a number of environmental best practice features are incorporated into the building design including rain water harvesting, low flush toilets, tap restrictors, and a state of the art Building

	<p>Management System which monitors, controls and optimises energy consumption (BP D'arcy, 2004). It is too early to comment on the real impacts of the use of this tool.</p>
<p>2. Reviewer's assessment of the tool (usefulness, sustainability relevance, who are the actors excluded? etc.) Suggestions and needs for further development of the tool</p>	<p><i>BRE Sustainability Checklist for Developments tool</i> The Checklist has many positive points including it is well presented and easily understandable layout whether on paper or on computer, as well as the fact that it is clearly laid out and well explained, making it very user friendly. The information it seeks is thorough and well considered, however the scoring can be subjective. Therefore to ensure comparability throughout the process it is best to have a team of people scoring together and to keep the same people throughout the project. The new downloadable format is also very helpful and cheaper compared to the cost of the paper version. The tool is very useful for reference material when considering a particular aspect of a development and information can be quickly and easily found.</p> <p>The <i>BREEAM assessment</i> is regarded by the UK's construction and property sectors as the measure of best practice in environmental design and management to assess the environmental performance of both new and existing buildings. Comparisons can be easily made between buildings. Credits are awarded in each area according to performance. A set of environmental weightings then enables the credits to be added together to produce a single overall score. The building is then rated on a scale of PASS, GOOD, VERY GOOD or EXCELLENT, and a certificate awarded that can be used for promotional purposes.</p> <p>However, this is an expensive tool to use (£1,000s) and requires a BREEAM approved assessor to make the assessment which is an additional expense. This method is building specific and requires detailed information to be collected – ie knowledge of whether an air cooling tower is designed to CIBSE TM13¹² however it would be the job of the consultant to collect the information required.</p>
E. Additional information on the case study available	
Websites	<p>BP Darcy website, 2004, www.bpdarcy.com</p> <p>The Prince's Foundation website, <i>Llandarcy Urban Village, Wales</i>, - Pages now offline. Website of Prince's Foundation: http://www.princes-foundation.org/</p> <p>http://www.neath-porttalbot.gov.uk/downloads/udp/17_llandarcyurbanvillage.pdf</p> <p>http://www.sustainability-checklist.co.uk/</p> <p>CEEQUAL website, 2004, http://www.ceequal.com</p>
References concerning the case key words or problem	<p>Brownhill D & Rao. S, (2002) <i>A Sustainability Checklist for developments: A common framework for developers and local authorities</i>, BRE Centre for Sustainable Construction Watford: Construction Research Communications.</p>
Other sources (Interviews, conferences, discussions, etc.)	<p>Neath Port Talbot online....., 10th January 2003, Press Release: <i>Wales Unveils First Urban Village - £1.2bn Boost Predicted</i>. http://www.neath-porttalbot.gov.uk/pressreleases/pressrelease.cfm?id=356</p> <p><i>Also notes from:</i> Presentation by The Prince's Foundation, <i>Llandarcy Urban Village</i>, Public Private Partnership, at meeting between Joanne Patterson and Anna Leron of the Welsh School of Architecture, John Cottrell of The Prince's Foundation and Steve Matthews of Parsons Brinkerhof on 12th November 2003. And follow up meeting with JP and AL and Steve Matthews on December 18th 2003.</p>