Research Project: Environmental Protection & Justice: Land Impacts
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Background: Land is a key issue in business sustainability and corporate social responsibility from a number of perspectives. Companies can be major land owners, particularly in sectors such as agriculture, utilities and mineral extraction, which places a responsibility of stewardship and the management of issues such as biodiversity onto them. Nearly all consumption and production systems for tangible goods have some land-based impacts through the generation of waste that goes to landfill, whilst others in industries such as mining, energy and chemicals face more specific challenges linked to contaminated land on operational sites. BRASS research has considered a number of land based impacts including those related to mining (see A42) and the landfilling of waste (see A16). There has also been particular emphasis on the issue of contaminated land, and the role of the remediation of brown land as a component of urban regeneration. This is an issue that has considerable sustainability and CSR implications for both industries that generate land contamination and the construction industry (and the housing sector in particular), and its key stakeholders including communities and regulators.

Aims & objectives:

- To review how legislation allowing the enforced remediation of contaminated land has aided urban regeneration. This is an important issue within the broader sustainability agenda given the target of building 60 per cent of all new housing on brown land.
- To analyse the approaches taken to contaminated land risk assessment to explore issues of commonality of methodologies, engagement with stakeholders, and the pooling of expertise;
- To lay the foundations for further research on how the regulatory framework can be most efficiently employed to bring brown land back into fruitful use;
- To work with Constructing Excellence in Wales and the Welsh Government to develop a construction and demolition waste sector plan to identify the problems and hurdles facing the sector in achieving sustainable waste management, and what they as a sector consider to be possible solutions to these problems. In doing so the aim is to develop and present a longer term perspective and vision for improving resource use and waste management, in line with government objectives set out in the Wales waste strategy.

About the research: The research project has three key elements. The first was a review of local authority contaminated land strategies and particular cases. This was a combination of a desk based using published strategies posted on the web or in hardcopy, combined with field work in the form of interviews with contaminated land officers in local authorities and key stakeholders and stakeholder bodies such as the Chartered Institute of Environmental Health. The second was an impact study of British legislation undertaken on behalf of the Northern Ireland government who had yet to adopt the legislative framework for contaminated land now in place in Great Britain. The impact study involved liaison with the Environment Agency and with contaminated land officers from local authorities to build up case-study information about sites designated as contaminated and the remediation of such sites. Finally BRASS worked with Constructing Excellence in Wales and the Welsh Government to develop the C&D sector plan. A key element in the development of the plan was to work with representatives of the sector and a number of task and finish groups were established to assist in the identification of the problems and hurdles facing the sector in achieving sustainable waste management and what they as a sector considered to be possible solutions to the these problems.

The work also links in strongly to other work on regulation since the work to date suggests that the regulation has been effective not so much in relation to remediation conducted under formal remediation notices, but by voluntary remediation at the time of land transfer or by planning

conditions as land passes through development. As such it links to other areas of BRASS research (e.g. food and waste) concerning public and private interest regulation.

Results and outputs: The review of local authority strategies revealed a lack of uniformity of method pursued by local authorities in devising contaminated land strategies which does affect the quality of information available in the strategies (particularly whether the focus is on sources of pollution or on the vulnerability of receptors). The availability and transparency of information on priority sites within localities is an important issue for business and for other professionals concerned with land development. This work concluded that:

- Many LAs viewed the compilation of the register as a task in itself and follow-up in terms of inspections was patchy with development rather than an inspection process driving land remediation;
- The planning system would seem to be far more effective in achieving the effective remediation of brown land than the elaborate system of regulation under Part IIA of the Environmental Protection Act 1990;
- The contaminated land regime has produced significant shifts in risk assessment and management processes pursued by private parties in buying and selling industrial land and this has led to voluntary remediation, or at least to financial provision paying for the eventual remediation of the land at the time of land transactions.

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- Lee R. (2002), Local authorities inspection strategy for contaminated land: Questions for due diligence, *Due Diligence and Risk Management*, 3 (4), 7-13

Impacts achieved/potential for impact: This work influenced the manner in which the Environmental Liability Directive was transposed in Northern Ireland, since the Directive deals with future pollution and the European Commission expects Member States to deal with issues of historic pollution. In addition Prof Bob Lee was involved in a project in Ireland where the Irish Environment Agency wished to devise a project whereby financial provision could be put in place to fund site re-instatement for land subject to regulatory controls over industrial pollution. This Guidance is now published in draft form. BRASS also did some training work on land contamination with both the Public Health Agency and the Chartered Institute of Environmental Health for both public sector bodies and businesses in Wales. This work also led to the awarding of a KESS (Knowledge Exchange) doctoral fellowship from the European Social Fund to work with an SME in an objective 1 area of the EU. The work is on-going with Ashfield Solutions, a firm of environmental engineers based in Abercynon, and the project looks at the regeneration of former industrial sites that are in receivership using data from survey work covering all major UK banks. Prof Lee and Dr Elen Stokes also edited and contributed to a volume composed of papers from the 2003 and 2004 UKELA Conferences on Land Use and Liability - Remediation; conservation; and acclimatisation. BRASS researchers also completed research for Environment Agency Wales into the potential economic impact of metal mine remediation work, concerning how improvements to the quality of water downstream from old polluting mine sites has value that can be quantified.